BD MEDICAL
EMERGENCY RESPONSE

TO REPORT ANY EMERGENCY CALL SECURITY from any BD phone at 2911 or 2364

If call is made from cell phone, use 801-565-2911 or 801-565-2364. If 911 is called by cell phone, ensure that Security is notified as soon as possible at the above number(s)

Please provide the following information:

1- name
2- company representing
3- contact number
4- area of emergency
5- nature of emergency
6- countermeasures taken

Emergencies include:

1- medical emergencies
2- fire
3- chemical spill/release
4- gas line break
5- water line break
6- power failure
7- violence

BD MEDICAL INTERNAL EMERGENCY CONTACTS

Name	Title	Contact Number
Richard Stonley	Plant Engineering Manager	565-2605
Anna Medley	Chem Lab Supervisor	565-2317
Page DuBois	Health Services	565-2565 225-205-5805
Patty Melrose	Safety Engineer	565-2895 516-1708
Robert Melendez	PAD Facilities Engineer	565-2660 385-253-9598
Jim Norris	Sterilization Supervisor	565-2654 232-2816
David Woolley	Sterilization Engineer	565-2374
Mike Johnson	Utilities Supervisor	565-2886 381-3564
Mark Dumas	Environmental Engineer	565-2439 243-1665
Area Code 801 unless otherwise noted		

INTRODUCTION

This book is for the use of contractors and subcontractors who perform work at BD Medical. It contains information and instructions regarding safety and environmental compliance that must be followed while on plant property.

The purpose of this handbook is to further amplify the safety and environmental requirements detailed under the general conditions of construction contracts and/or supplement this information where a contract is not available. You are required by law to provide a safe workplace for your employees. This book provides general guidance that will help you understand your responsibilities as an employer to provide a safe work environment here at BD Medical.

The rules and practices set forth in this book are those that have broad application, and it will be necessary in most cases to supplement them with additional rules specific to a particular job. It is the responsibility of the contracting party to become familiar with all applicable federal, State, local and BD internal safety regulations. It is also the responsibility of the contracting party to be aware of changing conditions and modify work practices to meet changing needs associated with safety. For further clarification or counsel please consult the BD Representative.

BD Medical will consider no claims for added compensation arising with compliance with these instructions. BD Medical takes safety and environmental compliance very seriously. Failure to comply with the requirements listed in this handbook, and those defined in enforceable contracts may result in termination of contract and/or dismissal from further work, individually or collectively.

Becton Dickinson-Sandy, Utah
Environmental Policy

The Sandy location of Becton Dickinson is committed to the protection of the environment in the interest of our customers, employees, and community. We strive to minimize any negative impact of our operations upon the environment while pursuing our business activities of developing, manufacturing and marketing medical devices that are indispensable to human heath.

As responsible corporate citizens we comply with regulations as a minimum and have established an environmental management system for continuous improvement.

The Environmental Management System (EMS) is an integral part of managing the business. The EMS sets forth plans, objectives, procedures, compliance controls and actively promotes recycling and waste minimization. An Environmental Management Team (EMT), with members representing the major functional areas of the business, administers the EMS.

Progress on objectives, targets and the system overall effectiveness is periodically reported to senior management during the course of the year. Objectives and targets results are communicated to all affected parties and new objectives and targets are established annually by the EMT. All environmental activities are conducted in the spirit of continuous improvement.

The environmental policy, objectives and targets are communicated to employees on an annual basis. Additionally, systems are in place for employees to voice concerns or provide improvement suggestions to the EMT.

In all our activities we understand the importance of conserving and protecting the ecosystem and the necessity of sustainable development.

Environmental Objectives and Targets are provided upon request.

BD Medical – Sandy Utah is an ISO 14001 Certified Facility.

BD MEDICAL

CONTRACTOR SAFETY AND ENVIRONMENTAL HANDBOOK

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1. APPLICABLE DOCUMENTS

1.1 OSHA 29 CFR 1926

1.2 Utah Occupational Safety and Health (UOSH) Rules and Regulations

1.3 Becton Dickinson Safety & Environmental Procedures Manual

1.4 EPA 40 CFR (applicable subparts)

1.5 Utah Department of Environmental Quality (applicable subparts)

2. DEFINITIONS

2.1 BD representative – The BD Representative, Facilities Engineer, Maintenance Supervisor, Facilities Supervisor, or other designated BD associate with responsibility for the contract work.

