IBM
US Contractor
Environmental & Safety
Guide

Version #12.1, 11/06/2024

Emergency Information

FOR ANY EMERGENCY SUCH AS FIRE, EXPLOSION, CHEMICAL SPILL, OR MEDICAL EMERGENCY, GO TO A SAFE AREA AND CALL THE LOCATION'S EMERGENCY TELEPHONE NUMBER. If an emergency telephone number is not posted on the site phones, use the standard means of summoning outside emergency services (911) or reference Corporate Security / Americas Emergency Contact Numbers

Location's Emergency Telephone Number:

Location	Site Emergency Number	Non-Emergency Security Number
Armonk, NY (CHQ)	914-499-4444	914-499-4400
Almaden, CA	408-927-1111	408-927-2555
North Castle, NY	914-765-4444	914-765-4400
Poughkeepsie, NY	845-433-3333	845-433-3342
Raleigh, NC	919-543-5555	919-543-4444
Silicon Valley Lab, CA	408-463-3111	408-463-2555
Yorktown Heights, NY (Watson)	914-945-3333	914-945-2323
All other US Sites	911	919-543-4444

Stay on the line: DO NOT HANG UP until the Security officer you are speaking with has hung up. Emergency response personnel may have questions to ask you or may have special information to give you about what you can do until help arrives.

EMERGENCY EVACUATION
It might be necessary to evacuate if there is an earthquake, fire, bomb threat or other emergency. Safe and immediate evacuation of all building occupants is essential. Contract employees should familiarize themselves with emergency evacuation procedures, as soon as possible, after their initial arrival onsite.

This guide can be accessed online: IBM Global Procurement Contractor Safety

Think Safety. Act Safely!

Safety is Part of Every Job!

Version #12.1, 11/06/2024

For more information, contact Global Safety
This guide is effective until replaced with a new version.

Contents

General Information

1 Introduction

At IBM, safety, health and environmental awareness are fundamental components of every activity. This document (the "Guide") sets forth practices and procedures that apply to work performed for IBM on IBM owned or leased premises or at client locations by IBM contractors, contractor employees, vendors, partners and subcontractors. The guidance and rules included in this document are not intended to be all inclusive. This document should be considered as minimum requirements supplementing the contractor's safety requirements. It is the responsibility of each contracting firm to ensure that its employees comply with the guidance in this document.

- The Guide shall be made available to all contractors, contractor employees, partners, vendors, and subcontractors.
- At a minimum, contractors, vendors, partners, subcontractors and their employees working at an IBM facility in an **administrative services capacity** (e.g., office/clerical work, non-high-risk activities) shall review and comply with Sections 1 through 3, 14 (Chemical Information – Hazard Communication), 14.11 (The Contractor's Role in Support of IBM's Environmental Management System), the Appendix, and any additional sections applicable to the job task.

As part of IBM's commitment to protect employee health, safety and the environment, IBM requires that all work performed at or for IBM by contractor firms and their employees comply with all "Applicable Requirements." This includes:

- Applicable federal, state or local laws, regulations, ordinances or codes
- IBM requirements identified in this guide
- IBM client location requirements, if applicable

Where there is a conflict between applicable requirements, the one most protective of health, safety and the environment applies. It is the contractor's responsibility to ensure that these requirements are met.

Contractors are responsible for monitoring the implementation of their safety and environmental processes. IBM reserves the right to evaluate contractor work for compliance with safety, health and other contract requirements. If IBM observes conditions that could impact facility or employee well-being, they will be brought to the attention of the contracting firm for corrective action. Depending on the severity of the hazard, it may be necessary for IBM to shut down a job. If the conditions observed are severe or recurring, the contracting firm may be disqualified from future work. Costs associated with job shutdowns because of safety violations will be charged to the responsible contractor.

Questions regarding safety, health or environmental aspects of work at IBM should be directed to the contractor management. If the contractor management needs clarification with respect to IBM's safety and environmental guidelines and rules, they should discuss with the IBM Representative, as necessary.

This guide can be accessed online: IBM Global Procurement Contractor Safety.

1.1 Definitions

Contractor as used in this document means any contractor, subcontractor, partner, or vendor employee performing contracted work for IBM. Contractors may include:

- Business Partners
- Construction Trades
- Contractor suppliers of labor
- Engineers and Technicians
- Lab Support Personnel
- On-site Consultants
- Manufacturer service representatives providing maintenance services
- Vendors (full service and short term)

IBM Representative means an IBM employee, or a contractor employee designated by IBM, who provides oversight of the contracted work. The IBM Representative is the primary contact between the contractor and IBM. This person may be known as a Technical Coordinator, Contractor Coordinator, Construction Coordinator, Project Coordinator, Contract Administrator or Project Manager. In many cases, an approval or permit is required from IBM prior to beginning an operation. These approval and permit requirements are noted in this guide and the IBM Representative will act as the interface between the Contractor and IBM to obtain the necessary approvals and permits. For more information about obtaining permits and approvals, see the section entitled Permits and Approvals.

1.2 Contractor Management

IBM expects contractor management to:

a. Be responsible for the safety and health of their employees.
b. Obtain prior approval from the IBM Representative for proposed work, work schedules, staging areas, or parking.
c. Obtain their own professional safety and health guidance and have their own safety and health programs and processes.
d. Solely supervise and direct the work of their employees.
e. Ensure employees and subcontractors understand and comply with the requirements identified in this document, with government and regulatory requirements, with location-specific training requirements, and with all safety provisions of the contract.
f. Provide employee training for specific hazards as required. Upon request by IBM, contractors shall certify that their employees have received appropriate and required training before work begins. This includes, but is not limited to, work requiring confined

space entry, asbestos remediation, hazardous chemical use, live electrical servicing or high voltage work. Training provided for contract employees by IBM shall meet the terms and agreements in the contract.

g. Follow product and equipment manufacturer's instructions, labeling, and/or listings.
h. Be responsible for all their property (e.g., tools, equipment, and material) while it is being used, transported or stored on the IBM site.
i. Advise the appropriate IBM Representative of any work that may affect the safety of IBM employees or impair IBM property or operations.
j. Communicate to the IBM Representative any safety concerns and near misses.
k. Report injuries or illnesses to OSHA and IBM Medical as appropriate (see General Safety section 3).
l. Ensure their employees avoid inappropriate behavior, such as horseplay, harassment, carrying weapons, creating excessive noise or using abusive or profane language.
m. Obtain special authorization or work permits from IBM for operations with unique hazards. Some examples may include but are not limited to confined space entry, crane lifts, cutting and welding, fire protection impairments and other location permit programs.
n. Follow IBM emergency instructions, including, but not limited to, alarms, evacuation procedures, and notification procedures.
o. Prepare and maintain documentation and/or records. Such records shall be available for submission to IBM upon request (e.g., occupational injury logs and ratings, training, and hazard assessments).
p. Be responsible and accountable for the work of their employees. All damage to buildings, grounds, equipment and other areas that results from contract work, negligent or not, will be the responsibility of the contractor to correct. The IBM Representative must be advised immediately of any and all damage that occurs.
q. Be responsible for any legal liability arising from or in connection with the failure of their employees, agents and subcontractors to act in compliance with applicable federal, state and local legislation, law, regulation, ordinance, and code or IBM requirements.
r. Prohibit the sale, advertisement, or marketing of services or products onsite by contractor employees.

Emergency Response

2 Reporting Emergencies

To report an accident, fire, smoke, or other emergency, contractors should call the local site emergency number (see Emergency Information), and state the following:

- nature of the emergency
- location of the emergency: building, floor, office number or column location
- name and company name
- telephone number calling from / callback number

If an emergency telephone number is not posted on the site phones, use the standard means of summoning outside emergency services - **911**.

Stay on the line - DO NOT HANG UP until the EMERGENCY RESPONSE DISPATCHER has hung up. If a hazardous condition threatens health or safety, go to a safe location before calling. Do not attempt any rescue where the potential for physical injury is present, such as where there is the presence of toxic gas or oxygen deficiency is possible.

If an emergency occurs in a construction area, all work shall stop. This is for the personal safety of workers in the area and responding personnel.

2.1 Emergency Equipment

a. IBM's emergency equipment (first aid kits, stretchers, emergency eyewashes/showers, fire extinguishers, public address system, fire alarm pull stations, smoke detectors, exit signage, AEDs etc.) are not to be removed, relocated, or rendered inaccessible unless specific permission is granted in each case by the IBM Representative. Alternative means of emergency equipment coverage shall be provided if emergency equipment is removed, relocated, or inaccessible. After work is complete, the emergency equipment shall be in the same, if not better, working order as prior to the work.
b. When needed, contractors shall ensure their employees are provided emergency eyewashes/showers that comply with all applicable requirements.
c. Contractors shall supply any emergency and/or safety equipment required on the work site.
d. Notify the IBM Representative prior to any work that will impact building critical fire and life safety infrastructure (e.g., sprinkler systems, smoke/fire detectors, fire doors, HVAC smoke dampeners, rated fire walls etc.). In some locations, a sprinkler system permit may be required prior to conducting this type of work.

2.2 Emergency Evacuation

If there is an earthquake, fire, bomb threat or other emergency, it might be necessary to evacuate a floor, area or the entire facility. Safe and immediate evacuation of all building occupants is of prime importance.

a. Contractor employees should familiarize themselves with emergency evacuation routes and the site-specific emergency response plan as soon as possible after initial arrival at the facility.
b. Emergency evacuations may be announced by public address system or building alarm systems. If an alarm sounds, leave the building by the nearest available exit, follow the public address system instructions, or follow the location-specific evacuation procedures.

c. Go to a safe area outside the building and out of the traffic lanes. Remain there until released or given further instructions.
d. Never use an elevator in an emergency evacuation.

- If you are a contractor or vendor assigned to or working for a specific IBM department, report your status to the IBM manager or IBM Representative.

General Safety

3 Accidents, Incidents/Injuries, or Near Misses

a. The contractor shall immediately notify its management, on-site Emergency Services (where present) and the IBM Representative of incidents, chemical spills/releases, near miss incidents, and/or employee injuries/illnesses that occur onsite.
b. If a contractor employee is injured, he/she should seek the necessary medical treatment and clearance prior to returning to work.
c. **Reporting to OSHA:** Contractor management must report contractor work-related injuries/incidents occurring while performing work for IBM to federal or State OSHA, as appropriate.
   - Within eight hours after the death of any employee as a result of a work-related incident
   - Within 24 hours after the in-patient hospitalization of one or more employees or an employee's amputation or an employee's loss of an eye, as a result of a work-related incident
   - Contractor must report the fatality, inpatient hospitalization, amputation, or loss of an eye using one of the following methods:
     - By telephone or in person to the OSHA office nearest to the site of the incident.
     - By telephone to the OSHA toll-free central telephone number, 1-800-321-6742, or State OSHA reporting line.
     - By electronic submission using the reporting application located on OSHA's public Web site www.osha.gov.

   All requirements of the OSHA reporting program must be met.
d. **Reporting to IBM Medical:** Contractor work-related injuries, illnesses or near miss incidents (non-injury incidents/accidents) are to be promptly reported to the following:
   - Contractor company management
   - IBM requestor of services or IBM representative.
   - Call toll free to IBM Medical at 1-888-553-5752
e. If this is a significant incident (e.g., fatality, in-patient hospitalization, amputation, or eye loss) the contractor management must report to OSHA as defined in OSHA 1904.
f. For situations where contracted individuals receive day-to-day direction regarding IBM specific processes, additional requirements apply. In these cases, the contract company must:
   - Call IBM Medical at 1-888-553-5752 to confirm appropriate OSHA record keeping & reporting responsibilities
   - Provide site injury/illness case information to IBM for appropriate OSHA documentation:
     - Total number of cases per site
     - Total number of days away or restricted work per site
     - Total number of contract employees working at that location
     - Total number of contract hours worked at that site.

   Required OSHA documentation will be due to IBM by December 15th of each year. If additional injuries occur after December 15th, updated documentation due by Jan 1.

3.1 Alcohol, Drugs, and Firearms

a. No person under the influence of or carrying, intoxicating alcoholic beverages shall enter or knowingly be permitted to enter an IBM work site.
b. No person under the influence of or carrying an illicit drug is to enter or knowingly be permitted to enter a work site.
c. Firearms, ammunition, unauthorized aerosol chemical irritants, or other weapons are not permitted on IBM property.

3.2 Infection Control

a. Contractors must assure that they are in compliance with all aspects of applicable regulatory requirements related to infection control, bloodborne pathogens, or Other Potentially Infectious Material (OPIM).
b. Contractors shall follow accepted work practices and use PPE as appropriate for job tasks.
c. Contractors shall not handle any equipment, containers or bags labeled and/or color coded as biohazardous unless specifically authorized to do so.
d. Contractors shall report all first aid incidents involving the presence of blood or OPIM to their management and the IBM Representative immediately. Decontamination of the area shall be performed by trained personnel.
e. Contractors shall notify the IBM Representative and IBM Medical of any contractor employee identified as either having or suspected to have active tuberculosis (TB). Arrangements are made by IBM, with assistance from the contractor company, for the Public Health Department (PHD) representative to tour the IBM work area. Arrangements for testing and follow-up of contractor employees, determined to be at risk, are made by the contractor company and the PHD.

3.3 Motor Vehicles and Parking

a. Contractors must obey all traffic regulations and speed limits while operating a motor vehicle at IBM locations.
b. Contractors must receive prior approval from the IBM Representative if parking in locations other than approved designated parking areas or equipment or material storage areas. Contractor vehicles and equipment must not block exits, walkways, loading areas, fire lanes, fire hydrants, or emergency equipment.

c. Motor vehicles must yield the right-of-way to pedestrians and emergency response vehicles.
d. Contractors must not perform maintenance or repairs to vehicles, equipment, engines, transmissions, or other fluid-containing systems at IBM locations. If an emergency repair is required, contact the IBM Representative.
e. All vehicles and mechanized equipment must be turned off when not in use. Do not leave vehicles and mechanized equipment idling at docks or near air intakes.
f. IBM is not responsible for any damage or loss incurred in parking lots. Usual precautions should be taken to protect vehicles and personal belongings.

3.4 Security

a. IBM Security authorizes entry into IBM buildings by issuing an identification badge to each contractor employee. Contractor's entry into IBM buildings must be approved by and coordinated with the IBM Representative.
b. Contractors must sign in and obtain an identification badge.
c. Contractors must prominently display their identification badges at all times.
d. Contractors must remove, destroy and dispose of stick-on badges (one-day badges) when leaving IBM facilities at the completion of the work shift.
e. Contractors who are authorized access to the IBM site must ensure controlled access security by:
   - Only admitting persons with valid identification badges into IBM buildings.
     Definition of Valid Identification Badges and security requirements: Standard IBM ID badges used at all IBM sites utilize a color-coding scheme to indicate escort requirements as follows:
     - Green and White = IBM Employee - No escort required
     - Yellow = Non-IBM personnel - No escort required
     - Red or "Visitor" Printed = Site Visitor - **Escort required**
   - Directing persons without badges to Security to gain access
   - Not lending a badge to another person
   - Entering and exiting through designated doors only
   - Not defeating locks, latches or locking/latching hardware
   - Leaving doors in a closed and locked condition
   - Not propping doors open unless they are monitored to ensure that only authorized people enter the area
   - Monitoring or properly securing openings made in walls, roofs or floors that could provide unauthorized access
f. Search Policy - IBM reserves the right to conduct random searches of any personal or other property carried onto or off IBM premises including vehicles, handbags, lunch boxes, back packs, briefcases, etc. Anyone refusing to participate in the search process will be brought to the attention of the individual's employer.
g. IBM requires prior notification of all visits by persons from Restricted or Controlled Trade Countries. IBM Export Control must be notified for approval. Questions concerning foreign visitors or restricted trade country status should be directed to IBM Site Export Control and to the Procurement interface.
h. Contractors must report any concerns dealing with security to the IBM Representative and IBM Security.
i. Contractor property, equipment and materials shall not be left unattended in general use areas, loading docks, hallways, meeting rooms, cafeterias, break areas and door entrances.
j. Cameras: The use of cameras (including cell phone cameras) is not permitted on IBM property. When necessary (for business needs), the use of cameras shall be coordinated and approved by the IBM Representative and/or appropriate IBM Manager.
k. Contractors performing work for IBM at a client location shall adhere to the security requirements of the client location.

