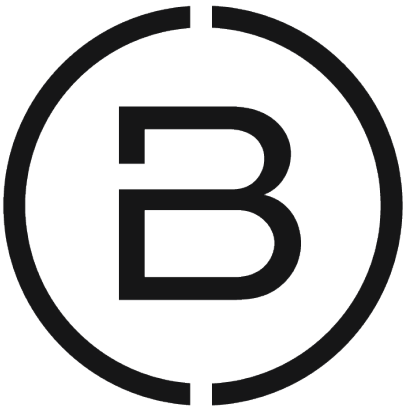
BAXTER

And Affiliated Companies



Company Safety Plan

278 Mill Street, Suite 100
Poughkeepsie, NY 12601

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EMERGENCY CONTACTS

ALL EMRGENCIES CONTACT 911

RL Baxter PROJECT TEAM		
Amanda Baxter	President	845-471-1047
Eric Baxter	Vice President	845-471-1047

HOSPITALS		
Vassar Brothers Medical Center	Emergency	845-431-5680
Saint Francis Hospital	Emergency	845-431-8220

ENVIRONMENTAL		
NYSDOL	Asbestos Control Bureau	(518) 457-1536
Region ll EPA	Lead Regulations	(877) 251-4575

POLICE AND FIRE	
City of Poughkeepsie Police	(845) 451-4000
Poughkeepsie Fire Department	(845) 451-4081

CENTRAL HUDSON GAS AND ELECTRIC	
Electric Interruption	(845) 452-2700
Gas	(845) 452-2700
Call before you dig UFPO	(800) 962-7962

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Policy & Commitment to Safety

From the President,

RL Baxter is guided by our safety and health policy. This policy is based upon the necessity to eliminate injuries, occupational illnesses and property damage, as well as to protect the public whenever and wherever the public comes into contact with the company's work.

All management and supervisory personnel are charged with the responsibility for planning safety into each work task and for preventing the occurrence of incidents and/or controlling conditions/actions that could lead to occupational injuries or illnesses. The ultimate success of a safety and health program depends upon the full cooperation of each individual employee. Management at RL Baxter is prepared to take the necessary actions to see that safety and health rules and practices are enforced, and to ensure that effective training programs are employed to the best advantage.

Safety will never be sacrificed for production. Safety is an integral part of quality control, cost reduction and job efficiency. All supervisors will be held accountable for the safety performance of the employees under their supervision.

Our goal is the total elimination of accidents from our operations, allowing each employee to return home safely to his or her family.

Sincerely,

Amanda Baxter

President

Responsibilities

All workers for RL Baxter are expected to do their part to ensure a safe workplace. To accomplish this all employees shall:

1. Abide by all federal, state, and local regulations.

2. Adhere to the safety policies and procedures of RL Baxter and where appropriate those of the owners and contractors for whom RL Baxter has contracted to perform work. In cases where the safety requirements exceed all Federal, State and local regulations, employees are required to follow the safety requirements.

3. Exercise good judgment in the application of RL Baxter's Safety Plan.

4. Protect the public and staff from potential hazards created by onsite work activities.

Responsibilities of Management

1. Manage and support the safety rules and programs outlined in this plan to enhance safety awareness and inform all employees of these established rules and programs.

2. Communicate the appropriate rules and regulations to all supervisors.

3. Coordinate any and all safety training for the employees.

4. Impress on all subcontracted and RL Baxter employees that their individual participation, responsibility and accountability is necessary to maintain an accident-free work environment.

5. Provide appropriate personal protective equipment for RL Baxter employees and ensure all subcontractor owners provide such PPE to each of their respective employees assessed and trained by a competent person.

6. Document all violations that are observed and institute disciplinary action to any and all employee and subcontracted personnel disregarding this policy.

7. Investigate all accidents and ensure subcontractor owners provide employee training to prevent reoccurrence.

8. Require all subcontractors as a matter of contract and all material suppliers through purchase order terms to follow safety rules.

9. Provide for regular safety inspections of jobsites to ensure RL Baxter safety rules are being followed by company employees and subcontractors.

Responsibilities of Jobsite Superintendents

1. Ensure that all work performed is done in accordance with established site specific safety regulations through methods such as pre-planning, training and use of the company disciplinary policy.

2. Superintendents will follow-up on all site inspections performed to ensure proper corrective and disciplinary actions are taken.

3. Inform foremen of RL Baxter's commitment to safety and of the need for them to manage their crews in a safe manner. Nothing less will be tolerated.

4. Review accidents, oversee the correction of unsafe conditions, and complete accident reports.

5. Conduct jobsite safety meetings and provide employees with proper instruction on the site specific safety requirements of their activities.

6. Require RL Baxter employees and subcontractors to perform all work in accordance with these established safety regulations. In cases where the safety requirements exceed all Federal, State and local regulations, employees and subcontractors are required to follow the safety requirements.

7. Notify RL Baxter's corporate office of any safety violations and complete all associated documentation for safety infractions.

8. Protect the public from potential hazards related to company operations.

9. Work with other contracted subcontractors on job sites to ensure RL Baxter employees are not endangered by the operations of others.

10. Perform weekly jobsite inspection checklists and keep on file.

11. Maintain electronic daily log books for completeness and accuracy including all safety concerns and hazards within this log for all projects.

Responsibilities of Jobsite Project Foreman

1. Execute the safety plan at the work level.

2. Be knowledgeable of all safety requirements and safe work practices.

3. Conduct pre-task planning sessions to coordinate activities for the day and to anticipate unsafe conditions which may occur in the performance of those activities.