2.2 Contractor - Any contractor, subcontractor, or consultant performing on-site work for Becton Dickinson.

2.3 Safety Engineer - The Becton Dickinson representative from the Safety and Environmental Department responsible for monitoring contractor safety practices.

3. INCIDENTS AND EMERGENCIES

3.1 Call Security at ext. 2364 or 2911 and report:

- Exact location
- Description of accident or illness
- Provide information as requested by the operator

3.2 Assure that someone is posted to direct Emergency Response Teams to the scene.

3.3 Any safety event involving non-Becton Dickinson personnel in which death, injury requiring medical assistance, fire, property damage, or chemical spillage/release occurs, shall be promptly reported to the Facilities Supervisor and Security, and thoroughly investigated by the contractor and BD representatives. An Incident Report form must be picked up at security and filled out by the contractor and the BD representatives.

3.4 For all chemical spills/releases call extension 2364 or 2911 and report:

- Exact location
- Chemical spilled, and approximate amount spilled
- Countermeasures taken
- Medical Emergencies related to the spill

Eliminate any sources of ignition if there is a chance the material is flammable. Provide the BD Emergency Response Team (ERT) with SDS for the chemical spilled. The ERT will then assess the situation. Clean up will be performed only by those trained in hazardous material spill clean up.

4. GENERAL REQUIREMENTS

4.1 All work performed in the ETO Sterilization building shall be coordinated with the BD representative. Comply with Process Safety Management requirements for this area.

4.2 The contractor or his authorized representative will coordinate the safety and environmental requirements through the BD representative.

4.3 Prior to starting work, the contractors and subcontractors shall meet with their employees to apprise them of the safety and environmental requirements.

4.4 The contractor must appoint a representative from the employees on the job, who can act in the contractor's absence.

4.5 Subcontractors must follow the requirements in this book. It is the prime contractor's responsibility to ensure that any subcontractor is provided with copies (available from the Safety Engineer).

4.6 All contractors' employees must abide by all special safety and environmental regulations pertinent to the area they work in or use.

4.7 All personnel will sign in and sign out on Form 1067 with Security at the beginning and end of each shift. The assigned badge will be worn at all times while within the facility. All personnel on site for the first time will also be required to read Form 3783: Checklist of Safety and Security Requirements. After reading the form, personnel will be required to sign Form 3781.

4.8 Enter and leave the building by the front entrance, or at Security Control Door 25, unless prior arrangements are made with Security to use another door.

4.9 Use of audio equipment (including radio headsets, etc.) by individuals requires specific approval of BD management.

4.10 Shirts that cover the shoulders must be worn at all times.

4.11 Safety and Security equipment shall not be disabled unless specifically authorized by BD management. This includes alarm contacts, motion detection units, gas detection, fire protection systems, access devices, CCTV cameras, and all wiring related to this equipment.

4.12 Report any damage or loss of property to your supervisor and Security immediately.

4.13 Contractors must be familiar with GMPs as they pertain to the work area assigned. This includes proper gowning for clean room entry.

4.14 The work area must be kept clean and orderly. All debris and scrap material, tools and equipment shall be cleared from the work site as work progresses and upon completion of the job.

4.15 BD reserves the right to inspect vehicles and containers, such as briefcases, lunch boxes, tool boxes, etc., upon entering and leaving the building or premises.

4.16 Contractors and subcontractors are not to use Becton Dickinson owned tools, equipment, or vehicles.

4.17 Open flame work such as welding, torch cutting, soldering, or brazing shall only be allowed by Hot Work Permit from location management. Work on electrical systems and the use of spark-producing electrical equipment in areas rated for flammable liquid, flammable gas, or combustible dust use also requires a permit. The BD Facilities Department shall be the contact in arranging for permits.

4.18 Storage and handling of compressed gas cylinders and related auxiliary equipment will be based on the requirements as established by the manufacturer, supplier, or the Compressed Gas Association.

4.19 Contractors must conduct their activities in an environmentally

responsible manner. No discharges to the atmosphere, soil, trash compactor or sanitary sewer are permitted without prior approval of the Facilities Supervisor.

4.20 Construction areas shall be walled, fenced, or otherwise blocked off, by the Contractor, to help prevent injury to unauthorized persons in the work area.

4.21 Employees in construction zones shall wear reflective warning vests at all times. Small building interior remodel work is exempt from this requirement.