3.5 Information Security

Contract employees who use IBM's computing systems or have access to IBM information must follow certain security rules. These rules are intended to protect IBM proprietary information and assets from loss, modification or destruction. In general, individuals are responsible for:

a. Only using computing resources for purposes approved by IBM management.
b. Properly classifying and securing files, data and information that is created and maintained.
c. Not using computing resources for personal use.
d. Accessing only the computing resources which you are explicitly authorized to use.
e. Using secure passwords and following other security procedures when using computers for IBM business.

3.6 Smoking

a. Smoking, including use of e-cigarettes, is not permitted within IBM buildings.
b. Comply with any posted outdoor "No Smoking" or "Designated Smoking Area" signs.
c. Do not throw cigarettes, cigars, or matches into trash containers. Only use designated receptacles.

3.7 Telephones

IBM telephones are to be used only for emergencies or IBM business.

3.8 Visitors

All visitors must be approved by the IBM Representative and follow the location security procedures.

3.9 Government Agency Inspections

The IBM Representative shall be notified immediately of visits or inspections by representatives of any government agency. The IBM Representative will contact the appropriate IBM Health, Safety, or Environmental staff.

3.10 Clean Room Areas

a. Clean room areas have restrictions on the generation of dust, dirt, particulate, chemical vapors and adverse temperature or humidity.
b. Contractors must obtain approval from the IBM Representative and comply with established clean room requirements (e.g., contamination control, special clothing, special work practices, and tool/equipment restrictions) and training before entering any clean room area.
c. IBM will provide the special clothing that Contractors must wear in clean room areas.
d. When working on raised floor areas, care must be taken to prevent dirt and construction debris from falling through floor tiles. Immediately report any liquids or chemical residue found under the raised floor by calling the on-site Emergency Services and the IBM Representative.
e. Contractors must enter and exit clean room areas only through authorized doorways.
f. No paper, food, beverages, wooden ladders, or personal cell phone use are allowed in clean room areas.

3.11 Computer Rooms

a. All computer rooms are restricted access, secured areas. The contractor must have permission from the IBM Representative and the computer room's Operations Manager prior to access. Contractors shall:
   - Be fully educated on Emergency Power Off (EPO) systems to prevent accidental activation
   - Not allow unauthorized entrance (e.g., tailgating)
   - Not prop open the doors without the permission of the computer room staff
   - Prominently wear security identification badges
   - Sign into restricted areas, as required
b. Any work with ceiling tiles in computer rooms must be reviewed and approved with the IBM Representative and the computer room's Operations Manager.
c. Do not place tools or equipment on or against any equipment in the computer room. Care must be taken not to disturb computer equipment as doing so may result in a major interruption to IBM customer service.
d. Work that may interfere with computer operations, such as use of chemicals or activities that cause smoke, dust or falling or flying materials, must be done outside of the computer room. Where this is not possible, precautions must be taken to protect IBM property and operations. Smoke from cutting, soldering or grinding may set off fire alarms or suppression systems. Conductive material falling on computer equipment can cause serious damage. Steps must be taken to control any dust created. The contractor must ensure that air contaminants are controlled to the satisfaction of the IBM Representative and the computer room’s Operations Manager. If computing equipment is to be covered while in operation, proper supply and exhaust air flow to the equipment must be maintained at all times.
e. Smoke detectors are sensitive to contaminants other than products of combustion. Excessive concentrations of dust, steam or other airborne particles may either hamper proper operation or cause smoke detectors to alarm. Activities that generate smoke, dust, steam, flying or other airborne particles (welding, grinding, cutting, burning, sweeping or vacuuming) must be reviewed with the IBM Representative prior to the start of work. In some cases, smoke detectors or fire suppression systems may need to be disabled. Appropriate precautions, including restoring systems no later than the end of the day, will be required.
f. Do not use power outlets on computer equipment. If receptacles other than wall sockets are needed, contact the IBM Representative. When using power receptacles or working near electrical equipment in computer equipment rooms, precautions must be taken to ensure the circuit breakers or emergency "off" buttons are not tripped accidently.
g. Whenever raised floor tiles are removed or employees are exposed to a floor cut out, the opening must be guarded or covered. Before leaving the area, floor tiles must be put back in place.
h. IBM recommends that only CO_2 fire extinguishers be used in computer rooms due to the corrosive nature of ABC extinguishers.

3.12 Exhaust Systems other than HVAC

Before any work is performed that could affect an exhaust system, the Contractor must obtain prior approval from the IBM Representative. Exhaust systems may contain hazardous materials and may be used to ventilate hazardous exhaust or gases. Exhaust system work includes, but is not limited to, the following:

- Blocking, puncturing or removing an exhaust system
- Disabling or replacing sensors in exhaust streams
- Entering an exhaust plenum
- Interrupting electrical service to an exhaust system
- Shutting off an exhaust system

If exhaust monitor set points are moved from their approved minimum and/or maximum position, they are to be returned to their proper position upon completion of work or prior to leaving the work area for the day, whichever comes first. The IBM Representative should be informed if the work has altered the approved exhaust flow/static or velocity pressure. This includes work associated with balancing and testing systems, equipment service and maintenance, and all other exhaust system work.

3.13 Housekeeping

a. Construction work areas shall be left broom clean at the end of each work shift and when the work is finished.
b. When the project work is completed, the contractor shall remove any contractor-owned materials from the site.
c. Care shall be taken not to damage finished work.
d. Construction areas must be clearly identified by contractor-supplied barricades (e.g., cones, signs, ropes, fences).

e. Materials must be stacked or stored so that they are stable and do not pose a tripping hazard, block doors or emergency equipment, nor restrict aisles, corridors or passageway width to less than required for emergency egress. Pipes and conduit shall be transported and stored horizontally.
f. Materials stored in vehicles must not protrude into driving or walking lanes.
g. Materials, tools or equipment must not be stored in stairwells or over any work area. Stairwell doors and other fire doors shall not be propped open.
h. Materials must not be stored outdoors without approval of the IBM Representative. If permission is given, such materials, tools, or equipment shall be marked with the Contractor's name, project number, and a contact telephone number.
i. Scrap lumber, metal, trash, garbage and other similar materials generated must be disposed of at regular intervals. Debris must be kept cleared from work areas, passageways and stairs.
j. Contractors must not remove items from IBM trash cans or dumpsters.
k. To prevent injury, nails protruding from boards must be removed or bent over.
l. Walking-working surfaces must be maintained free of slip, trip and fall hazards by removal of protrusions and other obstructions that could create unsafe conditions.
m. Broken glass must be swept up immediately and put into containers specifically designated for broken glass.
n. All ceiling tiles removed by the Contractor shall be maintained clean and undamaged and shall be replaced immediately after the work is completed.
o. Contractors must perform work in a manner that shall minimize and control the production and migration of odors, noise, dust, dirt and debris into adjacent equipment or work areas. Potential generation of odors, noise, dust, dirt and debris must be reviewed with the IBM Representative to determine if additional controls are required.
p. When the work activity could generate flying or falling material (e.g., soldering, cutting, welding, sawing), IBM property near the activity must be protected to prevent damage.
q. IBM trash disposal containers are not to be used unless prior approval from the IBM Representative has been given. Any material contaminated with chemicals must be handled through the site-specific chemical waste disposal process. All materials that can be recycled must be recycled through established IBM programs. Contact your IBM Representative for direction.
r. Remove all platform planks from overhead at the completion of the job.
s. Housekeeping in clean rooms is extremely important. Remove all debris, waste, or scrap material generated while performing work. This is to be done on a continuous basis, not just at the end of the day. All scrap/waste material transported through the clean aisle shall be enclosed in a plastic bag. Construction areas shall be vacuumed at least once every shift.

3.14 Noise

Contractors working in high-noise-level areas shall wear hearing protection, follow any posted noise signs/instructions and comply with OSHA 29 CFR 1910.95 Occupational Noise Exposure (or state OSHA equivalent). Contractors must wear hearing protection whenever operations in the work area have the potential to exceed regulatory requirements (e.g., motor generator rooms, fan rooms, boiler rooms, and sub fabrication areas). Contractors shall not create noise levels in adjacent occupied areas that exceed IBM’s permissible standards (85 dBA).

It may be necessary to conduct high noise operations before or after normal business hours to prevent interference with IBM business operations. Review potential high noise operations with the IBM Representative. When applicable, contractors shall make every effort to minimize noise levels when transporting materials and equipment through occupied areas.

3.15 Office Ergonomics

a. Contractors working in office environments are encouraged to apply ergonomics to maximize their comfort and productivity by:
- Using proper lifting techniques
- Adjusting chairs and workstations
- Using appropriate workstation accessories (e.g., wrist rests, copy holders, footrests)
- Placing work materials within easy reach
- Taking periodic breaks or shifting between tasks to reduce eyestrain and body fatigue

3.16 Office Safety

a. Contractors working in office areas must ensure that:
- Exit paths are kept clear and without obstruction
- Fire extinguishers and emergency equipment are accessible at all times
- Floors are kept free of slip, trip or fall hazards
- Equipment is approved and used as intended and electrical equipment has a polarized or grounded attachment plug
- Unsafe or defective equipment is removed from service until it is repaired or replaced
- Extension cords are used only to supply temporary power to portable equipment during construction or maintenance and protected by a Ground Fault Circuit Interrupter (GFCI)
- No heat-producing appliances are used (e.g., coffee makers, tea warmers, toasters, popcorn poppers, space heaters), unless approved by the IBM Representative
- Material storage is arranged to assure stability and to minimize the possibility of items falling
- Proper work practices and equipment (e.g., step stools) are used to access and retrieve materials. Contact the IBM Representative if you have office safety concerns.

3.17 Pedestrian Safety

a. Personnel must always be alert for potential slippery conditions in parking lots, walkways, aisles, stairs, etc., especially during inclement weather.
   - Use caution when walking on snow-covered or wet surfaces.
   - Wear outer shoes that are appropriate for the weather conditions.
   - Wipe your feet on the floor mats at building entrances during inclement weather. This helps prevent wet and slippery conditions on the stairs.
   - Use handrails when going up or down stairs.
   - Running is not permitted inside or outside buildings or in the parking lots, except at locations where permitted outside along roadways.

b. Report the specific location of any potentially hazardous conditions on sidewalks, parking lots, stairways, etc. to the IBM Representative.

c. In IBM facilities where aisle ways are shared by pedestrians and powered vehicles, pedestrians and powered vehicle operators must travel in a safe manner, remain alert and use caution at intersections, corners, doorways and in the aisles. Pedestrians must stay to the right when walking in aisles and be alert for powered vehicles.

3.18 Utilities

Unauthorized connection to utility services (e.g., compressed air, nitrogen, liquid nitrogen, natural gas, helium, oxygen, hot or cold water, electrical) may be hazardous and result in conditions that may interrupt utility services to IBM buildings and processes. Contractors may use regular wall electrical outlets as needed. If other utilities are needed, contractors must contact the IBM Representative, who will identify appropriate connection points and specify any safety considerations or other limitations.

3.19 Warning Signs

Various warning signs are posted at IBM locations to inform and protect workers. This includes signs requiring personal protective equipment, identifying exits, warning of potential hazards, showing speed limits or restricting entry.

a. Contractors must comply with all posted warning signs.

b. Construction work areas must be clearly identified with contractor-supplied barricades, signs, cones or fences.

c. Floor openings and/or holes must be guarded by substantial barriers, railings, and/or covering material supplied by the contractor. When covers are not in place, floor holes must be protected by a standard railing able to withstand a horizontal force of 91 kg (200 lbs.).

d. A flag person is required for work along roads or walkways where signs and barricades do not provide adequate protection for workers or passersby.

e. Safety signs and tags may be posted on manufacturing equipment indicating the status of equipment and whether they can or cannot be operated. Contact your IBM Representative for site specific information.

3.20 Weather Hazards

a. For outdoor work, if there is a risk of hazardous weather conditions, contractors shall monitor the National Weather Service and stop outdoor work if high winds, heavy rain, hail, or lightning may pose a risk to personnel safety or property.

b. Contractors shall implement a heat illness prevention plan where outdoor or indoor temperatures expose workers to the risk of heat-related illnesses, or as required by local or federal regulation.

c. Contractors shall implement a cold stress prevention plan where outdoor or indoor temperatures expose workers to the risk of cold stress, or as required by local or federal regulation.

3.21Working Alone

Contractors shall not work alone when performing any trade in an isolated area or performing an activity that may render them unable to summon help. A second employee shall be within sight and sound and be trained and equipped to respond appropriately in an emergency. Such tasks may include:

a. Work with hazardous chemicals/materials

b. Work on or near unprotected electrical circuits/equipment with hazardous voltage

c. Work on ladders that require extensive movement or maneuvering

d. Work at elevations unprotected by suitable fall protection

e. Work on systems that require, but do not permit, Lockout/Tagout

f. Material handling tasks that expose a person to injury

g. Work in a Confined Space (entry requires the presence of an attendant within sight and sound)

h. Work after normal day shift hours requires prior notification to the IBM Representative

Fire Safety

IBM buildings are constructed with building safety systems to protect people and property from fire. Contractors shall take precautions to prevent fires and ensure building safety systems are not compromised.

4 Fire Prevention

a. Contractors must provide fire extinguishers of the correct size and suppression rating when required in construction areas. Contractors shall inspect them periodically in accordance with regulatory requirements and store them in a manner to prevent damage to the cylinder.

b. IBM fire equipment is not to be used, moved, blocked or otherwise rendered inaccessible unless specific permission is granted.

c. Any penetrations that are made in any type of walls must be restored as soon as possible to maintain a tight seal around conduit, piping, ductwork, etc.
d. Combustible trash must be removed by contractors from the work area and disposed of as approved by the IBM Representative at the end of each workday.
e. Storage or dispensing of flammable chemicals on roofs is prohibited.
f. If work on roofs entails the use of flammable materials, fire extinguishers of the correct size and suppression rating must be in close proximity to the work.
g. Smoking inside IBM buildings is prohibited. Observe any posted outdoor “No Smoking” signs. Do not throw cigarettes, cigars, and/or matches into trash containers. Use only designated ash trays or smoking receptacles.

4.1 Fire Suppression Sprinkler Systems

a. Contractors must notify the IBM Representative and obtain approval prior to working on any sprinkler system. Plans shall be implemented to ensure fire protection while a sprinkler system is impaired or being worked on.
b. When spray painting near sprinkler heads, a protective cover must be placed over each exposed sprinkler head and must be removed immediately after the painting is complete.
c. A clearance of at least 46 centimeters (18 inches) must be maintained below all automatic sprinkler heads.

4.2 Internal Combustion Engines

a. Any proposed use of internal combustion engines, fueled by gasoline, liquefied petroleum gas (LPG), diesel, or any other fuel, inside buildings or on roofs requires approval of the IBM Representative.
b. Gasoline, LPG, or other internal combustion engines must not be operated inside IBM buildings unless approved oxy-catalyst exhaust purifiers are used, the exhaust is piped to an approved exhaust venting system or the exhaust is piped outside the building through an exhaust hose.
c. As required, LPG industrial trucks shall have continuous carbon monoxide (CO) monitoring to ensure CO levels are maintained below applicable requirements. Internal combustion engines must not be operated in the proximity of a facility's air intakes where exhaust could be carried, either directly or by prevailing air currents, to the facility's HVAC systems.
d. When gasoline is required, proper emergency equipment must be provided by the contractor, (e.g., fire extinguishers of the correct size and suppression rating within 9 meters [30 feet] of the work activity). This equipment must be maintained near fuel storage areas and must be capable of extinguishing any fire. Fuel must be stored in approved safety cans. Fueling of internal combustion engines must be done outdoors.

4.3 Purging Fuel Gas Piping

a. Purged fuel gases shall be directly vented to a safe location outdoors, away from personnel and ignition sources.
b. If it is not possible to vent purged gases outdoors, purging gas to the inside of a building shall be allowed only upon approval by the authority having jurisdiction of a documented risk evaluation and hazard control plan. The evaluation and plan shall establish that indoor purging is necessary and that adequate safeguards are in place such as:
   - evacuating nonessential personnel from the vicinity of the purging
   - providing adequate ventilation to maintain the gas concentration at an established safe level, substantially below the lower explosive limit, and/or
   - controlling or eliminating potential ignition sources
c. Combustible gas detectors are to be used to continuously monitor the gas concentration at appropriate locations in the vicinity where purged gases are released.
d. Personnel are to be trained about the problems of odor fade and odor fatigue, and are warned against relying on odor alone for detecting releases of fuel gases.