4. Ensure new employees receive new hire orientation training covering the hazards associated with their duties.

5. Provide safety training to existing employees performing new tasks.

6. Make sure an adequate supply of protective equipment is available and used by employees when required.

7. Make sure work is performed in a safe manner and no unsafe conditions or equipment are present.

8. Correct all hazards, including unsafe acts or conditions. Ensure no unsafe equipment is present on the jobsite that could be used by an employee.

9. Report all near accidents so an investigation can be conducted to prevent a reoccurrence.

10. Secure prompt medical attention for any RL Baxter or subcontractor injured employees.

11. Report all injuries and safety violations.

Workers' Responsibilities

1. Follow the safety rules and work in a safe manner to ensure the safety of yourself, co-workers, and others.

2. When uncertain about how to perform any task, request superintendent assistance.

3. Correct any unsafe act or condition within the scope of your immediate work. Any hazard which cannot be readily corrected shall be immediately reported to your supervisor.

4. Any unsafe condition corrected by an employee shall be reported to the appropriate supervisor by the employee(s) who corrected the hazard.

5. Report for work in good mental and physical condition so that assigned duties can be carried out in a safe manner.

6. Avail yourself of any site safety committee sponsored programs.

7. Inspect, maintain, and use safety devices provided for your protection.

8. Properly use and maintain all tools under your control.

9. Look out for other employees and assist them with safety requirements if an unsafe practice or condition is observed.

Responsibilities of All Personnel

1. Strive to make all operations on projects safe to achieve an accident-free workplace.

2. Maintain mental and physical health conducive to working safely.

3. Keep all work areas clean and free of debris.

4. Do not perform work in a manner which may be harmful to others. Assess the results of your actions on the entire workplace.

5. Do not let unsafe conditions imperil others. Prior to leaving work, replace or repair safety precaution signs removed or altered during the course of your work.

6. Abide by the safety rules and regulations of every construction site.

7. Work in strict conformance with federal, state and local regulations. In cases where safety requirements exceed all Federal, State and local regulations, employees are required to follow the RL Baxter safety requirements.

Subcontractors and Suppliers

1. Abide by all Federal, State, and local regulations. In cases where this safety plan exceeds all Federal, State and local regulations, all personnel are required to follow the RL Baxter safety requirements.

2. If the activities of another subcontractor affect the health or safety of your employees, notify the superintendent of the hazardous condition.

3. Before entering the project site, inform the superintendent of your arrival. All material deliveries shall be coordinated in advance with the project superintendent.

4. Immediately inform the project superintendent of all injuries to workers.

5. Any unsafe condition or action observed shall be reported to the project superintendent so that the observed hazard can be addressed.

6. Participate fully in the project Disciplinary Program.

Architects, Engineers, Owners and Visitors

1. Follow all safety rules of the project site.

2. Inform project site superintendent before entering the construction site. Personal protective equipment such as a hard hat, safety glasses, and safety boots must be worn as required at all times.
3. Jobsites will have signage advising PPE designated areas or site requirements.

Emergency Procedures

1. In the event an onsite emergency occurs on any project, the site superintendent shall be responsible for implementing emergency procedures described in this section.

2. Emergencies are classified as life threatening, medical, or serious property damage.

3. In the event of a life-threatening onsite emergency, accident, or medical emergency, the onsite superintendent shall initiate the following actions.

   a) Ascertain the nature of the emergency and the number of people affected.
   b) Immediately call 911 and local emergency agencies or designate one or two people to contact City of Poughkeepsie Police, Poughkeepsie Fire Department, ambulance, Haz-mat, Central Hudson Gas and Electric, and owner as quickly as possible.
   c) Superintendent shall immediately contact RL Baxter management team.
   d) Superintendent shall designate one or more employee to contact people adjacent to the work site if they are affected by the emergency. Have another employee contact the main office.
   e) Superintendent shall have authority and control of the site and assign tasks as necessary. Survey the area to insure scene is free of hazards that could cause further injury (traffic, electrical hazards, etc.).
   f) Take measures to eliminate hazards that may exist and restrict access to the project site emergency area. Secure the scene and do not disturb anything unless needed.
   g) Provide whatever immediate and temporary relief possible until emergency personnel arrive at the scene (bring first aid equipment, blankets, etc.).
   h) Ensure the injured party is accompanied to the hospital.
   i) Perform a preliminary accident investigation before emergency area is disturbed. Take pictures as soon as possible and conduct an accident investigation following the procedures outlined in RL Baxter's health and safety program

5. In the event of a property damage emergency, the following actions are to be taken by the onsite project superintendent:

   a) Determine if there is a danger to employee or subcontracted workers or public and staff adjacent to the project site. If so, follow procedures outlined for a life-threatening emergency, accident, or medical emergency.
   b) If no danger exists to workers, staff and public adjacent to the site, immediately call RL Baxter management team and report the property damage emergency. (911, police, fire, haz-mat, utility, etc.).
   c) Restrict access to the property damage emergency area. Secure the scene and do not disturb anything unless needed.
   d) Notify the corporate office.
   e) Document the emergency.

First Aid

Superintendent Responsibilities

1. Ascertain medical facility to where injured worker will be transported (Vassar Medical Center /St. Francis Hospital).

2. Aid in providing direction and access for responding ambulance service.

3. Provide “Emergency Numbers” form for subcontractor representatives.

4. Provide, inventory, and maintain a complete first aid kit.

Procedure

In all cases immediately call the emergency number provided on-site.