5. ENVIRONMENTAL REQUIREMENTS

5.1 The OSHA Hazard Communication Standard (29 CFR 1926.59) requires employers to provide information on all hazardous substances that may be present in the workplace. Contractors bringing hazardous materials onto BD property are required to have Safety Data Sheets (aka MSDS or SDS) available for that material on site. BD will, upon request, provide contractors with MSDS's on substances/materials from BD's operations that contractors may be exposed to at their work site.

5.2 The use of hazardous materials requires specific authorization by Becton Dickinson management. In no case should highly volatile liquids, such as gasoline, be used for cleaning.

5.3 Each container of hazardous materials must be labeled so as to indicate actual contents and in accordance with regulatory requirements.

5.4 Job waste materials shall be safely removed from the premises daily and handled in accordance with regulatory requirements. Waste materials must be labeled so as to indicate actual contents and in accordance with regulatory requirements.

5.5 Chemicals may not be discarded down the drain or in the garbage. Contractors are responsible for removing all chemicals and chemical containers from the job site at the end of the project.

5.6 Lids must remain on chemical containers when containers are not in use.

5.7 Flammable and combustible liquids and gases must be stored outside the building. Spill containment shall be provided for all containers. Such chemicals shall be removed from the premises **at the end of the work shift** unless specifically authorized otherwise.

5.8 The removal, handling, and disposal of fibrous materials shall be conducted in a manner that minimizes release and exposure to all personnel. Materials known to contain asbestos shall only be disturbed by qualified personnel. All work involving Asbestos Containing Materials, or Presumed Asbestos Containing Materials shall be done in accordance with OSHA 29CFR 1926.1101 and applicable State of Utah Department of Environmental Quality laws and rules. If suspect material is identified contact Becton Dickinson management immediately.

5.9 Dust barrier shall be erected to control dust in areas adjacent to production operations or dusty areas wetted as instructed by BD representative.

5.10 Chemical spills/releases shall be contained if it is safe to do so and reported immediately to BD management.

5.11 Spill kits shall be available on site for projects outside the building premises.

5.12 Contractors shall comply with all Fugitive Dust Control Plans and SWPPP Permits where applicable.

6. DRUGS AND ALCOHOL

6.1 Consumption of alcoholic beverages or controlled substances is absolutely forbidden anywhere on the property. Any contractor or subcontractor personnel under the influence of alcohol or drugs will not be allowed to perform work on BD property. Any personnel using prescription drugs or medication that may impair physical/mental capabilities shall inform their supervisor when reporting to work.

7. SMOKING AND EATING

7.1 Contractors may consume food and beverages only in designated areas. There will be no exceptions. Consuming food and beverages in

hallways or restrooms, including production departments, is prohibited. Drinks and food must be in covered/closed containers when transporting items from the cafeteria.

7.2 ***ALL tobacco product use is prohibited*** on BD Property and designated adjacent areas, including inside vehicles on BD Property.

8. WORK AREA DEFINITION

8.1 The area encompassing the contractor's work shall be defined by Becton Dickinson in each and every case. Contractor vehicles and personnel shall be restricted to travel in the defined area.

8.2 Contractor equipment shall be located so that roadway and building accessibility are maintained for operations, egress, and emergency requirements. Access to roadways and/or building shall not be blocked unless specifically approved by the Representative.

8.3 A contractor working within a BD area shall provide the Representative with the following information at the beginning of each day:

- What he/she will be doing.
- Equipment he/she will be using.

9. VEHICLES

9.1 Vehicles shall not be parked in **Visitor** or **Handicapped** spaces at any time. Park in loading zone or fire zone only for unloading tools, etc. Contractor's vehicles must park in contractor parking in the south lot or in unmarked stalls.

9.2 All vehicles with any obstruction in the driver's view to the rear of the vehicle shall have an operating backup alarm.

9.3 Parking Lot Speed Limit of 10 mph shall be observed at all times.

10. HOUSEKEEPING

10.1 Each contractor is responsible for cleanup of the area as work progresses and is to safely stow all equipment and materials at the end of the workday leaving the area in a safe condition.

10.2 Unused, surplus, or scrap materials shall be stored out of walkways and major work areas in a safe, stable manner.

10.3 All debris generated by the contractor shall be removed form the work site as agreed with the Representative.

10.4 During cleanup, the contractor shall not throw or drop materials from upper levels to lower levels unless the area below is properly barricaded and adequate warning signs are posted.

10.5 Work within or adjacent to cleanroom production areas are subject to special requirements which will be outlined by BD representative

10.6 Adequate illumination is required for all work performed. A minimum of 5 foot-candles is required for any task. Additional illumination shall be provided, as conditions require.