4.4 Salamanders or Other Portable Fuel-Fired Heating Devices

a. Contractors must obtain a Hot Work Permit from the IBM Representative before using a salamander or other temporary heating device.
b. Contractors must furnish fire extinguishers which are suitable for the type of work being performed.
c. Refueling shall only be performed outdoors.
d. Salamanders must be:
   - Used in an appropriate manner as identified by the manufacturer
   - Listed by a nationally recognized testing laboratory (e.g., UL)
   - Positioned away from combustible materials to reduce the possibility of uncontrolled fire
   - Protected in traffic areas to prevent them from being overturned

4.5 Smoke Detectors

Smoke detectors are located in mechanical rooms, electrical rooms, laboratory and office corridors, computer rooms, loading docks, supply and return air ducts, and adjacent to fire doors and fire windows. Smoke detectors are sensitive to contaminants other than products of combustion. Excessive concentrations of dust, steam or other airborne particles may either hamper proper operation or cause the smoke detectors to alarm.

Work which may produce smoke, dust, steam, flying or other airborne particles (e.g., cutting, burning, welding, grinding, sweeping, or vacuuming) must be reviewed with the IBM Representative prior to starting the work to prevent accidental fire alarms. In cases where construction may create dust or smoke that could activate a smoke detector, the smoke head should be removed or disabled by authorized personnel prior to onset of work and returned to normal condition at the conclusion of work or at the end of every work day.

4.6 Welding, Cutting, Open Flame Work

a. A Hot Work Permit must be obtained when the contractor's work using an open flame creates sparks or excessive heat. Examples of hot work include welding, cutting and grinding. The permit must be kept at the designated hot work area. Each permit is valid for one day and only for the area designated on the permit. A separate permit is required for each area where hot work will be done. To obtain a permit, contact the IBM Representative.
   - If a weekend or holiday permit is needed or if a permit must be extended, contact the IBM Representative.
   - Permits may be extended by the IBM Representative if there is no impact to any other fire systems work that may be scheduled for the same period. Any conflicts regarding permits and fire systems work shall be resolved by the IBM Representative.

b. Prior to performing any hot work:
   - The types of welding and materials to be used must be reviewed with the IBM Representative.
   - Noncombustible or flameproof shields or screens must be provided by the contractor to protect IBM or other contractor employees from radiant energy, sparks and molten metal spatter.
   - Gas cylinders must be kept far enough away from hot work or open flame operations so that sparks, hot slag or flames will not reach them. When such a location is impractical, fire-resistant shields must be provided.
   - The area must be inspected to ensure combustibles are not present or they are adequately protected and a Hot Work Permit has been issued.
   - A fire extinguisher of suitable size and type to mitigate potential fire hazards must be immediately accessible at the hot work area. The fire extinguisher must be operable, fully charged, inspected within the past year, and manned by an employee trained to use it.
   - While performing hot work, combustible material must be moved 35 feet from hot work. If it cannot be moved, it must be covered with a fire blanket.

c. The contractor is responsible for maintaining a fire watch throughout the operation. The fire watch is to take appropriate action to prevent fires, to extinguish incipient fires and to summon emergency assistance from IBM if any fire starts.

d. After welding, cutting or open flame work is completed, a fire watch is required in the hot work area for at least 60 minutes to ensure there is no smoldering or previously unnoticed fires.

e. Hot work conducted outside a building must be located away from building air intakes and air handling units. Contractors must take appropriate measures to prevent hot work odors from entering building ventilation systems. If hot work is to be performed within 3 meters (10 feet) of an air handling unit, contact the IBM Representative to properly shut off the air handling unit.

f. When welding is done within 30 centimeters (1 foot) of a sprinkler head, a heat/fire barrier, such as gypsum board, must be placed between the sprinkler and the welding area.

g. When cutting through or welding an existing roof or wall, position a fire watch (with a fire extinguisher) on each side of the roof or wall.

h. Contractors involved in welding operations must use filter lenses or plates of the proper shade number.

i. IBM must be notified whenever hot work has started a fire, even if the contractor was able to extinguish the fire before there is any damage.

j. Rooftop open flame, welding, or installation of flame-applied roofing system operations must be performed in compliance with the requirements as stated on the associated permit. These may include, but are not limited to:
   - Appropriate fire extinguishers and fire blankets provided.
   - Fire blankets spread 4.6 meters (15 feet) on either side of the hot work.
   - A two-hour fire watch starting immediately upon completion of any heat applied roofing and/or hot work. The individual performing the fire watch must be dedicated to that responsibility and must have communication access to local emergency services.
   - For work performed in openings where the roof system has been removed, periodic inspections (not to exceed every 30 minutes) of the roof and the ceiling cavity below the affected roof area for a period of not less than three hours following the close of the fire watch.

     These precautions do not apply to torch applied or hot air heat welded roof systems above metal or concrete deck, if there are no combustibles (e.g., wood blocking) and no openings in the roof deck that could allow heat/sparks to enter the building. Interior inspections only apply if the roof system (membrane, hardboard and rigid insulation) has been removed and sparks or hot embers could fall to the interior building cavity below the metal deck.

     Refer to the IBM Representative for local requirements regarding rooftop open flame or hot work.

Potentially Hazardous Areas/Operations, Permits & Approvals

5 Potentially Hazardous Areas/Operations

There are certain areas and operations at IBM where, because of the nature of hazards, extra precaution must be taken. IBM will provide contractor management with information about hazards unique to a work area, and/or the information may be provided via local signage.

a. Before entering or working in any of the following areas or working on any of the following equipment, the contractor must review the work and hazards associated with the work area, review the safety and health rules that apply, and take any precautions necessary.

- asbestos-containing areas
- chemical and gas use/storage or dispensing areas, including cryogenic materials
- confined spaces (tanks, manholes, vaults, pits, etc.)

- electrical circuits/equipment
- hazardous systems including, but not limited to compressed or liquefied gas lines, vacuum lines, pumps, industrial waste and sanitary sewer piping, and industrial exhaust ducts
- high noise areas
- high powered magnets
- high voltage electrical areas
- ionizing, laser, and non-ionizing radiation labs
- lab and service cores
- mechanical equipment rooms (MERs)
- robots
- Roofs and building roof areas
- storage, dispensing, and process areas for chemicals and gases
- unprotected elevated areas

b. Contractors are required to check with the IBM Representative before commencing any work on a flammable gas or solvent line or a tank or vessel that contains or has contained a flammable material.
c. If contractor employees have questions about working in these areas, they should contact their management. In general, contractors working in potentially hazardous areas must:
   - Abide by all applicable regulatory guidance as communicated by the jurisdiction having authority (e.g., OSHA)
   - obey all warning signs and signals
   - follow appropriate working alone practices
   - wear appropriate personal protective equipment
   - keep clear of tools, instrumentation and equipment unless authorized to work on it
   - not eat or drink in areas where chemical products are used
   - only activate Emergency Power-off (EPO) buttons in an emergency only activate Emergency Power-off (EPO) buttons in an emergency
   - take precautions to protect equipment from dust or flying or falling objects.

5.1 Permits and Approvals

Contractors must obtain any necessary permits, approvals and/or licenses required by applicable requirements before performing any work for IBM. Contact the IBM Representative to obtain IBM-issued approvals or permits.

Examples of work that may require a permit, approval, and/or license include, but are not limited to, the following:

- airlifting (helicopter lifts)
- asbestos work
- blasting or explosive use
- building entry
- camera/recording use (including use of the camera/video feature on phones)
- chemical spill cleanup
- chemical use (including pesticides)
- clean room work
- computer room work
- confined space entry
- construction storage/staging areas for materials and/or equipment on site
- construction trailer (office, storage) placement and use on-site
- crane or hoist use
- creating excessive noise
- dewatering
- disposal of construction debris/waste material
- electrical power shut off/shutdown
- electrical work on live equipment
- elevated work on mobile platform work/scaffolding use/raised floor work
- elevated work requiring fall protection
- emergency equipment movement/relocation
- excavation work
- exhaust system work other than HVAC-related work
- explosive (powder)-actuated fastening tool use
- fire alarm system work
- fire sprinkler system or smoke detector impairment
- gas cylinder work
- gasoline/fuel tanks
- hazardous energy
- internal combustion engine use indoors

- laser use (Class 3b or 4 lasers)
- lead bricks and sheeting
- lead work - disturbing lead containing structural materials
- liquid discharge into storm water drains
- lockout/tagout of equipment or systems
- open flame or hot work (cutting, welding or burning)
- openings (floor/wall/roof)
- pneumatic (air powered) tool use
- powered industrial vehicle use
- radiation source and equipment use, including x-rays
- radiographic testing
- temporary heater use
- utilities use
- water source shut off

5.2 Asbestos Work Areas

a. Contractors must not remove or disturb asbestos or material suspected of containing asbestos without the approval of, and coordination with, the IBM Representative and/or Location Asbestos Coordinator. Asbestos may be contained in various materials throughout the building, but is not limited to, the following:
   - adhesives and mastics
   - building insulation
   - ceiling areas and tiles
   - duct work
   - roofing materials, including flashing cement
   - flooring
   - pipe (including AC piping), heat exchange, boiler insulation and mudded fittings
   - sprayed on fireproofing
   - transite panels and piping (e.g., lab tables and hoods, drain piping)
   - valve packing and gaskets

   These specific items or areas are labeled, where feasible, to alert persons to the presence of asbestos, and labeling shall be promptly removed after completion of asbestos removal projects. Suspect material, such as those listed above, shall be assumed asbestos-containing unless it has been determined that the material is asbestos-free by using recognized analytical techniques.

b. Regulations governing the handling of asbestos vary geographically. It is the responsibility of the contractor to be familiar with and comply with all applicable regulations when working with asbestos containing materials (ACM) or presumed asbestos containing materials (PACM).

c. Contractors are required to obtain required training and accreditation (e.g., licensing and certification) prior to conducting any asbestos work and maintain such throughout the duration of the project.

d. If the IBM site has ACM or PACM, the IBM Representative will assist with identifying the types of material and their locations within the contractor's area of work.

e. IBM requires that if there is damage to materials potentially containing asbestos, contractors must immediately stop work, vacate the area, and immediately notify the IBM Representative and/or Location Asbestos Coordinator.

f. No ACM may be brought on site or used without specific written approval from IBM.

IBM Almaden:
The IBM Research – Almaden facility was constructed in 1985 and does not include any asbestos containing construction materials.

Contractors are advised of the existence of *naturally occurring asbestos* in native soil and bedrock at IBM Almaden.

Any construction or grading operation (e.g., excavation, trenching) using powered equipment shall comply with requirements contained in the California Code of Regulations: 8 CCR 1529 and 17 CCR 93105. These requirements include, but are not limited to, the employment of wet methods to mitigate the generation of potential asbestos dust during excavation and trenching operations using powered equipment.

Where complex or unique hazards are involved, contractors are expected to obtain their own professional safety and health guidance. If you encounter an unsafe condition during construction, grading, or any other activity, stop work and inform the IBM Representative.

IBM Rochester:
Most of the ACM or PACM is located within mechanical areas, such as mechanical rooms and the Central Utility Plant.

IBM Yorktown:
Most floor tiles and underlying mastic in Building 801 and the Industrial Waste Treatment Plant have been determined to contain asbestos. All core wall coatings in Building 801 are asbestos containing material.

5.3 Divers

a. All dive work must be ***approved*** by and coordinated through the TC.

b. Contractors must comply with all applicable requirements of OSHA 29 CFR 1910 Subpart T - "Commercial Diving Operations" and 1926 Subpart Y - "Diving" or equivalent OSHA state approved plans and all applicable local regulatory requirements.
c. Contractor divers must comply with the following requirements:
   - Have a dedicated dive tender for surface supplied air systems for each diver. During SCUBA operations, the diver must be line tended from the surface or accompanied by a second diver in the water with continuous visual contact during the dive.
   - Have a standby diver available during the dive to assist/rescue primary diver.
   - Deenergize or lock out and tag out exposed live electrical parts before working on or near them. Lockout/Tagout (LOTO) – Control of Hazardous Energy section of this guide.
   - Have up to date certifications and be trained to the appropriate level for commercial diving, in compliance with 29 CFR 1910.410.
   - Adhere to the **CONFINED SPACE (PERMIT-REQUIRED)** requirements and provide Confined Space Certifications and a Confined Space Program, if the divers will beentering a dewatered or partially dewatered pit without SCUBA or airline system.
- When breathing air is supplied by a compressor, ensure that the compressor has appropriate filters and that any engine exhaust is directed away from compressor intake and any open pit where the work is taking place.
- Have a reserve egress tank when connected to surface supplied air in the event of power failure (air compressor) or airline break.

Personal Protective Equipment (PPE)

6 PPE Requirements

Contract employees must wear personal protective equipment (PPE) appropriate for the task. Examples of PPE include, but are not limited to, safety eyewear, gloves, respirators, hard hats, safety shoes, fall protection, and hearing protection.

a. Contractors must comply with all applicable requirements with regard to performance, hazard assessment, employee training, selection, supply, use, care, limitations, storage and disposal of PPE. Contractors are responsible for assessing the hazards and determining the necessary PPE.
b. PPE must not be used as a substitute for ventilation or other engineering control measures.
c. Unless otherwise contractually specified, contractors shall supply PPE for its employees.
d. Contractor employees must be trained in the use, care, and limitations of all required PPE.
e. PPE must be kept in good condition and replaced immediately if it becomes worn or damaged.
f. Conductive articles such as rings, metal watch bands, metal-framed eyewear, and metal dangling jewelry shall not be worn while working with exposed live electrical equipment.
g. Servicing or repair of electrical – See Electrical Safety 13.0
h. Contractor employees should evaluate individual situations and determine whether flame-resistant clothing is appropriate.
i. When using hazardous materials, the contractor should consult the Safety Data Sheet for recommendations on appropriate PPE.
j. Safety glasses require side shields per ANSI/ISEA Z87.1.
k. Contractors are responsible to ensure that no medical restrictions preclude any contractor employee from using the necessary safety equipment.
l. Respiratory Protection:
   - Contractor use of respiratory protection must comply with applicable regulatory requirements.
   - Respiratory protection should not be the primary means of protecting employees.
   - Respirators must be NIOSH-approved and selected on the basis of hazards to which the worker is exposed.
   - Respirator wearers must be trained in the proper use and limitations of the equipment.
   - Fit-testing is required for all respirators with a tight-fitting facepiece. All respirators must be properly inspected, stored, and maintained.
   - Contractor employees should not be assigned to tasks requiring use of respirators unless their employer has determined that they are medically able to perform the work and use the equipment.

IBM Rochester:
Contractors performing work beneath the concrete floors in Buildings 106 or 315 should use hand protection due to the potential for dermal contact with the soil in these two areas.

Tools and Equipment

7 General Requirements - Tools

7.1 Contractors must provide all tools required to perform their work. Unless stated in the contract/agreement, contractors are not permitted to use IBM tools or equipment.
7.2 Security of contractor tools is the responsibility of the contractor. Theft of any tools should be reported to IBM.
7.3 Contractors may only use tools that are in safe operating condition with required guards in place. Tools shall be used according to their intended design. Damaged and defective tools must not be used and must be removed from service.
7.4 Tools and other materials must not be left on stepladders, scaffolds, roofs or other places where they may be dislodged and fall.
7.5 Appropriate PPE must be worn/used when using tools.
7.6 Plug-connected equipment and tools must be grounded by a ground pin on the plug unless the equipment or tool is labeled as “double insulated.”
7.7 Tools and test equipment, including leads, must be properly rated and inspected prior to use.

7.8 Non-sparking tools may be necessary where flammable materials are handled or where sparks could trigger an explosion. Check with the IBM Representative if not sure of requirements.

7.9 Contractor grinding wheels, buffers and wire wheels must have adequate safety guards.

7.10 Use ground fault circuit interrupt (GFCI) protection for all portable electric power tools. Receptacle outlets used in construction activities or in damp or outdoor locations must be protected by an approved ground-fault circuit interrupter which is tested prior to use.