1. Notify a designated first aider who is certified in first aid and CPR.

2. Do not move a victim.

3. Provide the appropriate emergency first aid (by trained employees only).

Superintendents are responsible for informing all employees about emergency telephone numbers as well as emergency procedures. In addition, superintendents shall be sure all employees are aware of the following precautions for special situations:

Clothing Fire

a. Prevent the victim from running.

b. Roll the victim on the floor and wrap in a blanket or coat.

c. Douse the victim with water or use an emergency shower provided the clothing is not burning due to a flammable or combustible material.

d. Do NOT remove wet or burned clothing from the victim's burned areas.

Burns from acid, caustics, or other chemicals

a. Immediately move the victim under an emergency shower or running water.

b. Keep the victim under the shower for a minimum of 20 minutes and remove clothing.

c. In case of eye burns, hold victim’s eyelid open and flush with water for 15 minutes, from an eye bath, water fountain, or with a gentle stream from a water hose.

d. Know the location of and how to operate emergency showers, eye baths and water hoses in your work area where available.

Exposure to vapors, fumes or gases

a. Notify trained personnel to close valves and perform similar precautionary procedures.

b. Move exposed people to fresh air as quickly as possible.

c. If fumes or gases have penetrated clothing and/or are causing skin irritation, immediately get victim under a shower and have clothing removed.

d. Have all victims report to a physician for examination.

e. Tell the physician the specific gas vapor or fumes involved and provide a Safety Data Sheet.

f. Call a physician AT ONCE if any symptoms occur after working hours. (Some fumes or gases have delayed action symptoms).

Electric Shock

a. De-energize the circuit if possible. If unable to do so, use a nonconductor to remove the electrical source from the victim.

b. If the victim is not breathing or has no pulse, first aider shall administer CPR.

c. If the victim is in water, ensure that no exposed wires are in or near the water.

d. Move the victim ONLY if there is no other way to stop the current flow.

Basic items to be staged on-site with first aid kit:

Unit-pack 36-unit first aid kit (special order):

ITEM	*NUMBER OF UNITS*
Adhesive Bandage 1" x 2-3/8"	1
Butterfly 1	1
Bandage Compress 2"	2
Bandage Compress 4"	3
Triangular Bandage	4
Zephiran Chloride	1
Ammonia Inhalant	1
Gauze Bandage 2" x 6 yards	2
Adhesive Tape	1
Eye Dressing Kit	2
Tourniquet, Forceps, Scissors	1
Wound Wipes	1
Cold Packs	3
Rescue Blanket	1
Gauze Compress 3" x 3"	4
Gauze Compress 24" x 72"	1
Latex Exam Gloves	1 dozen 36 Unit Case

Additional Basic Materials:

Pocket Mask w/O2 Port, or "Blob mask"	1 per first aider
Blanket and Pillow	1

NOTE: In absence of an infirmary, clinic, or hospital in near proximity to the workplace, the following additional first aid equipment shall be provided.

Folding Stretcher, Ferno Washington Model 12	1
FRAC - Kit #8398, Edco/PASCO Company Division of Tempco Products, Inc. or equivalent	1

Multi-Employer Work Sites

General

RL Baxter' contract documents clearly state the requirements of working safely while performing work on any project. It also outlines disciplinary action to be taken for worker non-compliance. This is done because we value our human resources.

This section establishes a line of responsibility for controlling hazards created by each employee or subcontractor on site. In order to complete a construction project, the efforts of many contractors is necessary. Working together during the course of a project can create situations where different trades are exposed to safety hazards created by others. OSHA has developed a Multi-Employer Work Site requirement to help define abatement responsibilities of those contractors involved in the construction process.

OSHA's Multi-Employer doctrine allows OSHA to issue citations to the following if a safety violation exists:

- The employer whose employees are exposed to the hazard,
- The employer who created the hazard,
- The controlling employer or owner on site who would have responsibility for correcting the hazard, and/or
- The employer responsible for correcting the hazard

Responsibilities

The jobsite superintendent will be responsible for making sure the appropriate safety measures are provided for RL Baxter and employees. In the event a hazard exists that is not created, controlled, or the responsibility of RL Baxter or one of its subcontractors, RL Baxter and employees will be prohibited from working in that area. The responsible and controlling party will then be notified about the condition.

Subcontractors who create a hazard are responsible for correcting the condition and maintain the protection as long as they are working in the area. Any subcontractor removing a safety device is responsible to replace that device immediately. In circumstances where maintaining protection (i.e. guardrails at a loading area) is part of a subcontractor's scope of work, that subcontractor will be required to maintain the proper protection. As a controlling contractor, RL Baxter will address any safety hazard that is identified by RL Baxter or a subcontractor and make sure that measures are taken to abate the hazard.

Example:

A panel box is not provided with a cover to prevent employees from contacting live parts. The electrical contractor is then responsible to provide and maintain the panel box cover until they complete their work.

Demolition

Employee or Subcontractors contracted for any and all demolition work on any project shall be responsible for following at a minimum the requirements outlined in safety plan. All demolition work shall not be performed unless a written demolition plan has been drafted by a qualified person experienced, licensed and competent in demolition related work. The written plan shall be reviewed by RL Baxter prior to the commencement of demolition work. At a minimum the written plan shall include the following, where applicable, to the project scope;

Preparatory Operations

Engineering Survey

OSHA Standard 1926.850(a) requires that an engineering survey shall be conducted by a competent person to determine the condition of the framing, floors, and walls so that measures can be taken, if necessary, to prevent the premature collapse of any portion of the structure. Any adjacent structure(s) shall also be similarly checked. The contractor performing the demolition work shall maintain a written copy of this survey on site.