11. INSPECTIONS AND VIOLATIONS

11.1 Contractor's procedures and work progress are subject to routine review by Becton Dickinson management. Contractor is required to modify or improve conditions relating to safety as noted during this review. Failure to correct unsafe conditions may result in suspension of work.

12. PROTECTIVE CLOTHING AND EQUIPMENT (PPE)

12.1 Contractors will be required to wear hard hats, safety glasses, hearing protection, and special clothing in areas designated by Becton Dickinson management. All PPE and work related activity should be in accordance with Utah OSHA standards.

12.2 The contractor shall train personnel using protective clothing/equipment in its proper use.

12.3 Protective clothing/equipment shall be inspected regularly and maintained in good condition. Unsafe or defective clothing/equipment shall not be used.

13. BARRICADES

13.1 Barricades meeting OSHA requirements shall be provided, installed, and maintained by the contractor for all floor or roof openings, roof edges, trenches, and excavations for personnel protection. All barricades and rope/tape must be erected before the work requiring barricades begins.

14. LADDERS, SCAFFOLDS, AND ELEVATED WORK PLATFORMS

14.1 LADDERS

14.1.1 The use of ladders with damaged or missing rungs or steps damaged or split side rails, faulty or defective construction is prohibited.

14.1.2 Metal ladders shall not be used for electrical work.

14.1.3 Ladders made for a specific job are acceptable for nailed-in-place temporary use only. Sound, straight, grained, kiln dried, knot-free lumber shall be used. Cleats nailed to the side rails with full filler blocks are preferred over inset cleats. Cleat widths shall be a minimum of 12 inches, and each cleat shall be uniformly spaced 12 inches top to bottom and side rails shall extend 36 inches above top of landing.

14.1.4 Stepladders shall not be used as straight ladders.

14.1.5 At no time shall the top step or platform of a stepladder be used for standing.

14.1.6 Stepladders shall only be used on level, paved, or properly floored surfaces.

14.1.7 All straight and extension ladders are to be equipped with non-slip feet and tied off if a ladder tender is not used.

14.1.8 The top section of an extension ladder shall not be used separately as a straight ladder.

14.1.9 Ladders and lifts shall be removed from walls and side of building at the end of each workday.

14.2 SCAFFOLDS

14.2.1 All scaffolding shall be erected by an OSHA competent person

14.2.2 All scaffolding over 6 feet high shall have UOSH approved handrails. For instance, 4-inch high toe boards, a mid-rail and a top rail (nominal 42-inch high) and be able to withstand a 200-pound load in any direction on any point of the top rail.

14.2.3 All employees shall dismount rolling scaffolds before the scaffolds are moved. All tools and materials shall be secured

before the scaffold is moved. All wheel locks shall be engaged before employees climb onto the scaffold.

14.2.4 Scaffold lumber shall be straight grained and free of knots. No less than 2-inch planks shall be used for up to 8-foot spans and 3-inch planks for spans of 8 to 16 feet.

14.2.5 Scaffold planks shall extend over their end supports no less than 6 inches and no more than 12 inches. All planking or platforms shall be overlapped (minimum 12 inches) or secured from movement.

14.2.6 Signs shall be provided and used on lower levels of scaffold stating, “Dangerous Overhead Work”.

14.2.7 Scaffolds with a height to base width ratio of more than four to one (4:1) shall be securely fastened to and braced against the structure vertically at 4 times the base width high, and every 30 feet horizontally. In other words, a scaffold with: base width of 3 feet must be secured at 12 ft.; base width of 42 inches must be secured at 14 ft.; base width of 5 ft. must be secured at 20 feet; etc.

14.2.8 All working levels of scaffolding shall be fully planked between the uprights. In no case shall a scaffold platform be less than 18 inches wide.

14.3 ELEVATED WORK PLATFORMS

14.3.1 The contractor shall operate all man-lifts, scissor-lifts, and similar mobile work platforms in accordance with the manufacturer’s directions. Such lifts shall meet all applicable UOSH requirements.

14.3.2 Contractor personnel shall not ride or work suspended from, or supported by, forklifts, cranes, hoists, or other material handling/lifting equipment unless in a work platform meeting the UOSH requirements for the specific use, and the platform has been reviewed by the Safety Engineer prior to any usage.