7.1 Mechanical Safety

a. Do not operate a machine unless you have been properly instructed in its use.
b. Before operating any machine, be sure guards are in place and in good condition.
c. At all times, be alert to the task being performed.
d. Ensure that equipment or machinery is physically stable so that it will not tip or move during operation.
e. Before starting any machine, ensure that everyone is clear of any moving parts. Allow adequate clearances to prevent unexpected accidents.
f. Do not use your hands/body or a makeshift device to brake or slow down moving machinery.
g. Do not inspect, clean, repair, or clear a jam on any machine or other mechanical equipment except as specifically noted in the operating procedure, you are properly trained, the primary power is shut off, and the control switch is tagged and locked out.
h. Do not wear jewelry, loose clothing, or unrestrained long hair when working on machinery with moving parts.
i. Use the proper tool for the job. Do not use or fabricate makeshift tools.
j. All personnel servicing or working with robotic mechanical systems must follow safety work practices according to regulatory requirements. Robotic safety training is required when working around or performing service on a robot.

7.2 Powder (Explosive)-Actuated Fastening Tools - Blasting

a. Blasting and the use of explosives must be inspected, handled, and used in compliance with applicable requirements including, but not limited to, licensing of the operator.
b. Any proposed use of explosives on IBM sites must be approved by and coordinated with the IBM Representative.
c. For each day of on-site blasting, contractors must obtain approval from the IBM Representative prior to the first blast.
d. All explosives and caps must be removed from the IBM facility at the end of each workday.
e. Blasting equipment must be stored in an approved magazine while at IBM.
f. "Pre-warning" and "all clear" signals must be sounded for each blast.
g. The type and size of fastener to be used shall be compatible with the type and size of material which the fasteners are to be driven into.
h. Powder-actuated tools shall not be used in explosive or flammable atmospheres.
i. Powder-actuated tools shall not be loaded until just prior to the intended firing time.
j. Loaded powder-actuated tools shall never be left unattended.
k. Powder-actuated tools shall never be pointed at anyone.
l. The area where firing is performed is the DANGER area. The DANGER area shall be defined before approval and shall be secured during firing by appropriate means. At a minimum, all people in the DANGER area shall wear appropriate personal protective equipment.
m. Spent and misfired cartridges must be disposed of in accordance with manufacturer instructions.

7.3 Power-Nailers

a. Power-nailers must follow all applicable requirements and be approved by the IBM Representative.
b. Use is limited to structurally compatible locations and must be controlled to protect personnel in or near the area of use.
c. When using air-powered (pneumatic) tools, use care when handling the hose. Turn off all air to the tool when you are not using it. Ensure that proper PPE is worn, including but not limited to Sturdy Footwear and Hearing Protection.
d. Safety clips or retainers must be securely installed and maintained on pneumatic impact tools to prevent attachments from being accidentally expelled.

Material Handling

8 General Requirements

a. The movement of significant amounts of materials, tools and equipment must be coordinated with the IBM Representative.
b. Carts, tools, materials and equipment must not be left unattended and must be managed to ensure emergency egress aisles are not obstructed.
c. Care must be taken when moving materials to ensure that people are not injured and that building structural components are not damaged. Damage will be charged to the Contractor. The following preventive measures must be used when moving materials:
   - Materials, tools, and equipment are to be transported through designated areas only.
   - Piping, conduit, ladders, etc. must be transported with the forward end of the material raised above head height to reduce the possibility of striking oncoming personnel. Or, if more than 3 meters (10 feet) long, must be carried by at least two persons, each supporting one end of the material to be transported.
   - Caution signs or signal people may be required at corridor intersections to alert personnel.
   - Floor load ratings must not be exceeded.

8.1 Loading Docks

a. IBM Managed Shipping and Receiving dock operations, contractors & subcontractors shall comply with the following:
- Ensure personnel have received adequate instruction on dock equipment, use and limitations and dock safety devices
- Inspect dock equipment and dock safety devices before use
- Report any incidents, defects or damage found to the IBM representative
- Ensure rear wheels are chocked and secured, or dock-lock system engaged
- Ensure trailers disconnected from tractors are supported with 2 trailer jacks at the trailer nose
- Ensure vehicles are not left unattended and engines are turned off
- As needed, utilize a trained spotter for trucks backing into the loading dock

b. Contractors who manage IBM docks, including other contractors / subcontractors using these docks:
- Ensure dock personnel (including contract employees) have received adequate instruction on dock equipment, use and limitations and dock safety devices
- Ensure equipment is in good working condition and taken out of service when damaged or in need of repair
- Ensure lift devices are marked with load capacity
- Ensure doors, truck lifts, dock plates, and levelers are properly maintained and equipped with safety skirts
- Ensure powered overhead doors are controlled from the interior only and require constant operator control to maintain downward motion of the door
- Ensure automatic powered doors with safety devices (reversing bumpers) to prevent accidentally crushing people or materials are tested per manufacturer's specification
- The Contract Company shall report any incidents, defects or damage found to the IBM representative
- As needed, utilize a trained spotter for trucks backing into the loading dock

8.2 Elevators

a. Freight elevators, if available, are to be used when moving materials, tools and equipment between floors. Passenger elevators may not be used for such purposes without authorization from the IBM Representative.
b. Freight elevator doors must be closed when the freight elevator is not in use.
c. Appropriate precautions must be taken to ensure elevator walls are not damaged when moving tools or construction materials.
d. Elevator weight limitations must not be exceeded.

8.3 Helicopter Lifts

a. Any proposed use of a helicopter to hoist, set, install or move equipment or materials must be coordinated with and have prior approval of the IBM Representative.
b. Helicopter lifts must be made in conformance with all applicable requirements and aviation regulations and safety standards.
c. Prior to the start of any operation involving the use of a helicopter, a thorough survey of the conditions and hazards on the job site must be made to ensure a safe operation.
d. All nonessential IBM and contractor personnel must be evacuated from areas of possible danger during the lift and the hazard area shall be blocked off or otherwise guarded to prevent unauthorized people from entering.
e. Wire ropes, chains, ropes, slings and other rigging equipment must be inspected before use and as necessary during use to ensure their safety. Defective equipment must be removed from service immediately.

8.4 Mobile Cranes and Hoists

Cranes and hoisting equipment are powered or manually operated devices used to lift, or to lift and transport, suspended loads. Special precautions are necessary to control hazards associated with hoisting operations. Lifting equipment includes, but is not limited to, hoists, cranes, slings, shackles, grabs, beams, gantries, and lifting bars. The following requirements shall be followed:

a. Any use of lifting equipment, including mobile cranes, must be coordinated with and approved by the IBM Representative (a permit may be required).
b. Unless stated in the contract agreement, contractors may not use IBM hoists and power lifting apparatus (except for dock lifting equipment), nor attach their hoisting equipment to IBM property unless the attachment point is rated to withstand the load and it is specifically authorized by the IBM Representative.
c. Contractor cranes, hoists and slings must meet all applicable requirements.
- All lifting equipment shall be designed, built, and rated to withstand the applied load.
- Every mobile crane, tower and derrick must be inspected by a competent person before being erected or operated for the first time.
- Inspections shall be performed on lifting equipment and lifting accessories prior to each use.
- All required certifications, licenses, and inspections for equipment and operators must be current, documented and available for inspection.
- Detailed, documented lift plans shall be made available upon request, including the travel movement plan of the crane.

d. Mobile crane lifts must not be performed over or adjacent to occupied areas. If such work is necessary, it must be coordinated by the IBM Representative and the occupied area cleared of all personnel not associated with the lift before starting the work. The hazard area shall be blocked off or otherwise guarded to prevent unauthorized people from entering.
e. Mobile cranes must not be operated during adverse weather conditions such as high winds, heavy rains, thunderstorms, or poor visibility.

f. At a minimum, mobile cranes, including portable crane derricks, power shovels, or similar equipment, may not be operated within 3 meters (10 feet) of overhead electric power lines rated at 50kV or less. For overhead electric power lines rated over 50kV, the minimum clearance shall be 3 meters (10 feet) plus 1 centimeter (0.4 inches) for every 1kV over 50kV.
g. Wire ropes, chains, ropes, slings, and other rigging equipment must be inspected by a competent person before use and as necessary during use to ensure their integrity. Defective gear must be removed from service.
h. Mobile cranes must always be attended or, when left unattended, properly secured.
i. Where necessary, the Contractor shall supply trained signal people.

8.5 Powered Industrial Vehicles (PIVs)

a. Contractors are not permitted to operate any IBM owned powered industrial vehicle unless provided for by the contract agreement by IBM.
b. PIVs and their use must comply with all applicable requirements.
c. There are areas that shall be shared by pedestrians and powered vehicles. Contractors traveling in these areas shall stay in designated walkways, stay alert, and be courteous.
d. Contractor PIV operators must be authorized by their employer and trained and licensed per applicable requirements.
e. If requested by the IBM Representative, contractors must provide information on operator training, PIV daily inspections and any preventative maintenance required by the manufacturer.
f. PIVs must be maintained in good working order with no unapproved modifications, missing guards, leaking fluids, etc. Nameplates and markings provided by the manufacturer must be maintained in legible condition.
g. Powered industrial vehicles and any associated attachments or rigging equipment must be inspected before their initial use each day by a trained operator. Defective equipment must be taken out of service.
h. PIV operators must remove the key before leaving a PIV unattended. A vehicle is considered unattended when the operator is 7.6 meters (25 feet) or more away from the vehicle or whenever the operator leaves the vehicle and it cannot be seen.
i. Fossil fuel powered industrial vehicles (gasoline, liquefied petroleum gas [LPG], diesel or other internal combustion engines) must not be operated inside IBM buildings unless approved by the IBM Representative. Fueling operations must be done outdoors. Air monitoring must be conducted and documented to meet all applicable requirements. If permission is granted to use an internal combustion powered vehicle inside a building, a contingency plan must be provided stating how situations like a fuel leak or running out of fuel will be handled.
j. LP gas engines must be equipped with oxy-catalyst exhaust purifiers and be inspected before approval for use can be authorized.
k. When gasoline is required, adequate means of extinguishing any fire shall be provided.
l. Electric PIVs must be charged in designated charging stations or where designated by the IBM Representative. Electric PIVs may not be charged in emergency egress aisles.
m. PIVs, except those guided by a walking operator, must be equipped with a warning device (horn, gong, or other audible device) which can be heard clearly above ambient noise levels.
n. When using docks to load or unload materials from a delivery vehicle with a PIV, the brakes must be set and wheel chocks placed under the rear wheels of the delivery vehicle, or dock locks engaged, prior to and during loading/unloading.

Work at Elevations

- Contractors shall comply with all applicable requirements for fall protection.
- Generally, personal fall arrest, personal fall restraint, or other positioning devices shall be worn by those employees whose work exposes them to falling more than 1.8 meters (6 feet) from the perimeter of a structure, unprotected sides and edges, leading edges, and/or through shaft ways and openings not otherwise adequately protected. In addition, safety nets and guardrails may be used.
- A Personal Fall Arrest System must be used to protect an employee in a fall from a working level. It must consist of an anchorage system, connectors, body harness and may include a retractable lanyard, deceleration device, lifeline, or suitable alternative.

9 Elevated Work Areas

a. Provisions must be made to ensure workers are not at risk of falling from elevated work areas. In construction, elevated work areas are ones where a worker may fall 1.8 meters (6 feet) or more. For maintenance and other non-construction work activities, workers must be protected where they may fall 1.2 meters (4 feet) or more to a lower level. Some examples include:

- work within 3 meters (10 feet) of an unprotected roof edge, platform or floor opening work on ladders when the work involves pushing, pulling, or other actions which may dislodge the worker or ladder
- work in aerial baskets or on certain scaffolds
- above machinery, projections, or sharp objects

b. Contractors working in elevated areas must be protected by standard guardrail systems, safety nets, personal fall arrest systems or personal fall restraint or positioning systems. Personal safety equipment must be provided and installed by the contractor and must meet and be used in compliance with applicable requirements. Body belts may not be used as part of a fall arrest system.
c. Contractors must be properly trained on the use and limitations of personal safety equipment prior to working at elevations.
d. Lanyards and lifelines must be secured to stable and adequate supports. Sprinkler system or utility piping must not be used.

Anchorage points for fall arrest systems must be approved by the contractor's competent person and the IBM Representative.

e. Fall protection must be used by employees on suspended or portable scaffolds where handrails and toe boards are not provided (this applies when worker is 1.8 meters (6 feet) or more above the ground or floor level).
f. Precautions must be taken to protect others from the hazards of falling materials. Standard toe boards must be provided where there is the potential for objects to fall from the working surface. Tools, debris, pipes or other material must not be left on stepladders, above suspended ceiling panels or other places where they may be dislodged and fall.
g. Contractors must not drop or throw material, tools, or other objects from roofs or other elevated work areas.

9.1 Ladders

a. The design and use of ladders must comply with all applicable requirements and manufacturer's recommendations, and used only for the purpose for which they were designed. Job-made ladders are not permitted.
b. Contractors are not to use IBM portable ladders unless specifically stated in the contract. Ladders must be identified with the contractor's company name.
c. The maximum intended load (personnel, tools, equipment, materials, and other loads to be placed on the ladder simultaneously) must not exceed the rated capacity of the ladder set by the manufacturer.
d. Ladders must be inspected prior to use and periodically by the contractor's competent person. Defective ladders must be immediately removed from service and tagged to prevent use until properly repaired. Ladders should not have:
   - broken, frayed, or worn ropes
   - cracks
   - inoperable extension devices
   - loose or broken steps
   - missing or damaged safety feet
e. Wood ladders must not be painted with opaque coatings and not be used in clean room areas.
f. Ladders with non-conductive side rails must be used for electrical work where the ladder could contact exposed energized electrical equipment.
g. Ladders must not be placed in front of doors or door openings unless the door is blocked open, locked shut, or attended by a responsible person.
h. Ladders used in hallways, high traffic areas, or other public areas must be identified with barricades, traffic cones, or by another employee.
i. Ladders must be set up only on stable, level, non-slippery surfaces unless adequately secured to prevent displacement. Ladders must be secured when necessary to prevent movement due to windy conditions.
j. Straight and extension ladders must be set up such that the distance between the base and the vertical wall is approximately one-fourth the working length of the ladder. When this type of ladder is used to access roofs or platforms, it must extend at least 0.9 meters (3 feet) beyond the roof edge, parapet, or platform. Extension ladder sections must not be used when separated.
k. The top two steps of a step ladder must not be used as steps. Step ladders must not be leaned against a vertical wall as a substitute for a straight ladder.
l. When ascending or descending a ladder, the user must face the ladder and maintain three points of contact with the ladder.
m. Portable ladders must be secured at the end of each work day.
n. Fixed ladders more than 6 meters (20 feet) in length or positioned at an angle greater than 75 degrees require the use of a climbing harness unless the ladder is equipped with a fixed safety cage.

9.2 Overhead Work

a. Overhead work may not be conducted in such a manner that it creates the possibility of a falling object striking any person below.
b. Contractors must not work above suspended ceilings when areas below are occupied.
c. Contractors performing overhead repairs or construction activity from ladders or other lifting aids must use barricades, cones, caution tape or other alerting techniques to warn people of the potential hazard.
d. Contractors must wear hard hats when they work in areas or perform operations where overhead work is taking place.

9.3 Roof Work

a. Roofing work must be in compliance with all applicable requirements.
b. Where access to the roof is restricted, the contractor shall request badge or key authorization from the IBM Representative.
c. It is preferred that when buildings are provided with employee internal roof access, the internal access should be used instead of portable ladders, scaffolds, etc. outside the building.
d. Contractors shall not work on the roof if the weather is a hazard or where the roof is damaged and presents a hazard.
e. Each contractor must assure that at least two employees are present at all times when work is being performed on a roof.
f. The contractor shall not allow employees to work within 3 meters (10 feet) of an open edge of any roof without the appropriate protection such as standard railings and/or fall protection.
g. Roofing contractors engaged in leading edge work or precast concrete construction, who can demonstrate it is infeasible or creates a greater hazard to use conventional fall protection, may use a documented 'Safety Monitoring System." For open flame work on a rooftop, refer to Section 4.7 (Welding, Cutting, Open Flame Work) under Fire Safety.