The survey provides the demolition contractor with the opportunity to evaluate the job and plan for the wrecking and supporting of the structure, proper equipment necessary, manpower requirements, as well as reviewing protection of the public issues. The survey needs to take into account hazards that may be present during the demolition process and identify measures to be taken to address those hazards.

If the structure to be demolished has been damaged by fire, flood, explosion, or some other cause, appropriate measures such as bracing and shoring of walls, floors and other building components shall be taken and identified as part of the survey. It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable material, or similar dangerous substances have been used or stored on the site. Undeterminable substances shall be tested and analyzed by a qualified person prior to demolition.

Where a hazard exists from fragmentation of glass, that hazard shall be removed. Wall openings that present worker hazard shall be protected to a height of 42 inches. All floor openings not designed for use with chutes shall be covered. Debris landing areas shall be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above.

Environmental Survey

An Environmental survey shall be conducted prior to the start of demolition to determine the presence of asbestos and lead. All areas containing asbestos shall be abated as per New York State Code Rule 56.

Components containing lead paint shall handle according to OSHA or EPA regulations depending on which agency has jurisdiction on the project. Typically, private projects will follow OSHA standards while public work requires EPA regulations to be followed. A determination shall be made as to what regulation shall be followed for the demolition project being performed.

No demolition work may be performed until hazardous materials surveys are complete and appropriate abatement/removal is facilitated and the documentation to support the abatement/removal is obtained.

All asbestos containing material removed from any project will be disposed of in as appropriate manner by the abatement contractor. Material that contains lead paint shall have a Toxicity Classification Leaching Potential (TCLP) test to determine the proper means of disposal.

Utility Location

- Properly locate utility services during the planning stage. All electric, gas, water, steam, sewer, and other service lines shall be shut off, capped, or otherwise controlled before demolition work is started.
- All utility companies involved shall be notified in advance and approval or services obtained.
- Relocation of utilities may be required to maintain power or other service during the demolition.
- Survey overhead power sources to determine if they present an electrical hazard to employees or equipment used during the demolition process.

Stairs and Passageways

- All means of access to the structure shall be shut off except for those specially designated as such.
- All stairs, passageways and ladders shall be inspected.
- Stairwells shall be properly illuminated.

Disposal Chute

- No material shall be dropped near the exterior walls of the structure unless the area is effectively protected.
- If materials are dropped more than 20 feet to any point lying outside the exterior walls of the building, a disposal chute shall be used.
- Disposal chutes shall be entirely enclosed if at an angle of more than 45°.
- Gates shall be installed at the discharge end, and a competent employee shall control the gate, and backing and loading of trucks.
- Disposal chutes not in use shall be securely closed off.
- Disposal chute openings shall be protected by guardrails at least 42 inches from the floor. Space between the chute and openings in the floors shall be solidly covered.
- Disposal Chute openings shall have a bumper, not less than 4 inches thick and 6 inches high, when material is to be dumped from wheelbarrows or mechanical equipment.
- Chutes shall be designed of such strength to handle the debris loaded in them.

Medical Services & First Aid

- Make provisions prior to start of work for prompt medical attention in case of serious injury.
- Locate and display prominently all contact information for nearby hospitals, infirmaries, clinics and physicians.
- Determine the instructions for the best route to these facilities.
- Proper equipment for transportation of an injured worker shall be ready as well as a communication system.
- If a hospital, clinic, infirmary, or physician is not available, a person with a valid certificate in first aid and CPR training from an accredited body shall be available at the site.
- A properly stocked first aid kit shall be available at the site. See First Aid section of this safety manual for proper quantities and contents of a jobsite safety kit.

Fire Prevention & Protection

- A "fire plan" shall be put in place prior to starting work. The plan shall outline the assignments of key personnel in the event of a fire. A suitable location at the site shall be designated and provided with the fire plan.
- Identify potential sources of ignition and take corrective measures.
- Electrical wiring for light, heat, or other power shall be installed by a competent person and inspected regularly.
- Exhaust discharge from engines shall be directed away from workers.
- Fire extinguishers shall be present and their location clearly identified.
- Heating devices shall be installed properly and regularly maintained.
- Smoking is prohibited near hazardous operations or materials.
- Keep access to street fire hydrants clear.
- Large multi-story buildings shall be provided with standpipes with outlets. A pump may be necessary if pressure is insufficient.

Personal Protective Equipment

During demolition operations, appropriate personal protective equipment shall be used and maintained. Safe work clothing, hand protection, foot protection, head protection, eye & face protection, hearing protection, respiratory protection, fall protection, as well as other personal protective equipment shall be used when needed. Employees required to wear respirators shall be part of a respiratory protection program, which includes medical evaluations and fit testing.

Special Structure Demolition

Confined Spaces

- Refer to your confined space program in your corporate safety manual for hazards associated with confined spaces.
- Examples of confined spaces on demolition work can include storage tanks, vessels, degreasers, pit vaults, casing, and silos.
- Failure to recognize a confined space as a hazard can lead to injury, illness or death.
- The danger of explosion, poisoning, and asphyxiation are present at the onset of entry into a confined space.