14.3.3 Contractor personnel shall wear a full body harness, and remain

tied off at all times when operating an articulating boom type lift (e.g. a JLG)

14.3.4 Under no circumstances will contractor personnel climb on the handrails of an elevated work platform.

14.3.5 Under no circumstances will contractor personnel utilize a ladder, bucket, stool, or other device to gain additional height above the elevated work platform.

14.4 FALL PROTECTION

14.4.1 Where approved working platforms or other means of fall protection are not feasible, employees working more than 6 feet above the floor shall be protected by secured fall protection equipment.

14.4.2 Safety nets shall be provided when work places exceed 25 feet above the ground or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floor, safety lines, or safety harnesses are impractical. Where safety nets are required, work shall not begin until the net is in place and has been tested. NOTE: Safety harnesses are not required when working from a properly secured ladder.

14.4.3 Where fall protection equipment is used, the lanyard must be attached to a solid anchor point capable of supporting a 5000-pound dead weight, per person attached to the anchorage point.

14.5 WORK ON ROOF

14.5.1 Contractor personnel working on roofs shall utilize OSHA-approved fall protection or erect OSHA approved rail system.

14.5.2 Each person will advise BD Security of the location where they will be working, and their anticipated completion time. When they exit the roof at the completion of work, each person shall notify Security that the are no longer on the roof.

15. LIFTING AND HANDLING EQUIPMENT

15.1 Contractor-owned or leased handling, lifting, or other mobile equipment

shall be currently inspected for load testing and other mechanical safety requirements. Equipment shall be operating properly and have no fuel or hydraulic leaks. The contractor shall assure that all personnel operating such equipment are properly trained.

15.2 All lifting and handling equipment and construction vehicles shall have a properly operating fire extinguisher available at all times.

15.3 Contractors shall maintain all contractor-provided equipment. Current Equipment Inspection Reports shall be made available to the Safety Engineer upon request.

15.4 Material hoists or cranes are not to be used for lifting personnel. Cranes and hoists are to be operated by a licensed operator only.

15.5 All rigging equipment shall be selected for the load to be lifted and shall comply with OSHA requirements for inspection and maintenance. Defective equipment shall be removed from service immediately.

15.6 Under no circumstances will any load be carried or lifted directly over the head of any personnel.

16. STRUCTURAL STEEL ERECTION

16.1 Tag lines shall be used for controlling loads-this means all materials and equipment raised overhead.

16.2 Containers shall be provided for storing or carrying rivets, bolts, drift pins, etc., and secured against accidental displacement when aloft.

16.3 Impact wrenches shall be provided with a locking device for retaining the socket.

16.4 Persons working at any elevation over 6 feet from ground level shall use an approved safety harness with lanyards properly attached.

16.5 Properly secured ladders extending 3 feet above the landing or steel level shall be used for access to upper areas. Employees shall not “climb” steel for access to upper work areas.

16.6 Safety nets shall be provided when work places exceed 25 feet above the ground or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floor, safety lines, or safety harnesses are impractical. Where safety nets are required, work shall not

begin until the net is in place and has been tested.

16.7 During roofing, siding, and other similar operations, static lines are to be run and a safety harness is to be worn with the lanyard attached to the static line. Strength requirements for static lines is the same as for anchorage points, as noted in 14.4.3 above.

16.8 All planking used overhead shall be secured with a minimum of 6-inch overlap and a maximum of 12-inch overlap.

16.9 All Steel Erection shall be performed in accordance with OSHA Regulation 29CFR 1926 Subpart R

17. ELECTRICAL

17.1 All electric and electronic installations shall conform to the current edition of the International Building Code, or the National Electrical Code, whichever provides the greater safety for personnel.

17.2 Existing building electrical circuits shall be turned on / off only by qualified BD Facilities Employees.

17.3 All personnel shall be State licensed electricians and shall have required experience. Work on high voltage transmission and distribution systems shall be conducted by personnel trained and qualified in high voltage precautions and safe-electrical-work-practices.

17.4 All work on systems with voltage above 600 VAC requires pre-authorization by BD management and a job specific hazard analysis shall be jointly performed prior to beginning work on the system.

17.5 Extension cords used with portable electric tools shall be the 3-wire type, be protected from damage, and not fastened with staples or hung from nails. All splices shall have soldered wire connections with insulation equal to the cord. Worn, exposed wire, or frayed cords shall not be used. Each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug, except cord sets and receptacles which are fixed and not exposed to damage, shall be inspected before each day’s use for external defects and damage. Grounding lugs shall be in place.