9.4 Openings in Floors, Roofs and Walls

a. Openings made in floors, roofs and walls shall be approved by and coordinated with the IBM Representative.

b. All floor and roof openings (including raised floor tile(s)) shall be guarded so that no one can fall in or through the opening by one of the following:
   - A cover of standard strength and construction that is secured to prevent movement from the opening. While the cover is not in place, the floor hole must be constantly attended by someone or must be protected by a standard railing.
   - A standard railing that is secured (e.g., bolted) to the floor with chains attached at the top and mid rail at the entrance way and toe board on all exposed sides.
   - Wall openings which pose a hazard because of the location shall also be guarded as defined above.

c. Raised floor tile(s) shall be removed and reinstalled by the IBM Representative; exceptions require prior approval from the IBM Representative.
   - IBM Almaden: Contractors may remove raised floor tiles as necessary for their work in a safe manner.

d. Raised floor tile(s) shall be removed using the appropriate floor tile removal tool. Standard railings must be positioned (as a barricade) around the tile(s) to be removed and then be bolted to the floor after the tile is removed. Removed raised floor tile(s) shall be properly stored to prevent a fall or trip hazard.
e. Reinstalled raised floor tile(s) must be flush with the adjacent flooring.

9.5 Scaffolding

a. The use and construction of scaffolding must comply with all applicable requirements.
b. The erection and dismantling of scaffolds must be performed under the supervision and direction of the contractor's competent person.
c. The competent person shall log the inspection of each scaffold.
d. Anchorage and bracing must be provided so that scaffolds are prevented from swaying, tipping or collapsing.
e. The footing or anchorage for scaffolds must be sound, rigid and capable of carrying four times the maximum intended load without settling or displacement. Davit (connection) points used to attach suspended scaffolds to the building structure must be approved by the contractor's competent person.
f. Required tie-in connections to the structure must be made as soon as the scaffold reaches a tie-in connection point, rather than waiting until the entire scaffold is erected.
g. Guardrails, guardrail screens, toe boards and outriggers must be used when required.
h. Where fall protection is required and a standard guardrail system is not provided, a personal fall arrest system must be used.
i. Each person on a suspended scaffold must be equipped with a fall protection system using attachment points that are separate from the scaffold attachment points. Anchorage points for fall arrest systems must be approved by the contractor's competent person. Lanyards shall be a minimum of 1.3 centimeter (0.5 inch) nylon, or equivalent, with a maximum length to allow for a fall of no greater than 1.8 meters (6 feet), and secured independently from the scaffold.
j. A safe and unobstructed means of access, such as a walkway, stair, or ladder, must be provided to and from all scaffold platforms.
k. Platform planking must be scaffold grade or equivalent, and be secured to prevent movement.
l. Wheeled scaffolding shall be equipped with lockable wheels and be locked when employees are on the scaffold.

IBM Poughkeepsie:

- Contractors shall maintain a color-coded tagging system for scaffolding, where "red" indicates the scaffold has not been inspected by the competent person and "green" indicates the scaffold has been inspected by the competent person.

Excavations/Earth Moving

10 Earth-Moving Equipment

a. All operators of earth-moving equipment (including scrapers, loaders, bulldozers, graders, back hoes, tractors, etc.) must be knowledgeable and experienced in the operation and safety features of such equipment.
b. While operating such equipment, the hazard area must be barricaded by a fence or surrounded by black-and-yellow "CAUTION - DO NOT ENTER" tape.
c. Before initial use each day, the operator must inspect the equipment to verify its condition and to ensure safe use, including, but not limited to, ensuring good operating condition of brakes, seat belts, horn, back-up alarm, and wipers, if applicable.

10.1 Excavations and Trenches

Excavations include, but are not limited to, any man-made cut, cavity, trench, or depression in the earth's surface formed by earth removal. Prior to starting any excavation work, contact the IBM Representative to obtain permit or approval and have excavation work reviewed by Facilities, on-site Emergency Services (where present), Utility Plant, Gas Group, Environmental, and Security, as necessary.

a. All excavation and trench work must be performed in accordance with applicable requirements and/or site processes (e.g., Solids Management Protocol or water contamination policies).
b. Notify the IBM Representative prior to starting excavation/trenching work.
c. Contractors shall assign a designated person who is competent in all aspects of trenching and excavation to oversee excavation activities. Excavations over 6 meters (20 feet) deep must be designed by a professional engineer.
d. No excavation or trench work shall be performed until the existence and locations of underground pipes, electrical conductors, footings, etc., have been determined using a radar-penetrating underground survey. Adequate precautions for chemicals, vapors, and gas lines shall be in place prior to excavation to avoid a release.

e. Excavations and trenches must be adequately identified and barricaded with physical protection. All equipment left unattended at night, adjacent to a highway in normal use, or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, to identify the location of the equipment.
f. Daily inspections of excavations must be made by the contractor's competent person. If there is evidence of possible cave-ins or slides, all work in the excavation must cease until necessary safeguards have been taken.
g. Excavations such as ditches or trenches 1.5 meters (5 feet) or deeper must be shored, braced or sloped to prevent cave-ins or slides.
h. Regardless of the depth of the excavation, when heavy equipment is operated nearby, the shoring or bracing must be able to withstand the extra load.
i. All excavated material (spoils), rock debris or equipment must be effectively stored or retained at least 0.6 meters (2 feet) from the edge of the excavation to protect employees from falling objects.
j. Contractors must provide ladders, stairways, ramps, or other safe means of egress in all excavations that are 1.2 meters (4 feet) deep or more so that a worker does not need to travel more than 7.6 meters (25 feet) in any direction before being able to exit the excavation.
k. Where employees or equipment are permitted to cross over excavations, walkways or bridges with standard guard rails must be provided. Pedestrian bridges must be designed by a competent person and have sufficient strength to prevent vertical deflection of the center of the walkway. All surfaces which a person could reasonably contact should be free of splinters, nails or protrusions which may cause injury.
l. Any project that involves soil excavation must have a soil-and-erosion-control plan that must be given to the IBM Representative and reviewed by the necessary IBM groups, such as Environmental, and apply by any location stormwater pollution prevention protocol.
m. Employees shall not work in excavations in which there is accumulated water or in excavations in which water is accumulating unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation.

IBM Almaden:
Contractors shall be expected to follow Best Management Practices (BMPs) as defined by the Santa Clara Valley Urban Runoff Pollution Prevention Program. This may include the use of hay bales, silt fences, anti-track pads and inlet protection.

Confined Spaces

11 Permit-Required Confined Spaces (PRCS)

For the purpose of this section, a confined space includes, but is not limited to, a manhole, tank, pit, vault, vessel, silo, boiler, or excavation that:

- is large enough that an employee can bodily enter and perform work
- is not designed for continuous employee occupancy
- has limited or restricted means for entry or exit

In addition, the confined space must be treated as a permit-required confined space if it may contain or does contain one or more of the following:

- an internal shape that could trap or asphyxiate
- a material that has the potential to engulf an entrant
- a potentially hazardous atmosphere (toxic, oxygen-deficient, or flammable)
- any other serious safety or health concerns (high voltage, steam, engulfing materials)

The objective of the Permit-Required Confined Space (PRCS) program is to ensure that personnel who enter PRCSs:

- are aware of the hazards involved
- are properly trained to deal with such hazards
- have appropriate personal protective equipment
- are capable of being rescued should an unforeseen event occur

Contractors must comply with all applicable regulatory requirements regarding confined space entry including all requirements listed on the confined space entry permit.

PRCSs are identified by posted danger signs or other equally effective means to inform exposed individuals of the existence and locations of and the dangers posed by these spaces. If a PRCS does not have an appropriate sign or the sign is illegible, notify the IBM Representative to arrange for another sign to be posted.

11.1 PRCS Pre-Entry Requirements

a. IBM or the IBM Representative will provide contractors with information about elements or hazards that make the area to be entered a PRCS.
b. Contractors must have a written confined space program and evidence of confined space training documentation prior to conducting work. The Contractors' written procedures and training documentation for PRCS entry shall be provided to the IBM Representative, on-site Emergency Services, or Global Safety, as applicable. Training documentation must indicate the name of the company, the names of the employees, and the dates of training.
c. Contractors must not enter any permit-required confined space without the approval of the IBM Representative and an entry permit. Contractors shall follow location-specific requirements for PRCS entry.

d. Contractors must obtain a confined space entry permit to perform a PRCS entry. Notify the IBM Representative to follow the location-specific PRCS procedures to obtain a permit. The permit must include, but not be limited to, safe-entry requirements such as:
   - atmospheric testing
   - confined-space attendant(s)/stand-by personnel
   - guarding space entrance and exit
   - hazard isolation
   - lockout/tagout/blockout
   - personal protective equipment
   - removal of contents
   - rescue (contractor may need to make special arrangements and provide for use of non-entry retrieval systems whenever feasible)
   - ventilation

e. Contractors shall review with the IBM Representative proposed entry procedures, confined space release, and, if requested, employee training records. Contractors shall perform a hazard evaluation of the PRCS prior to entry.
f. Contractors must provide their own atmospheric-testing equipment. If the initial atmospheric levels in a PRCS are different from ambient air and the hazards cannot be eliminated, the job cannot proceed without the IBM Representative consulting with an IBM Global Safety representative.
g. Additional air measurements may be required depending upon the expected or added hazards in the confined space (e.g., painting, welding). Measurements are to be made by trained personnel with calibrated equipment to ensure a hazardous atmosphere is not present.
h. All permit-required confined spaces should be ventilated by the use of a positive pressure ventilation system arranged to avoid recirculation of contaminated air.
i. Contractors must provide training for each category of participant, for example, supervisor, entrant, and attendant (stand-by person).

11.2 PRCS Entry Requirements

a. The contractor's entry supervisor will be expected to authorize entry and supervise the contractor's entry personnel. All required permits and release documentation must be made available at the entry location.
b. At least one trained attendant must be required to remain at the confined space entrance during an entry and must maintain effective two-way communication with the entrant.
c. If any unforeseen hazardous conditions are met during entry, the confined space must be evacuated immediately and the IBM Representative notified immediately. The permit to enter is then considered terminated (ended).
d. The entry supervisor shall terminate entry and cancel the permit when:
   - the work as described in the permit has been completed, or
   - a condition not allowed by the permit arises, or
   - the shift for the employees engaged in the entry is completed

e. Contractors must provide a process to "close out" permits and/or releases when work is completed and notify the IBM Representative of any changes or concerns regarding the confined space that was entered.

IBM Almaden:
After a review of the contractor's permit, the contractor will be given a *Contractor Confined Space Release*. A new release will be required for each shift of entry workers.

Note: Permits may be required for entry into areas and crawlspaces above drop ceilings when the work requires the entrant's entire body to be inside a ceiling area or space. In these cases, the IBM Coordinator shall be notified in advance. Depending on the nature of the work, permits or special precautions may be required.

Lasers & Radiation Equipment

12 Lasers

Lasers may be used in some IBM work areas. Lasers used by IBM have exposure controls and warning lights and signs. Lasers are capable of producing injuries to the eye and, under some circumstances, the skin if improperly used or inadequately controlled. Laser equipment must be operated using accepted industry practices for the safe use of lasers including, but not limited to, those promulgated by ANSI.

a. Regulations governing lasers vary geographically. It is the responsibility of the contractor to be familiar with and comply with all applicable regulations when working with lasers.
b. Contractors may not bring lasers onsite without the approval of the site IBM Laser Safety Officer.
c. All laser tools must be properly labeled and certified by the appropriate governing regulatory authorities.
d. "Horseplay" with laser equipment is not permitted.
e. High power lasers (Class 3b and 4) are not permitted unless specific approval is obtained from the IBM Representative and the following information is provided:
   - proposed location of use
   - name of the qualified operator (operator must have evidence of training)
   - laser characteristics (class, power, wavelength, pulse characteristics)

- procedures to be used to prevent exposure to personnel in and around the locations of use

f. At a minimum, all entrances and approaches to laser work areas must be closed off or shielded from laser radiation as approved by the IBM Representative.
g. Access to laser work areas must be restricted to authorized personnel.
h. Required eye protection must be worn as appropriate.
i. Standard laser warning signs must be posted at entrances, approaches and operations areas.
j. Lasers must be secured when not in use.
k. Anyone operating a rotating beacon laser, fixed beam continuous, or pulsed laser must be trained in the safe use and operation of the specific laser device. A copy of the training certificate shall be provided to the IBM Laser Safety Officer prior to operation.
l. The IBM Laser Safety Officer must be informed during the planning process for the work to allow time for an evaluation of the hazards associated with use of the laser, develop appropriate control measures, and establish a Nominal Hazard Zone (NHZ).
m. Only persons who are authorized, properly trained, and protected may have access to the beam path at points which exceed the Maximum Permissible Exposure (MPE) level.
n. Screens, barriers, personal protective equipment, and administrative controls shall be used to protect personnel inside of the NHZ.
o. The laser beam shall not be aimed at any manned vehicles, such as automobiles or aircraft.
p. The laser beam shall not be aimed at any windows, mirrors, or other reflective surfaces not part of the tool.
q. The laser must be mounted securely either above or below eye level.
r. The laser beam must be terminated with a beam stop and must be turned off when not in use.

New York State:
Where applicable, a copy of a valid certificate of competence issued by the NYSDOL is needed for each employee operating a mobile laser. (Refer to Industrial Code Rule 50 for information on NYSDOL certification requirements.)

12.1 Ionizing Radiation

a. Sources of ionizing radiation that may be in use at IBM include radioactive materials or other radiation producing devices, including x-ray accelerators, Portaspecs, and radiographic tools. Warning signs are posted where ionizing radiation sources are used.
b. Contractors must obtain authorization from the IBM Representative and must notify IBM's Radiation Safety Officer prior to bringing and/or using tools and equipment utilizing ionizing radiation sources on to IBM premises. The following information needs to be provided:

- proposed location of use
- name of qualified operator (operator must have evidence of training as required)
- description of the material/device and the planned operation
- proof of a current license (copy) if a license is required by the regulatory agency granting authority to possess the material/device
- proof of calibration for any portable radiation detection instrumentation to be used
- procedures to be used to prevent exposure to personnel in and around the location of use. (In some cases, this might require control of an area outside the operations area)
- warning signs placed where ionizing radiation sources are in use according to applicable requirements.

c. Radiation sources must not be left unattended during use. No radiation sources may remain unattended overnight on IBM property.
d. Do not work on equipment capable of producing ionizing radiation while shields are removed or interlocks are defeated.
e. Do not perform work immediately above (or below in raised floor areas) equipment capable of producing ionizing radiation. Equipment must be shut down prior to performing any work in such areas.

12.2 Non-Ionizing Radiation

a. Sources of non-ionizing radiation that may be in use at IBM include radiofrequency, microwave, magnetic field, ultraviolet and infrared producing devices.
b. Contractors must review the need for the use of non-ionizing radiation devices or equipment with the IBM Representative prior to use.
c. Contractors are responsible for:

- posting appropriate warnings and providing necessary shields or other safety devices
- using trained and qualified operators to access portions of the tool in which there is a potential exposure to non-ionizing radiation
- training should address an understanding of hazards associated with non-ionizing radiation including, but not limited to:
  - thermal effects, burns, electrical shock and fires
  - using required personal protective equipment
  - setting up and controlling access to any operations areas as required by applicable requirements
  - following established procedures for working safely as exposures should be kept as low as reasonably achievable (IEEE C95.1)

d. There may be instruments that produce strong magnetic fields. The magnetic fields are always present, even if the electrical power is shut off. All items affected by magnets, including tools, hardware, medical implants or prostheses and cardiac pacemakers must be kept out of the magnetic field and away from the magnet. Warning signs are posted and boundary lines marked on the floor of areas using strong magnets.

Electrical Safety

13 Electrical Safety

The primary safety procedure to minimize the risk of injury due to exposure to electrical energy is to de-energize and perform the work in an electrically safe condition under lockout/tagout. It shall be IBM's and the contractor's goal to develop work procedures where it is feasible to work under de-energized lockout conditions.

Contract employees servicing electrical equipment must be trained according to the requirements set forth by NFPA 70E and OSHA.

Before equipment is serviced, repaired or worked on, the line disconnect switch or circuit breaker supplying power must be tagged and locked in the **OFF** position. Circuits shall be checked with the proper equipment to ensure that all power is removed from the system. Equipment shall not be energized or re-energized until all permanent covers or closures for potentially energized electrical parts or equipment have been reinstalled.

All electrical cords must be protected by linebackers or hung safely overhead.