Demolishing a Chimney or Stack

Consult architect/engineer drawings and perform a careful, detailed inspection of the structure by an experienced person. Pay close attention to the condition of the chimney or stack. Employee shall lookout for structural defects such as weak or acid-laden mortar joints, and any cracks or openings. The interior brickwork in some sections of industrial chimney shafts can be extremely weak. Remove any steel straps as work progresses from the top down.

- Hand demolition shall be performed from a working platform.
- Install scaffolding around the chimney. Pay close attention to the tie-in braces.
- Adequate spacing between chimney and work platform is essential.
- The area around the chimney shall be roped off or barricaded and appropriate warning signs posted.
- A safety monitor on the ground is suggested.
- Do not work on the chimney in poor weather conditions.
- Keep the chimney wet to reduce dust.

Demolition of Pre-Stressed Concrete Structures

υ *Pretensioned members* do not have any end anchors. Simple pretensioned beams and slabs of spans up to about 7 meters (23 feet) can be demolished in a manner similar to reinforced concrete. Members shall be turned on their sides once lowered to the ground for breaking up.

υ Precast units stressed separately from the main frames of the structure, with end anchors and grouted and ungrouted ducts shall be lowered to the ground if possible.

υ *Monolithic structures* – Experience in prestressed work is suggested when dealing with members that have been stressed together. Temporary supports are usually required so the anchorage can be cautiously exposed.

υ *Progressively prestressed structures* - The stored energy in this type of structure is large. Sudden and complete collapse can occur without warning.

Safe Blasting Procedures

- A complete written survey shall be made by a qualified person of all adjacent improvements and underground utilities. Excessive vibration is a possibility when performing blasting operations. Seismic or vibration tests shall be conducted to determine the proper safety limits and to prevent damage to nearby buildings, utilities, or other property.
- A structural engineer shall direct the work if structural columns, beams, or other components are to be removed. Extreme caution shall be taken to avoid weakening and premature collapse of the structure.
- Use of explosives to demolish smokestacks, silos, cooling towers, or similar structures shall be permitted only if there is a minimum of 90 degrees of open space extended for at least 150% of the height of the structure.

  Fire Precautions

  Fire near explosives represents severe danger. Every effort shall be made to ensure that fires or sparks do not occur near explosive materials.

  Smoking, matches, firearms, open flame lamps, and other sources shall be prohibited in or near explosive magazines, or in areas where explosives are being handled, transported or used.

Electrical detonators can be inadvertently triggered by stray radio frequency signals from two-way radios.

Personnel

A blaster is a competent person who uses explosives. A blaster shall be qualified by reason of training, knowledge, or experience in the field of transporting, storing, handling, and using explosives. Knowledge of state and local regulations is required.

Vehicle Safety

- Vehicles carrying explosives shall be in good mechanical condition.
- Explosives, blasting agents, and blasting supplies shall not be transported with other materials.
- Blasting caps shall not be transported in the same vehicle with other explosives.

Proper Use of Explosives

- Blasting operations shall be conducted between sunup and sundown.
- Adequate signs shall be posted. Alerts shall be sounded to warn of hazards.
- Blasting mats and other containment shall be used where there is a danger of debris being thrown into the air.
- Take caution to prevent accidental detonation by radio, television, or radar transmitters.

Procedures After Blasting

Inspection

- Immediately disconnect the firing line from the blasting machine.
- Power switches shall be locked open or in the off position.
- Allow sufficient time for clearing of dust, smoke, and fumes.
- Make sure all charges have been exploded.

Disposal of Explosives

- Explosive distributors will usually take back unused stock.
- Local fire marshals or representatives of the US Bureau of Mines may arrange for disposal.
- Never abandon explosives.
- Dispose of wood, paper, fiber that may have contained explosives by burning.

Job Site Demolition Survey

Category	Areas	Satisfactory	Unsatisfactory	Corrective Action Required/Performed
Safe Access & Movement				
	Work Areas			
	Walkways, runways, passageways			
	Ladders, stairways, elevators			
	Protection for floor and roof openings			
	Illumination			
Vehicles				
	Roads: turn space, parking area, mud			
	Materials storage areas / dump areas			
	Signs and signals for vehicle routing			
	Maintenance and repair			
Utilities & Service				
	Location of temporary buildings			
	Location / identification of high voltage lines			
	Location of sanitary facilities / drinking water			
Scheduling Work				
	Provide safety equipment; hard hats, life belts, goggles, work vests			
	Establish liaison between contractors to prevent congestion among trades			
	Provide temporary flooring, safety nets and scaffolding where required			
Work Procedures				
	Adequate space			
	Equipment: cranes, hoists, elevators, trucks			
	Rigging procedures			
Tools & Equipment				
	Repair, maintenance, care			
	Inspection			
	Supplies for tools			
Workers / Foremen				
	Job assignments			
	Training and supervision			
	Number of workers			
	Safety plans			
	Safety bulletins, charts, posters			
	Recognition for groups, individuals			
	Investigation, reporting of accidents			
	Safety meetings			
	New employee training/orientation			
	Immediate corrective action plan			
	First aid; medical treatment plan			
Hazard Recognition				
	Health; asbestos, chemicals, materials			
	Noise levels			
	Confined spaces			
	Dust			

Disciplinary Program

Purpose

Safety on all projects requires constant attention and awareness from everyone involved. The success of a safety plan is related to the efforts put forth by all onsite workers and management involved in the project. It is for this reason that employees of RL Baxter Construction Co. and its subcontractors are required to adhere to the safety rules and regulations of state, federal and local agencies, and the owner for whom work is being performed. These safety requirements may exceed applicable OSHA Standards. In these circumstances, onsite employees are required to follow the site specific safety requirements. In order to ensure active participation from each employee, we have developed a Disciplinary Policy to enforce these safety rules and regulations on projects.