17.6 All extension cords used shall be rated for hard or extra hard use.

17.7 All plug ends shall be weather-tight, and designed for use as part of an extension cord.

17.8 Except where bulbs are deeply recessed in the reflector, bulbs on temporary lights shall be equipped with guards. Temporary lights shall not be suspended by their electrical cords unless commercially designed for suspension.

17.9 Receptacles shall be designed so that it is impossible to plug a machine that uses one voltage into a different voltage. Phasing should also be specified. Weatherproof receptacles shall be used outside. All receptacles used at BD Medical Sandy Facility will be provided with appropriate ground connection points. Receptacles used in wet locations shall have ground fault circuit interrupters installed. Receptacles shall have covers.

17.10 Each disconnecting means for motors and appliances, and each service feeder or branch circuit at the point where it originates, shall be legibly marked to indicate its purpose, unless located and arranged so that the purpose is evident.

17.11 Electrical cords passing through work areas shall be covered or elevated to protect them from damage, which would create a hazard to employees.

17.12 Boxes for disconnecting means shall be securely and rigidly fastened to the surface upon which they are mounted and shall be fitted with covers.

17.13 Operations within 10 feet of overhead electrical power lines and the substation are prohibited unless one of the following conditions exists:

17.13.1 An insulated electric line derrick truck or electrical service aerial lift is servicing that power line.

17.13.2 Properly certified insulated tools and PPE are used.

17.13.3 Power has been shut off, visible grounds have been installed, and positive means has been taken to prevent the lines from being energized (Lock Out/Tag Out).

17.13.4 Only Qualified High Voltage Electrical Workers are allowed to work closer than 10 feet to an energized electrical line, regardless of any insulation installed on the line.

17.14 All work on live high voltage circuits requires the use of Arc Flash Gear in accordance with NFPA 70E.

17.15 Metering of circuits, and other live electrical work of any kind shall be performed wearing electrically insulated gloves. Gloves must have a test certification date stamped on them no more than 6 months old.

17.16 The non-current-carrying metal parts of fixed, portable, and plug-connected equipment shall be grounded. Portable tools and appliances protected by UL-approved system of double insulation need not be grounded. However, extension cords servicing these tools shall not have the grounding lug removed. An adapter shall be used if required.

17.17 The path from circuits, equipment, structures, and conduit or enclosures to ground shall be electrically continuous and have ample carrying capacity for the purpose.

17.18 All electric generators shall comply with OSHA 29CFR 1926.404(f)(3), and shall have all electrical outlets protected by Ground Fault Circuit Interrupters.

18. LOCK OUT/ TAG OUT

18.1 During service or maintenance of equipment all equipment and energy sources shall be locked or tagged out to prevent accidental release of hazardous energy. All contractors must provide and attach their own locks and tags.

18.2 Process and plant equipment must be made inoperable before contractor may work on or near it. Exceptions will be made by the Facilities Supervisor on a case by case basis

18.3 No work shall be performed on piping, wiring, or near existing utility lines where injury or damage are likely to occur, unless the work is thoroughly reviewed with the Representative, Safety Engineer, and Production supervisor in the area.

19. HOT WORK PERMITS

19.1 The affected party(s) prior to the initiation of any hot work must fill out a Hot Work Permit. Permits are available from Facilities Maintenance.

19.2 Hot work includes cutting, grinding, soldering, welding, brazing, heating or any other spark or flame producing work.

19.3 The Hot Work Permit is also required for use of any spark-producing or electrical tools in all electrically classified areas where flammable liquids or flammable gasses or combustible dust are handled, stored, or used, including but not limited to the EtO Sterilization Plant and related equipment; The Flammables Storage Room; Low Volume Compounding Alcohol Products Mix Room; Molding Pneucon Pump Room; Molding East Conair Pump Room; etc.

19.4 The permit must then be authorized and signed by a BD representative. The permit must be posted in the work area for the duration of hot work activities.

19.5 Sprinklers must be in service. When automatic sprinkler systems are out of service, hot work must be carried out at a specified, properly equipped, outside plant area or postponed until the fire protection systems are returned to service. Any exception must be approved by the Facilities Supervisor in advance.

19.6 Hot work and fire suppression equipment must be in good condition.

19.7 A Fire Watch will be provided during hot work activities and for 30 minutes following hot work operations.

19.8 Fire extinguishers will be immediately available. Extinguishers shall be visually inspected prior to the initiation of hot work to ensure their readiness.