Clearance around electrical panels shall be maintained according to 29 CFR 1910.303 Table S-1. For equipment with a voltage to ground less than 150 V, with exposed live parts on one side and no live or grounded parts on the other side of the working space, or exposed live parts on both sides effectively guarded by suitable wood or other insulating material, this clearance distance is 3 ft. Higher voltage equipment has a larger clear distance (consult 29 CFR 1910.303 Table S-1).

In those rare circumstances where work on energized electrical parts will be performed, special protective equipment is required. IBM recognizes that electrical hazards are present not only in the form of electrical shock but can also produce life-threatening burns and other injuries associated with arc flash and arc blast.

Contractors must be aware that NFPA 70E minimum requirements for use of personal and other protective equipment are based on average conditions found at many industrial facilities, but available fault currents and fault clearing times can sometimes exceed the average conditions. This means that the NFPA 70E minimum requirements may not be adequate to protect workers in all cases. Contractors must perform their own hazard analysis and decide to upgrade the levels of protection as needed.

Restrictions:
Contractors shall not work on the following unless authorized by the IBM Representative:

- alarm systems
- electrical Load Centers
- live circuits with more than 48 volts
- power-distribution switches rated at 600 volts or more
- security systems
- transformers

13.1 Lockout/Tagout (LOTO) – Control of Hazardous Energy

Contractors working on equipment where the unexpected energization, start-up or release of stored energy could cause injury must have an Energy Control Program which complies with applicable regulations. Hazardous energies may include electrical, mechanical, hydraulic, pneumatic, chemical, steam, pressurized systems, gravity, and/or stored energy, which includes suspended parts and springs.

a. Contractors and IBM must inform each other of their respective lockout/tagout process/procedures through the IBM Representative. All contractor lockout/tagout activity must be compatible with the IBM lockout/tagout process in that, if a device is capable of being locked out, lockout is used. Tagout only is not acceptable where the device is capable of being locked out. Where a lockout is not possible, tagout must include an additional measure such as blocking, removing a circuit breaker, removing the handle from a valve on a gas cylinder, etc.
b. Awareness notification shall be made to personnel potentially affected by the work (but not involved) prior to power shutdown, and again prior to power restoration.
c. Contractors are responsible for training and authorizing their employees to perform lockout/tagout, having written/documented procedures and performing periodic inspections as applicable.
d. If IBM Lockout/tagout procedures exist, contractors may review them for reference, however the contractor is expected to provide written procedures as required by applicable regulations.
e. Cord- and plug-connected equipment with no other forms of hazardous energy are exempt from lockout/tagout requirements. This only applies when the disconnected cord and plug are under the exclusive control of the person performing work on the specific equipment.
f. Personnel who apply locks and tags for the purpose of controlling hazardous energy must be trained and authorized by their employer. The lock and key are to be retained by the individual performing the work, and only this individual is authorized to remove the lockout/tagout devices upon completion of the work.
g. Contractors are responsible for providing and using their own lockout/tagout devices. Locks and tags must be unique to the contractor’s lockout/tagout program, be legibly marked with the authorized employee name and company name, and not be used for any other purposes. Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques.

h. Operating equipment shall be shut down using the normal stopping procedure to avoid any additional or increased hazard. Energy isolating devices shall be located and operated such that the equipment is isolated from every energy source which an individual may be exposed to during the performance of their work.
i. Contractors must not defeat, remove, ignore, or bypass existing locks or tags. Locks and tags must only be removed by the authorized individual who attached it.
j. When more than one authorized person works on equipment under lockout/tagout, each must apply their personal lock and tag using a multi-lock hasp. Alternately, an approved group lockout/tagout procedure may be used.
k. Use administrative locks/tags when removing equipment, systems or circuits from service. Although no maintenance or servicing is underway, there would be a risk of injury if the valve was opened or the circuit energized. Tags with the wording “OUT OF SERVICE” shall be used to identify equipment removed from service or to keep people away from the tagged equipment. These tags are not used to warn of hazardous conditions.
l. Verification of Isolation: Prior to starting work on equipment that has been locked and tagged out, the authorized employee shall verify that isolation and de-energization of the equipment has been accomplished.
m. Equipment with Stored Energy: Some equipment may have a source of stored energy. This energy can be stored as hydraulic or pneumatic pressure, gravitational, mechanical motion, thermal energy or the presence of gas, water, steam or chemicals. All potentially hazardous stored or residual energy must be relieved, disconnected, restrained, or otherwise rendered safe. If stored energy exists, the equipment must be identified with a sign or decal which reads, **“CAUTION: Multiple Energies Present. Lockout/Tagout Required”** or similar language. Proper procedures and equipment must always be used to contain and/or isolate sources of secondary energy.
n. Release from Lockout/Tagout: Before the lockout/tagout device is removed and energy is restored to the equipment, the work area shall be inspected by the authorized employee to ensure that non-essential items have been removed and that the equipment components are operationally intact. IBM and contractor employees in the area shall be notified that the lockout/tagout devices are being removed and the work area is clear.

13.2 Electrical Installations

a. Electrical work and installation must comply with all applicable requirements.
b. IBM requires identification of electrical systems to enhance safety during construction and maintenance activity. The contractor performing the work must ensure that any modified or newly installed electrical system is properly labeled and identified. At a minimum, labeling and identification must be provided as follows:
   - circuit breaker panel schedules must be updated
   - electrical devices and equipment must be labeled with the panel and circuit number, providing their source of power
   - panels/disconnects which supply hard wired equipment must be labeled with equipment identity
c. Contractors must suitably plug or cover gaps or holes in electrical panels, junction boxes or other electrical enclosures. No gaps are allowed. Covers must be installed on unused buss rail taps.
d. New cables installed under raised floors must be enclosed in conduit or be "plenum rated”
e. Permanently attached hardware, capable of accepting a lockout device in the “OFF” position, must be provided for newly installed, relocated, or replaced circuit breakers, switches, disconnects, or other gear. f. Extension cords must:
   - be labeled and listed for intended usage and amperage
   - not be plugged into another extension cord to increase the working length (daisy chained)
   - not run through doorways, walls, or floors
   - maintain at least 2 meters (7 feet) of overhead clearance when installed over aisles and work areas
   - not be fabricated using electrical boxes or duplex receptacles
   - not be fastened to surfaces or placed in a manner that could cause damage to the outer jacket (e.g., stapled) or create a tripping hazard. Exception: tape may be used to temporarily fasten extension cords to surfaces in a manner to not create a trip hazard.
   - Be maintained in good condition
     - Not used if outer jacket has been damaged. Damaged cords must be replaced.
     - Not used if caps and plugs are damaged. Damaged caps and plugs must be replaced with devices that are approved for the purpose by a nationally recognized testing laboratory.
   - Properly be rated for the connected equipment
   - Be plugged into an approved GFCI device
   - Be a three-wire type with a three-prong plug and used only in continuous lengths without splices or connectors. Two-wire cords may only be used with double insulated tools.

13.3 Electrical Safe Work Practices for Construction

a. Electrical safety-related practices must be used to prevent electric shock, burns and other injuries resulting from electrical contact and arc/flash/blast exposure when work is performed near or on equipment or wiring. These practices include, but are not limited to, the following:
   - Exposed live electrical parts must be de-energized, locked out and tagged before working on or near them.
   - Nonmetallic safety glasses must be worn.
   - Conductive jewelry must not be worn.
   - Circuits must be checked with the proper equipment before work is started to ensure that no voltage is present.
b. Tools and test equipment, including leads, must be properly rated, inspected prior to use, and appropriate for the work environment.
c. Plug-connected equipment and tools shall be grounded by a ground pin on the plug unless the equipment or tool is labeled as

"double-insulated."

d. Receptacle outlets, portable tools and electrical equipment used in construction activities or in damp or outdoor locations shall be protected by an approved ground-fault circuit interrupter (GFCI), which is tested prior to use or according to manufacturer's instructions.
e. Properly rated personal protective equipment shall be worn commensurate with the hazard level determined.
f. Bulbs on temporary lights must be guarded to prevent accidental contact except where they are deeply recessed into the reflector. Temporary lights must not be suspended by their electrical cords unless designed for such use.
g. Conductive ladders (portable metal ladders) must not be used when working near electrical equipment.
h. Construction activity in electrical vaults in proximity to exposed medium voltage (1kVac to 38kVac) electrical equipment within 7.6 meters (25 feet), or where inadvertent contact could occur, must be reviewed by the IBM Representative prior to the start of work.
i. Task lighting must be provided such that adequate illumination is provided for all working spaces.

13.4 Work On or Near Exposed Live Electrical Parts – >50 Volts (hazardous energy capable of producing a harmful arc/flash or electric shock)

Live electrical servicing is to be avoided with rare exception and must not be performed solely for convenience. For live electrical servicing to be deemed necessary, it must meet the following criteria:

a. Where de-energizing the equipment will introduce additional or increased hazards such as:
   - deactivation of emergency alarm systems
   - removal of lighting from an area, and/or
   - shutdown of ventilation equipment in a hazardous location
b. Where it is not feasible due to equipment design or operational limitations, such as work on circuits that form an integral part of a continuous industrial process that would otherwise need to be completely shut down in order to permit work on one circuit or piece of equipment. Examples of live electrical servicing include:
   - bolting or snapping a circuit breaker into an energized panel
   - pulling wire into or out of an energized enclosure
   - removing a cover from an energized panel to perform work
   - removing or installing buss tap boxes on energized buss rails
   - removing or installing Motor Control Center (MCC) buckets
   - securing or removing a conductor in an energized enclosure
   - wiring a lighting ballast to an energized conductor
c. Live electrical servicing requirements include:
   - Contractor companies must employ a process to authorize and document each instance of live electrical service performed by their employees. Such work must be reviewed with the IBM Representative and an approved Hot Work permit shall be issued prior to any live electrical servicing taking place.
   - Management of affected areas must be notified of live electrical servicing and be apprised of the risks to employees performing the work, and possible interruption to IBM processes prior to such work taking place.
   - Provisions for emergency response must be in place prior to live electrical servicing taking place.
   - Personnel working on or near exposed hazardous voltages (live parts) must be trained and qualified by their employer.
   - Whenever personnel work on or near exposed hazardous voltages either to perform authorized live electrical service, or to perform inspections, troubleshooting, diagnostics, or calibration such as using a volt/amp meter on an energized circuit, PPE and other protective equipment must be selected, used, and maintained as at least minimally required by NFPA 70E – Standard for Electrical Safety in the Workplace®." Copies of this standard can be purchased from NFPA.
   - Work on or near exposed live electrical parts includes contact with any body parts or with tools, probes, or test equipment, regardless of the personal protective equipment being worn.
   - Conductive articles such as rings, metal watch bands, metal-framed eye wear, and metal jewelry must not be worn.
   - Parts and conductors must be considered energized unless under lockout/tagout and an electrically safe condition has been verified.
   - A perimeter boundary must be established with approved warnings.
d. When contractors are performing work on, or associated with, exposed lines or equipment energized at 50 volts or more, the contractor shall ensure that at least two workers are first aid trained per 29 CFR 1910.269(b)(1)(ii) or local requirement.

13.5 Contractor Substation Work: Medium Voltage (1kVac to 38kVac) and High Voltage (> 38kVac)

Contractor facility substation work must comply with all applicable requirements. All work on this equipment must be approved by the IBM Representative prior to execution of the work.

a. Live electrical servicing must not be performed on energized medium-voltage electrical components.
b. Insulated medium voltage cables and other similar parts must be treated as energized until locked out, tested to zero voltage, and grounded as required by the written procedures. If inspection or any work must be done within the approach boundary (within 60 centimeters [2 feet]) for qualified employees, while energized:
   - an arc/flash hazard analysis is required
   - measures must be taken to minimize the available incident energy

- NFPA 70E-compliant PPE must be worn relative to the analysis result

c. Standby personnel with current First Aid, Bloodborne Pathogen (BBP) and Cardiopulmonary Resuscitation (CPR) training must be available in less than 4 minutes.
d. Provisions for emergency response must be in place prior to commencement of work.
e. Written procedures (switching orders) are required for any work on medium-voltage equipment and site identified low-voltage equipment requiring it. Switching orders must ensure that all energized circuits entering equipment, or an area in which work is to be done, are opened at a location remote from the immediate work area.
f. Each switching order step required to take high-voltage equipment out of service must be identified and followed sequentially. At a minimum, switching orders must address the following elements:

- Documenting job briefings, including identification of potential hazards, required before beginning work on high voltage equipment and at least one time each day, or shift, during the work
- Prohibiting of wearing of conductive articles such as rings, metal watch bands, metal-framed eye wear, and metal jewelry
- Selecting, using, and maintaining personal and other protective equipment as required by NFPA 70E
- Listing of all tools required for the job
- Isolating work area to exclude personnel not involved with the work
- Locking and tagging each disconnecting device
- Testing of all exposed terminals, buss ways and connections with an appropriate metering device to verify zero voltage, after the equipment has been de-energized, but before grounds are applied. Such testing must be performed by a qualified person wearing appropriate PPE per NFPA 70E.
- Testing performed to determine whether the potential for any induced voltage or unrelated voltage back-feed from alternate power sources, emergency power supplies, or electronically coupled signals exists
- Applying ground leads capable of conducting the maximum available ground-fault current to exposed circuits, connecting to known ground first and to conductor last. Application of ground leads is performed by a qualified person using appropriate PPE and live-line tools.
- Notifying personnel potentially affected by the work (but not involved) prior to power shutdown and again prior to power restoration
- Complying with applicable requirements for control of hazardous energy (lockout/tagout) and electrical safe-work practices by any personnel not involved in the initial performance of the switching orders (e.g., cleaning of high-voltage switch gear or evaluating and adjusting terminations)
- Creating switching orders signed by the originator and reviewed by the supervising individual and servicing technician
- Restoring power (may be treated as a continuation of the original order or as a separate order)
- Verifying all personnel involved have completed their work and returned to a safe area
- Checking for removal of all tools, tags, locks, and grounds
- Performing "high-pot" or phasing tests, where applicable
- Securing of all panels and covers prior to power restoration

13.6 Work in High Voltage and Electrical Rooms

a. No work in high voltage or electrical rooms may occur without the prior approval of the IBM Representative.
b. No conduit or pipe bending shall be performed in high voltage or electrical rooms. All aisles with switches and controls which operate electrical distribution equipment shall be kept clear of pipes, tool carts, and equipment at all times.
c. Do not store material, debris, tools, or equipment in high-voltage or electrical rooms.
d. Only qualified electricians may perform approved electrical work. Electrical work shall never be performed alone. Only qualified authorized personnel shall be permitted in the work area.
e. Documentation of switching procedures shall be retained.

13.7 Multiple Source Circuits

Some equipment may be powered from more than one source. One example of this type of arrangement is a motor starter that is supplied from a different source than the rest of the motor. Both the equipment and the main breaker shall be labeled to show that there is a second energy source to the equipment. When multiple sources feed a piece of equipment, the Contractor shall install a secondary disconnect that is interlocked with the main disconnect to ensure that all power is interrupted at the same time.

Chemical/Environmental

14 Chemical Information – Hazard Communication

The practices specified in this document are intended to ensure that IBM and all contractors are aware of chemical hazards present while performing their job. Contractors are responsible to understand and implement Hazard Communication requirements and to be aware of the hazards present in the work area. Information about chemical hazards can be provided by posted signs, manufacturer's

labels, and Safety Data Sheets (SDSs). Upon request, IBM will provide information necessary to make this determination, such as the SDS for hazardous chemicals used in the work area or information about the location's chemical hazard labeling program.

The Hazard Communication Standard requires IBM to make SDSs available for those IBM chemicals a contractor's employees may be exposed to while performing work. The IBM Representative will provide the SDSs for hazardous chemicals.

When contractors of other employers are working in the same area, information about the hazardous chemicals used by other contractors, such as the SDSs, may be obtained from the IBM Representative upon written request.