Responsibilities

The project superintendents and foremen are responsible for implementation of the Disciplinary Policy. This does not exclude these parties from following safety policies/practices or from disciplinary action resulting from safety violations.

Procedure

1. Employees are subject to one of the following disciplinary actions resulting from safety violations. Each violation (excluding the first verbal which will be documented in the supervisor's daily log) will be documented on the attached Safety Violation Form. This form will include the date of the violation and disciplinary action taken.

   a) First Violation: Verbal warning, to be documented in supervisor's daily log.

   b) Second Violation: Verbal warning, documented on Safety Violation Form.

   c) Third Violation: Mandatory two-day work suspension without pay, documented on Safety Violation Form.

   d) Fourth Violation: Termination, documented on Safety Violation Form.

2. Violations are to be documented and up to date. A copy of the safety violation will be issued to the employee to whom it applies and a second copy will be filed in the employee's personal file.

3. When a safety violation is issued, the supervisor of the employee who is in violation will meet with that employee to discuss the safety infraction. The subcontracted employee will be informed of the rule or procedure that was violated and the corrective measures that shall be taken to eliminate the hazard. The employee in violation shall fully understand the reason for and the associated risks pertaining to their violation prior to returning to work.

4. Nothing in this policy prohibits the immediate dismissal or removal from the site of any employee or subcontractor whose conduct constitutes a serious violation of the site specific safety requirements, which could cause serious danger to himself/ herself, other employees, property or equipment.

Safety Violation Form

A safety violation form is to be completed each time an onsite worker violates a site specific safety rule. This form shall be forwarded to the subcontractor's main office and added to the subcontractors onsite file.

EMPLOYEE NAME: **COMPANY:** **DATE OF VIOLATION:** **DESCRIPTION OF VIOLATION**:
CORRECTIVE ACTION TO BE TAKEN TO PREVENT A REOCCURENCE:
DISCIPLINARY ACTION TAKEN:
NOTHING IN THIS POLICY PROHIBITS THE IMMEDIATE DISMISSAL OR REMOVAL FROM THE PROJECT OF ANY WORKER OR RL BAXTER EMPLOYEE WHO'S CONDUCT CONSTITUTES A SERIOUS VIOLATION OF SAFETY RULES, WHICH COULD CAUSE SERIOUS DANGER TO HIMSELF/HERSELF, OTHER WORKERS, PROPERTY, OR EQUIPMENT. AS A WORKER WORKING AT ANY SITE, I UNDERSTAND THE NATURE OF MY SAFETY VIOLATION AND THE PROPER CORRECTIVE ACTIONS NECESSARY TO ELIMINATE THE HAZARD. **SUBCONTRACTOR/EMPLOYEE SIGNATURE: _____DATE: _____**

Site Superintendent Safety Violation Form

Project: _____

Date: _____

Name of Subcontractor: _____

Violation: _____

_____

_____

_____

_____

_____

_____

_____

_____

Fine:_____

Comments: _____

_____

_____

_____ _____

Superintendent **Subcontractor**

_____ _____

Date **Date**

Weekly Safety Meetings

Responsibilities

The project superintendent is responsible for ensuring that subcontractors perform weekly safety meetings with their workers. It is the responsibility of the job superintendent to see that weekly safety meetings are conducted in an orderly and productive manner. (Superintendent shall make sure subcontractors are submitting copies of safety meetings at least on a weekly basis.)

Procedure

1. All RL Baxter supervisors shall schedule weekly meetings with all employees.

    a) All employees shall attend each safety meeting and sign in on a Tool Box Talk Attendance sheet.
    b) Attendance sheets shall be kept on file at the jobsite and a copy shall be forwarded to the main office.

2. Guidelines for subcontractor safety meetings are as follows:

    a) Safety is the sole purpose of the meeting and other matters shall not be covered.
    b) Safety meetings shall be held at least once a week and cover a topic pertinent to the work being performed. The suggested duration of the meeting is ten to fifteen minutes but can exceed that time frame if safety issues need to be addressed.
    c) Employees shall pass on copies of the information discussed with the project superintendent.
    d) Comments and suggestions by employees shall be recorded for discussion at the next meeting.
    e) Administrative matters not contributing to safety are not appropriate topics to be discussed at the subcontractor's safety meetings.
    f) A record shall be maintained containing the subjects presented or discussed for potential auditing purposes.

3. Subjects for the safety meetings may come from:

    a) The insurance carrier
    b) Local safety council
    c) Associated General Contractors of New York State
    d) OSHA regulations
    e) Fire department
    f) Supervisors / Employees
    g) Recent incidents
    h) The customer
    i) Consultant

Posting Requirements

The following documents shall be posted in the site office trailer readily visible to all project workers:

1. OSHA
   a) A poster illustrating industry standard crane hand signals shall be posted if any crane or hoisting activities are being performed.

   b) OSHA requires the OSHA 300A form to be posted from February 1 through April 30 each calendar year.

   c) The OSHA Workplace Poster. OSHA Document 3165 (new version) or 2203 (old version), both are acceptable.