19.9 Workers will be trained in the use of the equipment.

19.10 The following precautions must be taken within 50 feet of work

- Floors will be swept clean of combustibles.
- Combustible floors will be wet down, covered with damp sand, metal, or other shields.
- No combustible material or flammable liquids will be in the immediate area.
- Combustibles and flammable liquids will be protected with covers, guards, or metal shields.
- All wall and floor openings will be covered.

19.11 The work area must be secure to prevent injury to work crew members.

All equipment must be de-energized and locked out.

19.12 All Hot Work Permits must be turned in to Security at the end of each day.

20. CONFINED SPACE ENTRY

20.1 Facilities Supervisor or the Plant Safety Engineer shall be informed of any planned entry prior to actual entry into a permit required confined space.

20.2 A Confined Space Entry Permit is required for entry into any confined area with limited means of exit or entry that is not designed for continuous employee occupancy. Confined spaces include, but are not limited to manholes, tanks, vessels, silos, storage bins, hoppers, vaults, and pits. Permits shall be obtained from the Facilities Supervisor or Plant Safety Engineer.

20.3 All employees of contractors making confined space entry will be trained by their employer concerning the hazards of confined spaces. Employees will be trained in accordance with 29 CFR 1910.146, OSHA Permit Required Confined Space Entry.

20.4 The contractor will provide all safety gear, monitoring equipment, ventilators, and rescue gear for confined space work.

20.5 An attendant shall be positioned outside of the space when entry is in progress. Communication shall be maintained between the attendant and the entrant.

20.6 Unless the Permit Required Confined Space is de-classified for the entry by the Plant Safety Engineer or Facilities Supervisor in accordance with OSHA 29CFR 1910.146, entry to a Permit Required Confined Space requires use of equipment to rescue each entrant from outside the space. The Rescue Team must be on site throughout the duration of the entry.

20.7 The contractor's employees will complete a confined space permit, equivalent to Form 3936, prior to entry.

20.8 The confined space permit shall be posted at the entrance to the space prior to entry and for the duration of the entry. All items on the permit shall be filled out and the permit signed. The permit shall be turned into the Facilities Supervisor or the Plant Safety Engineer.

21. EXCAVATING AND TRENCHING

21.1 All excavating/trenching shall be performed under the direct supervision of an OSHA competent person

21.2 An Excavation Work Permit (BD Form 4655) is required to be completed and signed by an Authorized BD Facilities Department representative each day, prior to the start of ANY excavation work.

21.3 The contractor shall stake the location of all proposed excavations at least 2 days prior to the start of work and request approval to excavate from the BD representative.

21.4 Utilities must be marked prior to initiation of work. This should include a thorough review of plant drawings, blue stakes, and site walkthrough. Underground utility marking shall be performed by Blue Stakes for all Utility Company owned lines, and by Sorenson Construction as necessary for all BD owned utility lines.

21.5 The walls and faces of trenches 5 feet or deeper, and all excavations in which employees are exposed to danger from moving ground or cave-in shall be guarded by a shoring system, sloping ground, or some equivalent means, meeting OSHA requirements and agreed to by the Safety Engineer. Trenches 4 feet deep or more shall have adequate means of exit such as ladders or steps located so as to require no more than 25 feet of lateral travel.

21.6 In excavations that employees may be required to enter, excavated or other material shall be effectively stored and retained at least 2 feet from the edge of the excavation.

21.7 Daily inspections shall be made by the BD representative or the Facilities Supervisor. If evidence of possible cave-ins or slides is apparent, all work in the excavation shall cease until necessary precautions have been taken to safeguard the employees.

21.8 All excavations and equipment left unattended shall have barricades to identify location.

22. FIRE SAFETY

22.1 Adequate fire extinguishers must be provided in all areas where danger of fire exists. Contractor personnel shall be trained in the use of such extinguishers.

22.2 Flammable and combustible liquids and gases must be stored outside the building. Such chemicals shall be removed from the premises **at the end of the work shift** unless specifically authorized otherwise.

22.3 Service on fire detection and suppression systems shall be coordinated with Facilities Maintenance and Security shall be notified prior to initiation of work.

22.4 All LP Gas tanks shall comply with the following:

22.4.1 Barricades to prevent accidental collision with the tank by mobile equipment or vehicles shall be installed.

22.4.2 All piping, appliances, regulators, valves, hoses, etc. attached for use shall be rated for use with LP Gas.

22.4.3 A regulator shall be installed at the LP Gas tank.

22.4.4 A shutoff valve shall be installed on the LP Gas line for each appliance attached, as close to the appliance as possible. This is in addition to the line installed at the tank.