14.1 Chemical Approval

All chemicals used by contractors must be approved by IBM prior to being brought onsite or used on site. Contractors must identify all chemicals planned for use at IBM. Contractors must submit in advance of being onsite a Contractor's Chemical Authorization Request combined with a legible copy of the current Safety Data Sheet (SDS) for each chemical product the contractor plans to use. IBM will respond to the contractor with whether the chemical authorization is approved, approved with restrictions, or not approved.

a. Safety Data Sheets (SDSs) for contractor's chemicals must be provided to IBM by the Contractor, if required. Where possible, the least hazardous chemical shall be used and the amount used on site shall be minimized. Contractors must request approval to use chemical products early enough to avoid scheduling delays.
b. Chemicals requiring prior approval include, but are not limited to, the following:
   - acids, bases, etchants, and chemical corrosives
   - adhesives, glues, cements, epoxies, mastics, and resins
   - aerosols of any kind
   - air and compressed gas dusters
   - air fresheners
   - alcohol and cleaning wipes
   - analytical and calibration chemicals and gases
   - asphalt, roof coatings
   - caulk, caulking compounds, and powdered chalk
   - chemical abrasives, slurries, and buffing compounds
   - cleanroom chemicals
   - cleaners, soaps, bleaches, detergents, disinfectants, degreasers, and strippers
   - compressed and liquefied gas and cryogenic liquids
   - coolants in tanks, containers, and non-vehicular equipmen
   - floor coatings, concrete
   - fuels (diesel or gasoline) in tanks, containers, and non-vehicular equipment
   - greases, oils, lubricants, hydraulic and cutting fluids
   - paints, dyes, pigments, and colorants
   - pesticides, herbicides, fertilizers, and biocides
   - radioactive materials
   - snow and ice melting products
   - solder (acid or resin core), fluxes, and flux removers
   - solvents and thinners
   - Sterno cans and charcoal briquettes
c. No ozone-depleting chemicals (except for refrigerants) may be used at IBM facilities.
d. No asbestos-containing materials may be brought on site or used without specific written approval from IBM.
e. No lead-containing products or materials may be used without IBM approval.
f. No Polychlorinated Biphenyls (PCBs) or PCB-containing equipment may be brought or used on site.
g. Contractors may not apply pesticides without being licensed by the state (if required) and must provide the IBM Representative with a copy of the applicator license.

IBM Almaden:
Trade contractors must submit a legible copy of the current Safety Data Sheet (SDS) in advance for each chemical product the contractor plans to use. All chemical products must be approved in advance by the site Chemical Coordinator.

IBM Poughkeepsie, IBM Rochester:
Chemicals used by a contractor, regardless of how they are acquired or brought on site, must be approved by the IBM Representative and location Chemical Coordinator and appear on each contractor's approval list on the Sphera Chemical and Safety Data Sheet (SDS) inventory system. The contractor's list of approved chemicals may be obtained from the IBM Representative.

IBM Yorktown:
Contractors are required to submit a Contractor Chemical Information Form (CCIF) to the IBM Contractor Chemical Coordinator prior to the start of a project. This includes chemicals that might be in trucks, tool boxes, and trench boxes. IBM will notify the contractor if a chemical cannot be used or if usage restrictions exist. Yorktown maintains a list of pre-approved products that may be used on a regular basis (exceptions include while working in confined spaces, supply air plenums and ducts, or near air intakes, boilers, open flames, or ignition sources).

14.2 Chemical Use

a. Contractor chemicals must have an intact, original and legible label affixed to all containers to identify contents. When a chemical has been repackaged or the manufacturer's original label has been defaced or is otherwise illegible, a replacement label must be used and these labels must meet applicable labeling requirements.
b. Chemicals shall be used in accordance with instructions provided on the label.
c. Contractors must provide all protective equipment necessary to perform their work safely.
d. Prior to starting work, contractors must determine if emergency eyewashes and/or showers are needed. If they are, contractors must identify the location of the nearest eyewash and/or shower station. If none are available within a close unobstructed path from the use of the chemical, contractors must supply a portable eyewash and/or shower.
e. Adequate ventilation must be maintained by contractors to control odors and/or vapors generated from chemical use. Temporary supplemental exhaust may be required to control vapors in adjacent areas. Use of paints containing aromatic hydrocarbons (petroleum distillates) must be used with adequate ventilation. Application after IBM standard working hours may be required. The use of water-based paints is preferable. Review such use or application with the IBM Representative prior to the start of work.
f. Contractors must provide all required chemicals when working in IBM facilities unless the contract document specifies otherwise.

14.3 Chemical Storage

a. Contractors shall remove all chemicals from the site each day unless prior arrangements have been made with the IBM Representative. The IBM Representative may work with IBM Global Safety, the site Fire Marshal, and/or Chemical Management to determine appropriate overnight storage in compliance with applicable fire or building codes, as necessary.
b. Chemical containers must be closed and properly stored when not in use.
c. Overnight storage of 113 liters (30 gallons) or more of flammable paints and/or solvents must be stored in an approved flammable liquid storage cabinet (one-day maximum supply allowed). If an approved flammable liquid storage cabinet is not available, contractors must ensure that flammable paints and solvents are removed from the building when not in use.
d. Flammable liquids must not be stored in areas used for exits, stairways, or normally used for the safe passage of people.
e. Hazardous chemicals must be stored in a chemical storage cabinet or approved chemical storage room.
f. Chemical containers must not be stored directly on the ground. Secondary containment must be used and approved by IBM.
g. Incompatible substances, such as acids and flammables, must never be stored together. Refer to the matrix for additional information on incompatibles.

From	Separation requirements due to incompatibilities							Storage incompatibilities due to chemical reactions. DO NOT STORE WITH:
	T	A	B	F	O	W	P	
Toxics (T) Examples: lead, arsenic, MEK, xylene		X	X	X	X	X	X	Corrosives (A & B), O, F, explosives
Acids (A) Example: sulfuric acid	X		V	V Z	V	V	V Z	O and explosives
Bases (B) Examples: sodium hydroxide, ammonia	X	V		V	V	V	V	O and explosives
Flammables (F) Example: gasoline	X	V Z	V		V	Y	V	T (poisons), explosives
Oxidizers (O) Examples: nitrates	X	V	V	V		V	V Z	A, B (corrosives), T (poisons)
Water Reactives (W) Examples: acids, sodium	X	V	V	Y	V		V	Water
Pyrophorics (P) Example: silane	X	V Z	V	V	V Z	V		Generally, only used in factories and stored outside building due to spontaneous ignition

Legend:

V = *Noncombustible partition. The partition should extend not less than 45.7 centimeters (18 inches) above and to the sides and the rear of the material stored.*

X = *One-hour noncombustible fire-resistive occupancy separation* ***except*** *when approved gas cabinets are used. Due to the explosive potential recognized for the silane family of gases, reinforced concrete separations are recommended.*

Y = Not *allowed; a separate storage room is required.*

Z = *Separation by not less than 6.1 meters (20 feet) may be used as an alternative to a noncombustible partition.*

14.4 Compressed Gas Cylinders

a. Contractors must obtain approval from the IBM Representative before bringing any compressed gas cylinders onto the IBM location.
b. All compressed gas cylinders must be legibly marked with the name of the contents. Cylinder markings must follow the current American National Standards Institute (ANSI) standards and be marked by stenciling, stamping, or tagging.
c. Cylinder owner shall be identified by a tag or other appropriate means.
d. Proper Compressed Gas Association (CGA) fittings must be used. Adapters are not permitted.
e. Gas cylinders that are damaged or contain buildup of scale or rust must not be brought on site.
f. Hose lines must be properly rated, regularly inspected, and tested for leaks. If a leak develops in a cylinder assembly, immediately notify management, on-site Emergency Services (where present) and the IBM Representative.
g. Compressed gas cylinders must be used in well-ventilated areas.
h. Gas cylinder transportation onto and around the site must comply with the following:
   - Valve protection caps must be installed (exception: welding/cutting apparatus).
   - Cylinders must be secured to a suitable hand truck or cart.
   - Cylinders shall not be carried by the bottle valve, regulator, or protective cap.
   - Cylinders must never be rolled or dragged; an approved cart must be used.
   - Cylinders must never be dropped or allowed to strike each other or other surfaces.

i. Single oxygen and acetylene cylinders with the associated regulator and hose assembly are considered in use or ready to use. If frequently used (e.g., at least once per week), they may be placed together, either on an approved welding cart or secured to a building structure.
   - Cylinder carts shall be specifically designed to hold/carry oxygen and acetylene cylinders in the upright position and cylinder shall be securely held to the cart (such as with straps or chains).
   - Both cylinders shall either have valves closed with protection caps on or be connected to a properly functioning regulator.
   - Check valves, which prevent the flow of gas from one cylinder through the torch into the accompanying cylinder, shall be installed on all oxyacetylene welding equipment.
   - Cylinders in storage / not-in-use must comply with the following**:**
     Cylinders must be secured and stored vertically.
     - Valves must be closed when not-in-use and at the end of the day's work.
     - Protective caps must be replaced on cylinders not-in-use.
     - Torch valves must not be relied on for cylinder shut off.
     - Any unusual circumstances that require overnight cylinder storage must be approved by the IBM Representative prior to storage.
     - Incompatible gases must not be stored together.
     - Follow applicable OSHA 1910 or 1926 standards (or state equivalents) surrounding compressed gasses.

IBM Almaden:

Compressed gas cylinders must be secured with two fireproof restraints.

a. Use of compressed fuel-gas cylinders must comply with the following:
   - Cylinders must be kept far enough from welding or cutting operations so that sparks, hot slag, or flame will not reach them. When such a location is impractical, fire-resistant shields must be provided.
   - Acetylene cylinders must not be transported, used, or stored with the cylinder lying down; this can result in the release of solvents.
   - Except when in use or attached and ready for immediate use, oxygen cylinders must be separated from fuel-gas cylinders by a minimum of 6 meters (20 feet) or by a non-combustible barrier at least 1.5 meters (5 feet) high having a fire-resistance rating of at least one hour.

b. IBM required work with refrigerants shall be performed by certified technicians trained to properly handle refrigerants. Refrigerants shall not be intentionally vented except as expressly permitted under the appropriate regulation. Upon request, the contractor company shall provide copies of appropriate contractor certifications to the IBM Representative.

IBM Poughkeepsie:

- Except when in use or attached and ready for immediate use, oxygen cylinders must be separated from fuel-gas cylinders by a minimum of 6 meters (20 feet) or by a non-combustible barrier at least 1.5 meters (5 feet) high having a fire-resistance rating of at least one hour.

14.5 Flammable Liquids, Paints, and Solvents

a. Adequate ventilation must always be maintained when paints or solvents are used to control odors within the occupied area. Additional precautions may be required for activities such as roofing, painting, floor sealing or furniture stripping, which may include performing the work after normal work hours, providing exhaust ventilation or adjusting the building ventilation system operation.
b. Dispensing of flammable liquids (flashpoint below 100 °F [38 °C] and Class II combustible liquids (flashpoint above 100 °F [38

°C] and below 140 °F [60 °C]) must comply with all applicable requirements, including grounding and bonding of the containers. Storage and dispensing of these materials must comply with the following:

- Where quantities larger than 3.8 liters (1 gallon) are used, flammable liquids must be stored and dispensed from approved safety cans.
- Safety cans must be clearly labeled according to section 14.3 (Chemical Use) of this Guide.
- Flammable liquids may not be dispensed or transferred to equipment or portable containers within buildings or on the roofs of buildings.
- Flammable liquids may only be dispensed into 18.9-liter (5-gallon) or less containers.

c. Flammable solvents and materials must be used with extreme caution when possible sources of ignition may be present.
d. Waste oil-based paint or solvent used for cleaning paint brushes must be disposed of by IBM per section 14.11 (Waste Disposal) of this Guide. Oil-based paints or solvents must never enter industrial waste drains, sanitary sewers, or storm drains.

14.6 Lead

Construction and renovation activities involving the disturbance of lead-containing materials may be hazardous if appropriate work practices are not followed. Examples of materials which may contain lead include, but are not limited to noise and vibration dampers, paint and primer coatings, pipes, radiation-shielding materials, roofing materials, sheetmetal (e.g., terne metal) and structural steel.

a. All work involving the handling of lead-containing materials must be conducted in accordance with all applicable requirements.
b. Contractors must not use lead-containing products or materials without IBM approval.
c. Contractors are responsible for evaluating and controlling their employees' occupational exposure to lead. Contractors must not remove, handle or otherwise disturb lead or material suspected of containing lead without the approval of, and coordination with, the IBM Representative.
d. Prior to work on painted surfaces where removal of old paint is required (due to scraping, demolition, renovation, etc.), contractors must notify the IBM Representative to request sampling and analysis of paint and/or primer coatings for determination of their lead content.
e. When feasible, lead-based paint and primer coatings must be removed in such a manner as to minimize or eliminate personnel exposures and prevent building, air, soil or water contamination.
f. Aggressive removal techniques may only be used when manual removal methods are ineffective. In such cases, the specific work practices and engineering controls to be employed must be approved by the IBM Representative prior to the start of work. Examples of aggressive removal techniques include, but are not limited to:
   - abrasive blasting
   - burning
   - grinding
   - heat-gun stripping
   - mechanical chipping, scraping, or sanding
   - power washing

Refer to Section 14.11 (Waste Disposal) of this Guide for proper disposal of lead-based or lead-containing materials, including residual from chemical removal.

14.7 Spills and Releases

It is the responsibility of all contractors to avoid creation of chemical spills and releases.

a. On specified projects, contractors may be required to supply emergency spill equipment to contain spills and prevent migration to drains, soil, catch basins, or storm sewers. This equipment may include, but is not limited to loose granular absorbent, socks, and drain blockers.
b. Contractors must perform preventive maintenance off-site on all equipment to avoid the loss of fluids such as oil and coolants. Greasing fittings on earth-moving equipment and adding fluids to reservoirs is permitted.
c. In the event of an emergency involving hazardous chemical or hazardous material spills or releases, employees should remove themselves from the area and immediately call the Emergency Services telephone number corresponding to the site where work is being performed. The IBM Representative must be notified immediately after notifying emergency responders.
d. Spills and releases include, but are not limited to:
   - Chemicals as defined in Section 14.2 (Chemical Approval), including their waste products
   - Treated chilled water, hot water, steam condensate
   - Untreated wastewater
   - Utility systems
e. Any waste resulting from a spill incident that meets the definition in Section 14.11a (Waste Disposal) must be disposed of by IBM.
f. Water, whether contaminated or clean, or wastewater may not be intentionally released to the ground without IBM approval.
g. Contractors must ensure and confirm with the IBM Representative that chemical pipes, equipment, exhaust hoods and/or duct work, tanks, etc. have been decontaminated, flushed and properly isolated before any work is started. EXCEPTION: Contractors who have been contracted specifically to repair, handle, and/or remove chemicals or contaminated equipment.

14.8 Environmental Permits

Contractor activity that impacts IBM's ability to meet environmental permit requirements must be discussed and approved by the IBM Representative. The IBM Representative may discuss such impacts with environmental staff, as appropriate. Such activity may include,

but is not limited to, that which causes air emissions, wastewater discharges, and stormwater discharges. Any permits held by the Contractor must be communicated to the IBM Representative.

14.9 Recycling, Reduction, Reuse

Contractors must make every effort to reduce the amount of waste that is generated on-site. After completing the project, contractors must remove any contractor-owned material(s) from the site if the material can be used again for another purpose. When Contractor reuse is not an option, materials such as those listed below should be recycled. The following list is not all inclusive:

- Cardboard
- Paper
- Scrap metal
- Wood, wooden pallets

Office wastes should be recycled into the following categories:

- Mixed recyclables: paper, photocopies, printouts, junk mail, envelopes, newsprint, folders, cardboard, aluminum cans, glass and plastic bottles
- Confidential: “confidential” papers, CDs, printouts
- Garbage/Compostables: food waste, tissues, coffee cups, food containers
- Hazardous: batteries, circuit boards, electronic devices, fluorescent lamps
- Other recyclables: toner and printer ink cartridges

All discarded materials must be sorted into the appropriate waste container. Contact the IBM Representative for site-specific nonhazardous solid waste procedures and/or instructions.