2. State
   a) Employment of Minors, including Schedule of Permitted Hours.

   b) Fair Employment and Discrimination laws.

   c) Minimum Wage information.

   d) Notice of Compliance of Workers' Compensation Benefits.

   e) Notice of Unemployment Insurance

3. Federal
   a) Occupational Safety & Health Act.

   b) Federal Minimum Wage Notice.

   c) Employee Polygraph Protection Notice.

   d) Equal Employment Opportunity Commission Discrimination.

   e) Family and Medical Leave Act.

Employee Exposure Assessment

PURPOSE

To provide guidelines for assessing RL Baxter employee and subcontracted employees exposure when performing operations that produce fumes, mists, gases, vapors, airborne dust, etc. that is specific to the scope of work on any projects.

SPECIFIC GUIDELINES:

1. Operations and tasks that produce airborne contaminants are to be reviewed through the scope documents and by utilizing calibrated instrumentation and/or by reviewing Material Safety Data Sheets from submittals. Superintendent shall ensure all site specific safety procedures are implemented according to applicable federal and state regulations.

   Note: A list that identifies all operations and tasks that produce airborne contaminants shall be obtained through existing Hazardous Materials Surveys (Where available) by owner,

2. Incorporate engineering controls and/or personal protective equipment to reduce exposures to airborne dusts, fumes, mists, gases, vapors, etc., as identified in the Hazardous Materials Survey making sure all engineering controls are utilized prior to the use of respiratory protection.

3. Obtain required training certifications. Programs and instructions from contracted companies for all contaminants, engineering controls and/or personal protective equipment assessed and identified.

SUPERVISORY:

1. Superintendents, subcontracted owners, or group leaders are responsible for training their respective personnel about the types of airborne contaminants, engineering controls, and/or personal protective equipment.

2. Above responsible parties are also responsible for requesting measurement and evaluation of any new job or material for inclusion on the list of airborne contaminants, including engineering controls and/or personal protective equipment.

OSHA Recordkeeping Requirements

What work-related injuries and illnesses shall you record?

Record those work-related injuries and illnesses that result in:

- death;
- loss of consciousness;
- restricted work activity or job transfer, or
- days away from work;
- medical treatment beyond first aid

* You shall also record any significant work-related injury or illness that is diagnosed by a physician or licensed health care professional. You shall record any work-related case involving cancer, a chronic irreversible disease, a fracture or cracked bone, or a punctured eardrum.

Medical Treatment

Medical Treatment includes managing and caring for a patient for the purpose of combating disease or disorders. The following are **NOT** considered medical treatments and are **NOT** recordable:

- visits to a doctor or health care professional solely for observation or counseling;
- diagnostic procedures, including administering prescription medications that are used solely for diagnostic purposes; and
- any procedure that can be labeled *First Aid (see below)*.

First Aid

If the incident required only the following types of treatment, consider it first aid and **DO NOT** record the case:

- using non-prescription medications at non-prescription strength;
- administering tetanus immunizations;
- cleaning, flushing, or soaking wounds on the skin surface;
- using wound coverings, such as bandages, BandAids™, gauze pads, etc., or using SteriStrips™ or butterfly bandages;
- using hot or cold therapy;
- using any totally non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.;
- using temporary immobilization devices while transporting an accident victim (splints, slings, neck collars, or back boards).
- drilling a fingernail or toenail to relieve pressure, or draining fluids from blisters;
- using eye patches;
- using simple irrigation or a cotton swab to remove foreign bodies not embedded in or adhered to the eye;
- using irrigation, tweezers, cotton swab or other simple means to remove splinters or foreign material from areas other than the eye;
- using finger guards;
- using massages;
- drinking fluids to relieve heat stress.

Recording the number of days away from work or restricted work activity

You count the number of days an employee was on restricted work activity or was away from work as a result of a recordable injury. Do not count the day the injury/illness occurred, begin counting the day after. Count all days including weekends up to 180 days, then stop counting.

Forms

300 *Log of Work-Related Injuries and Illnesses*
300A *Summary of Work-Related Injuries and Illnesses* (for posting only)
301 *Injury and Illness Incident Report*

Injury and Illness Report

An OSHA 301 *Injury and Illness Report* is required to be filled out for each recordable case within 7 days after you receive information that a recordable injury or illness has occurred. However, a workers comp accident report or other form may be substituted provided it contains all the information requested on the OSHA 301.

Posting Requirements

2002

Post Your *OSHA 200 Log* with recordable injuries from 2001, February 1-28, 2002

2003 and after

Post your *OSHA 300A Summary* February 1 through April 30 of the year following the year covered by the form (3 month posting requirement)

NOTE: OSHA 300 forms are required to be kept for each establishment occupied by a company. By OSHA's definition, a construction project expected to operate for a year or more is considered an establishment and shall maintain its own OSHA 300 log and post its own OSHA 300A Summary.

Accident Investigation

Purpose

An accident investigation is necessary in order to determine the cause or causes of an accident. The investigation will enable RL Baxter to take the appropriate measures to prevent similar situations from reoccurring and to protect our interests in case of litigation. All accidents will be investigated including "near miss" incidents. The difference between an accident and a near miss is often a matter of chance.

When Is An Accident Investigation Conducted?

An accident investigation is conducted as soon as possible after the incident, while the details are still clear in the minds of the parties who observed or who were involved in the accident. As time passes by after the incident, it becomes more difficult to accurately obtain facts, and conditions that may have caused the accident may have changed. A prompt, thorough investigation is crucial so the possibility of another accident due to the same faulty procedures or conditions is minimized.