22.5 Temporary heating devices shall comply with the following:

22.5.1 An adequate supply of fresh air shall be maintained to prevent a buildup of carbon monoxide from heating devices

22.5.2 All heaters shall be equipped with safety controls that will automatically shut off all fuel and turn the heater off if it is tipped over.

22.5.3 All heaters fueled by propane or a flammable or combustible liquid shall be equipped with a device that stops the flow of fuel in the event of flame failure.

22.5.4 All space heaters shall be turned off when unattended.

23. FIRST AID

23.1 The contractor is expected to provide first aid equipment and trained personnel for his employees, as defined in the OSHA Standards. In case of emergency call Ext. 2911 or 2364.

24. DEMOLITION

24.1 All utilities shall be disconnected and locked out prior to initiation of demolition.

24.2 A written Engineering Plan is required for all demolition work that involves structural building components. A copy of that Engineering Plan shall be maintained on the job site, and made available on request to the Facilities Supervisor, Representative, or Safety Engineer.

24.3 Barricades shall be erected prior to initiation of work. Access to area shall be controlled at all times. Signs shall also be posted prior to initiation of work.

24.4 Structures shall be braced so as to prevent un-planned collapse.

24.5 No material shall be dropped to any point lying outside the exterior walls of the structure unless the area is effectively protected. Chutes shall be used when materials are dropped from a height of more than 20 feet.

25. TOOLS AND EQUIPMENT

25.1 All tools and equipment shall be inspected prior to use and shall be used in accordance with manufacture's recommendations.

25.2 Power tools shall be double insulated or grounded.

25.3 Power tools and extension cord sets used outside or in wet locations shall be protected with Ground Fault Circuit Interruption (GFCI).

26. POWDER ACTUATED TOOLS

26.1 Powder actuated tools must be operated only by trained employees. The tool must be checked every day to see that safety devices are in proper working order.

26.2 Every person who operates a Powder Actuated Tool is required to be **licensed** by the tool manufacturer to operate the tool.
NOTE: Powder actuated tools are spark producing, and a Hot Work Permit is required for operation.

27. MOBILE EQUIPMENT

27.1 All mobile construction equipment, including but not limited to Forklifts, Rollers, Excavators, Backhoes, Skid Steer Loaders, Front End Loaders,

Scrapers, Bulldozers, etc. shall comply with the following:

27.1.1 All equipment must be equipped with Roll-over Protective Systems (ROPS)

27.1.2 All equipment must be equipped with working backup alarms that are audible above the ambient noise levels

27.1.3 All equipment must be equipped with seat belts, and their use must be enforced

27.1.4 All equipment must be maintained in good working condition and according to the manufacturer's specifications.

27.1.5 Any equipment with damage or modifications that may affect the safety of the operator and other personnel will be immediately taken out of service, and either immediately repaired or removed from the job site.

28. STERILIZATION & MIX ROOM AREAS

28.1 Work in the sterilization and mix room areas requires authorization from BD Management.

28.2 All contractors performing work in these areas shall either be accompanied 100% of the time by qualified BD Employees, or shall complete training in the hazards of these areas and the special procedures required for safe work, by the BD Safety Engineer or his designee.

28.3 Opening a pipe or any equipment in these areas that may contain a flammable or a toxic material requires completion of a Line Break Work Permit prior to the start of work.

28.4 Hot work permits for these areas can be issued only by Qualified BD Personnel who are well versed in the hazards of work in these areas, and the special precautions required for safe work in these areas.

ELECTRONIC HISTORY ONLY

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VERSION HISTORY

Revision /Version	Description	ECO Number	Version Prepared By
10 (H)	Updated format to SAP template so document will print correctly and follow the correct flow of the template. Added “she” to section 12.3. Added file path for external documents. Updated title of this procedure to “Contractor Safety and Environmental Procedure” and added section 4.2.6 for Contractor Safety and Environmental Handbook with location Facilities Office. Updated contact name and phone numbers, adding Bob Melendez and updating Travis Lindstrom’s Responsibility. Updated MSDS	50000011290	June Davis

	references to SDS.		
9(F)	Update contact name and phone numbers.	500000096425	Bob Partner
8(E)	Update contact number for Nurse	500000070085	Bob Partner