14.10 Waste Disposal

a. Unless otherwise directed by the IBM Representative, all waste designated as hazardous by applicable laws or regulations and IBM Special Waste must be disposed by IBM. Contact the IBM Representative regarding hazardous waste and IBM Special Waste disposal. IBM Special Waste is a waste that is considered a nonhazardous waste that has been determined by IBM that, because of its properties or volume, requires special management practices. Examples of IBM Special Wastes include:

- asbestos
- batteries
- cadmium (Cd) and cadmium-containing product scrap
- end-of-Life Engineered Nanoparticles (Nanomaterial-bearing waste)
- flammable liquids
- lamps and light bulbs
- lead (Pb) and lead-containing product scrap
- lighting and electrical capacitors and ballasts
- manufacturing product scrap, including but not limited to discarded items related to products such as printed wiring boards, housings and other failed component parts
- medical waste
- mercury (Hg) and mercury-containing product scrap, which may include thermometers and thermostats, manometers, barometers, flowmeters, and light switches
- Petroleum-based liquids and hydraulic fluids
- polychlorinated biphenyls (PCBs)
- precious metals
- radioactive waste
- solvent based inks and toners, and paint wastes in liquid form
- strong acids and caustics
- used and End-of-Life IT equipment and parts*

* Used IT equipment and parts which are transported to an IBM Asset Recovery Center (ARC) or an IBM-approved Product End-of-Life Management (PELM) supplier are not considered by IBM to be Waste during transport when the decision as to the final disposition of the equipment and parts has not yet been made. Notwithstanding the preceding, some jurisdictions may regulate the transportation of used IT equipment and parts. All IBM shipments of used IT equipment and parts must be done in compliance with applicable legal requirements.

IBM Almaden:

All chemical wastes shall be collected and disposed through the site Chemical Distribution Center. If chemical products will be used in a contractor’s work, disposal of waste products shall be arranged with the IBM Representative before the start of work. IBM will ensure any chemical wastes generated are handled, packaged, identified, stored and disposed in compliance with applicable federal, state and local regulations. Unused chemical products (e.g., a half a can of paint) are not waste materials. Unused materials are the responsibility of the contractor and are to be removed from the premises at completion of the work.

b. All waste generated must be placed in either IBM-supplied or IBM-approved and contractor-supplied storage containers, roll-offs, or receptacles for proper disposal. All waste containers must be appropriately labeled with the standard waste label from the IBM Representative.

c. Chemical waste should be in the original container or IBM-approved waste containers. The container must be accompanied by documentation that indicates the waste identity, the accumulation start date, the contractor name that generated the waste,

and the name of a responsible party able to provide further information. Hazardous waste must be identified according to governing regulatory authority, which may require pre-project review and approval with the IBM Representative and appropriate IBM Environmental staff.

d. Chemicals or waste, including paint brush residue, are not to be discharged into any sewer (e.g., discharged down any drain), placed in trash containers, or emptied onto the ground.
e. Debris contaminated with chemicals (e.g., rock, sand, gravel, dirt, broken concrete), cannot be disposed of without approval of the IBM Representative. Vehicles that have transported or contained chemicals (e.g., concrete, road salt, chemically contaminated soils, asbestos) are not to be "washed out" on IBM property.
f. All waste streams must be identified prior to the start of the project; chemical waste management guidance may be provided in the comments as part of the chemical authorization process. This guidance will be provided on a case-by-case basis; contact the IBM Representative for details.
g. Decontamination work must follow local procedures including notifying the IBM Representative of work on piping, exhaust, tool or equipment parts, fittings, or other material contaminated with chemicals.
h. Unused chemical products (e.g., a half a can of paint) are not waste materials. Unused materials that can / may be used on another job are the responsibility of the contractor and are to be removed from the premises at completion of the work.

For additional information about asbestos or lead, refer to the appropriate sections in this guide.

14.11 The Contractor's Role in Support of IBM's Environmental Management System

IBM is committed to environmental affairs leadership in all aspects of its business activities. EVERY contractor performing work for IBM is expected to follow the company's policies and to report any environmental, health, or safety concern to IBM Management or the IBM Representative. To identify and effectively manage the potential environmental impact of IBM's operations, IBM has established and maintains a strong worldwide Environmental Management System (EMS) and Worldwide Energy Management Program (EnMP). These programs are vital elements in the company's efforts to achieve results consistent with environmental leadership. Because Contractor's activities may have an environmental impact, the IBM Representative may require adherence to applicable IBM site procedures. Additionally, the contractor is responsible for ensuring its staff is appropriately trained for their jobs and as required under applicable local, state, and federal regulations and/or IBM requirements.

As part of IBM's certification to both the ISO 14001 (Environmental Management Systems) and 50001 (Energy Management Systems) standards, certain environmental aspects and energy uses have been determined to be significant at the corporate level and at applicable sites:

a. Significant environmental aspects related to activities and services include:
   - chemical use
   - energy consumption
   - nonhazardous waste discharges
   - hazardous waste discharges
   - waste reduction, recycling, and/or reuse
   - product end-of-life management
   - air emissions
   - water discharges
   - unplanned releases/environmental incidents
   - groundwater and/or soil remediation
   - hazardous materials transportation
   - water consumption.

b. Significant energy uses include
   - data center load
   - HVAC
   - Central Utility Plant
   - lighting

Contact the IBM Representative for additional significant environmental aspects and significant energy uses at the individual-site level.

Appendix:

IBM Corporate Policy 127: IBM's Culture of Health and Safety

IBM has a long history of excellence in employee health and safety. The importance we place on this priority supports our ongoing commitment to our employees, customers, business partners, visitors, and the communities where we live and work. The objectives of our health and safety management system include providing a safe and healthy workplace, the prevention of injuries and illnesses, and the provision of resources to fulfill these commitments.

IBM is committed to:

- Complying with legal and other requirements
- Reducing health and safety risk by eliminating or controlling hazards
- Promoting participation in continuous improvement of the management system

IBM's commitment to health and safety is essential to our brand, innovation and market leadership. We strive to continue the excellence we have attained in these areas.

IBM Corporate Policy 139 - Environmental Affairs

IBM is committed to environmental affairs leadership in all of its business activities. IBM has had longstanding corporate policies of providing a safe and healthful workplace, protecting the environment, and conserving energy and natural resources, which were formalized in 1967, 1971 and 1974 respectively. They have served the environment and our business well over the years and provide the foundation for the following corporate policy objectives:

- Provide a safe and healthful workplace and ensure that personnel are properly trained and have appropriate safety and emergency equipment.
- Be an environmentally responsible neighbor in the communities where we operate, and act promptly and responsibly to correct incidents or conditions that endanger health, safety, or the environment. Report them to authorities promptly and inform affected parties as appropriate.
- Conserve natural resources by reusing and recycling materials, purchasing recycled materials, and using recyclable packaging and other materials.
- Develop, manufacture, and market products that are safe for their intended use, efficient in their use of energy, protective of the environment, and that can be reused, recycled or disposed of safely.
- Use development and manufacturing processes that do not adversely affect the environment, including developing and improving operations and technologies to minimize waste, prevent air, water, and other pollution, minimize health and safety risks, and dispose of waste safely and responsibly.
- Ensure the responsible use of energy throughout our business, including conserving energy, improving energy efficiency, and giving preference to renewable over nonrenewable energy sources when feasible.
- Participate in efforts to improve environmental protection and understanding around the world and share appropriate pollution prevention technology, knowledge and methods.
- Utilize IBM products, services and expertise around the world to assist in the development of solutions to environmental problems.
- Meet or exceed all applicable government requirements and voluntary requirements to which IBM subscribes. Set and adhere to stringent requirements of our own no matter where in the world the company does business.
- Strive to continually improve IBM's environmental management system and performance, and periodically issue progress reports to the general public.
- Conduct rigorous audits and self-assessments of IBM's compliance with this policy, measure progress of IBM's environmental affairs performance, and report periodically to the Board of Directors.

Every employee and every contractor on IBM premises is expected to follow this policy and to report any environmental, health, or safety concern to IBM management. Managers are expected to take prompt action.

IBM Energy Policy

The elements of the Policy are contained within IBM Corporate Environmental Policy 139 and Corporate Instructions ENV 101 and ENV 108. In summary, IBM is committed to:

- The responsible use and consumption of energy throughout its business
- Conserving energy and improving energy efficiency
- Complying with applicable legal requirements, IBM requirements, and other voluntary requirements to which IBM subscribes.” The primary energy performance indicator is percent energy conservation.

IBM Health & Safety Management System

IBM has long understood that investing in a culture of health and safety makes sense for its employees and its businesses. Our ability to serve clients and communities depends upon the well-being of our employees and others who contribute to our success.

Today, health and safety are integral parts of IBM's business and this is affirmed through Corporate Policy 127: IBM's Culture of Health and Safety, while our roles and responsibilities are defined through Corporate Instruction HR 110: IBM Health & Safety Responsibilities. We achieve the commitments stated in this policy through our Health and Safety Management System (HSMS).

IBM's Health and Safety Management System is comprised of our policy, IBM Health and Safety Standards, local legal requirements and related processes that provide the framework to manage health and safety risks, while keeping internal and external issues such as changes in IBM's business strategy, health and environmental factors, among others, in mind. It works seamlessly as it involves leadership commitment and worker participation and consultation on health and safety.

IBM's success stems from a healthy and productive workforce. To achieve this, the culture of health and safety must be ingrained in our day-to-day activities. IBM's HSMS is important as it serves as a guide to:

- continually improve our ability to assess, eliminate and control health and safety risks

- maintain a safe and healthy work environment
- prevent accidents, injuries and illnesses
- meet legal and regulatory requirements
- maintain IBM's long standing leadership position on employee well-being

Every IBMer, contractor, partner and visitor play a critical role in identifying, eliminating, and controlling factors that could potentially pose a negative impact on our health and safety. We have a shared responsibility - as an IBM worker, you have a role to:

- report accidents, incidents and near misses to IBM Global Safety
- complete health & safety training as required by IBM, federal, or local regulation.
- participate in the ongoing conversation about preventive and protective measures that impact you and your colleagues using the Health & Safety@IBM community
- raise health and safety-related questions or concerns using Ask Health & Safety
- remove yourself from work situations that present an imminent and serious danger for your life.

Voluntary Protection Program (VPP)

The VPP STAR program is a voluntary partnership between employees, management and federal or State Occupational Safety and Health Administration (OSHA). The VPP program recognizes the outstanding efforts of employers and employees who achieved exemplary occupational safety and health performance. IBM employees at Almaden, Poughkeepsie, and Yorktown locations have been accepted into the VPP STAR program. We rely on the commitment of our contractors to safe work performance, maintaining safe work areas, completing safety training, and following safety procedures. The diligence of contractors helps contribute to the overall safety at IBM locations. Questions about VPP should be directed to the IBM Representative.

Revision Summary

2024 Revision #12.1:

Minor update to version 12: A link to the Global Procurement website has been added and a date has been added to the cover page of this guide.

2024 Revision #12:

The following revisions align the requirements outlined here with regulation, industry best-practice, or internal IBM standards:

- Section 3.20 – New requirements for hazardous weather conditions
  - For outdoor work, if there is a risk of hazardous weather conditions, contractors shall monitor the National Weather Service and stop outdoor work if high winds, heavy rain, hail, or lightning may pose a risk to human health, property, or the environment.
  - Contractors shall implement a heat illness prevention plan where outdoor or indoor temperatures expose workers to the risk of heat-related illness, or as required by local or federal regulation.
  - Contractors shall implement a cold stress prevention plan where outdoor or indoor temperatures expose workers to the risk of cold stress, or as required by local or federal regulation.
- Section 4.6 – New hot work requirements
  - Prior to performing any hot work combustible material must be moved 35 feet from hot work. If it cannot be moved, it must be covered with fire blanket.
- Section 5.2 – New IBM Almaden memo detailing asbestos areas
  - Contractors are advised of the existence of naturally occurring asbestos in native soil and bedrock at IBM Almaden.
  - Any construction or grading operation (e.g., excavation, trenching) using powered equipment shall comply with requirements contained in the California Code of Regulations: 8 CCR 1529 and 17 CCR 93105. These requirements include, but are not limited to, the employment of wet methods to mitigate the generation of potential asbestos dust during excavation and trenching operations using powered equipment.
  - Where complex or unique hazards are involved, contractors are expected to obtain their own professional safety and health guidance. If you encounter an unsafe condition during construction, grading, or any other activity, stop work and inform the IBM Representative.
- Section 8.1 – New suggestion for contractors performing loading dock operations.
  - As needed, utilize a trained spotter for trucks backing into the loading dock.
- Section 9.5 – New requirement for scaffold inspection
  - A competent person shall log the inspection of each scaffold.
- Section 9.5 – New IBM Poughkeepsie requirement for color-coding scaffolding.
  - Contractors shall maintain a color-coded tagging system for scaffolding, where “red” indicates the scaffold has not been inspected by the competent person, and “green” indicates the scaffold has been inspected by the competent person.
- Section 13 – New electrical safety requirements and reminders
  - All electrical cords must be protected by linebackers or hung safely overhead.
  - Clearance around electrical panels shall be maintained according to 29 CFR 1910.303 Table S-1. For equipment with a voltage to ground less than 150 V, with exposed live parts on one side and no live or grounded parts on the other side of the working space, or exposed live parts on both sides effectively guarded by suitable wood or other insulating material, this clearance distance is 3 ft. Higher voltage equipment has a larger clear distance (consult 29 CFR 1910.303 Table S-1).
  - When contractors are performing work on, or associated with, exposed lines or equipment energized at 50 volts or more, the contractor shall ensure that at least two workers are first aid trained, per 29 CFR 1910.269(b)(1)(ii) or local requirement.
- Section 14.3 – Clarified chemical storage requirements
  - Flammable liquids must not be stored in areas used for exits, stairways, or normally used for the safe passage of people.
  - Hazardous chemicals must be stored in a chemical storage cabinet or approved chemical storage room.
- Section 14.4 – New IBM Poughkeepsie oxygen cylinder storage requirements
  - Except when in use or attached and ready for immediate use, oxygen cylinders must be separated from fuel-gas cylinders by a minimum of 6 meters (20 feet) or by a non-combustible barrier at least 1.5 meters (5 feet) high having a fire-resistance rating of at least one hour.
- Appendix: Removed requirement for all contractors to take Safe and Healthy IBMer training.

2022 Revision #11:

- Updated emergency contact number at represented sites per Security’s webpage updates
- Updated emergency reporting process, removing the call out for faxing information

2021 Revision #10:

- *Page 5* - Updated site security numbers and included NA Security publisher page link was provided. Updated document owner from Randy Back to David Smalley and IHS to CH&S.

- Moved Revision Summary section towards end of document
- Added examples of administrative services capacity
- *Page 6* – Updated section 1.2 bullet g, m
- Updated section 2.1.a (to include AEDs), d (to be more inclusive to include all building fire life safety equipment)
- *Page 7* - Updated section 3.0.b (to include medical treatment AND medical clearance to return to work)
- Updates section 3.3.b (clarified parking area permissions)
- Page 9 – section 3.11.a sentence/rewording
- 3.11.d added computer rooms operations manager to air contaminant sentence
- 3.11.f removed doubling wording of “power outlet”
- 3.11.h typo correction from “OBM” to “IBM”
- *Page 11* – Section 4.0.a added statement “extinguishers must be stored in a secure manner to prevent damage to cylinder”
- *Page 13* – Section 5.0.c added statement “follow all applicable regulatory guidance’s as communicated by JHA”
- *Page 15* – Section 5.3.b updated statement to include other similar OSHA approved state plans
- 5.3.c updated typo of lowercase e
- *Page 16* – Section 6.0.m clarified bullet for when to use fall arrest systems and what they must consist of
- *Page 20* – Section 10.0.a added knowledgeable as criteria
- *Page 21* – Section 10.1 Almaden call out, Updated Santa Clara local guidance and included resource link
- *Page 28* – Section 14.1 updated approval list on “CAM” to “Sphera”
- *Appendix* – Updated reference to CP127 to reflect most recent version
- *Appendix* – Removed reference to WBMS and updated to IBM HSMS
- *Appendix* – Removed Rochester from list of VPP accredited sites
- *Throughout* - Updated all IHS or Integrated Health Services to CH&S or Corporate Health and Safety
- *Throughout* – Validated all links are functional and take reader to appropriate webpages
- *Throughout* – Updated headers and hyperlinks for user ease of tracking through document

2017 Revision #9:
- *Page 7* - Section update 3.0 (d) Reporting to IBM Medical
- *Page 15* - Section update 6.0 (g) PPE - Electrical Safety
- *Page 23* - Section 13.0 Electrical Safety - NPFA70E training requirements

2016 Revision #8:
- *Addition - Section 3.1 Accidents, Incidents/Injuries, or Near Misses.*
- *Reporting to OSHA*
- *Reporting to IBM*
- *Recordkeeping*
- *Addition - Section 5.4 Divers*
- *Addition - Section 8.2 Loading Docks*
- *Formatting changes throughout*