Accidents generally are not caused by a single factor, but rather are the result of several conditions or actions. The purpose of the accident investigation is to gather information which can improve the safety and health conditions in the work environment.

Accident Investigations

An Accident Investigation Report shall be used to document the investigation. Consideration shall be given to the types of equipment that may be needed to conduct an accident investigation. It is important that this equipment is available so if an accident occurs the tools needed to do a thorough investigation are in place.

Investigation Procedures

1. First aid or medical care: The first priority in an accident is to provide first aid or medical care for the individual(s) injured. The next of kin shall then be notified that an accident has occurred.

2. Reporting accidents: Report serious accidents by telephone immediately to the main office.

3. Documenting the scene: It is important to record the scene of the accident as it exists after the accident. The area shall be isolated and restricted to authorized persons. Photographs shall be taken and sketches drawn. When photographing the accident scene, make sure the camera is equipped with a flash, if needed, and that proper film speed is being used. A description of the photograph shall be put on the back of the picture taken as well as the name of the person who took the picture.

4. Evidence preservation: Conditions change rapidly due to factors such as weather conditions or the necessity to make the area suitable for work to resume. The area shall be blocked off from unauthorized personnel until the accident investigation is completed.

5. Notes on physical conditions: Notes shall be taken on physical conditions that may have contributed to the accident. Information such as poor housekeeping, surface conditions of roadways/walkways, poor visibility, traffic, weather, defective scaffolding, etc., shall be recorded.

6. Vehicles: If the accident involved vehicles, measure distances and plot locations of the vehicles, skid marks, equipment, barricades, etc.

7. Injury type: Note the location and type of injury that occurred. The location of the injury would be left forearm, right thumb, lower back, etc.

8. Other notes: Notes shall be taken as to where on the project the accident happened and at what time it occurred. Additional notes shall be taken on any other related factors.

9. Notification of agencies: As required by regulation, local and federal agencies shall be notified. In the event of a fatality or catastrophe (an incident resulting in the hospitalization of three or more employees) OSHA shall be notified within eight hours.

10. Interviewing employees/public: Employees or public who witnessed or were involved in the accident shall be interviewed. Interviews shall be held in the presence of others for verification purposes. Get all sides and interview as many witnesses as possible. Questions such as what activities were being done, method used, position of equipment and personnel, and any other unsafe acts observed shall be asked. Ask witnesses to provide a detailed written statement to document what he/she observed. Obtain the names, social security numbers, license numbers, addresses, phone numbers, and insurance carriers of all witnesses.

11. Investigate employee training: Investigate if hazards and the appropriate safe work practices related to the accident were covered with the employee(s) involved in the incident through orientation, tool box talks, or by other means. Be sure to document any training that was provided that was applicable to work being performed when the accident occurred.

12. Physical and mental condition: Consider physical and mental conditions that may have contributed to the accident. Conditions such as blacking out, drugs or alcohol, medication, and other conditions shall be addressed.

13. Maintain contact: Maintain contact with the injured party and their family.

14. Request copies of reports: If the police, emergency rescue squad, or the fire department is on site as a result of the accident, request a copy of their reports. They usually conduct an investigation and information they obtained may be helpful.

15. Information pertaining to the accident: Information pertaining to the investigation shall not be provided to anyone (except OSHA, with prior approval from main office). All other interested parties who request information concerning the accident shall be informed that an investigation is being conducted and that no information will be

available until the findings have been made. **Note:** The main office shall authorize the release of any information pertaining to an accident that occurred at a RL Baxter jobsite.

16. Litigation: If an accident occurs that is of a serious nature, the accident may end up in litigation. It is important that the investigation be done correctly and documented. If technical matters are involved in the accident in which you do not have sufficient expertise, you shall seek the assistance of a specialist.

Interviewing

The interviewer shall be complete, correct, and ask pertinent questions. It is important to listen carefully to the person being interviewed and to record all information that is given. The purpose of the interview is to obtain a comprehensive and accurate account of all pertinent information that relates to the accident under investigation. The interview shall be conducted in a professional manner and the person interviewed shall be encouraged to describe the accident as they observed it. There are simple questions that shall be asked when conducting an interview. These questions are who, what, when, where, how, and why the accident occurred.

Interviews may be the primary source of information in an accident investigation. The interview shall be conducted in a thorough and efficient manner. Guidelines for accomplishing a high quality investigation are as follows:

1. Know where the interview is going to lead. If possible, prepare in advance.

2. Make sure you have an understanding of the equipment or process involved in the accident. This demonstrates knowledge and enables you to ask suitable questions.

3. Schedule interviews to allow for enough time at each interview to ask all questions.

4. Interviews shall be held in private so there are no distractions. This allows you to focus your attention on what the interviewee has to say concerning the accident.

5. Be careful not to be overbearing in the tone of your voice or your mannerisms. When speaking to the interviewee use language that the employee can understand.

6. Remember that the purpose of the interview is to obtain information. If possible, avoid asking questions that suggest an expected answer or can only produce an answer of yes or no.

7. Keep control of the interview and let the person being interviewed talk. Keep the conversation from getting away from the subject at hand.

8. If you are interviewing witnesses, let the person describe what they observe your questions. After they have given their description, ask your questions and record both versions. Do not ask leading questions. Allow the individual(s) to tell their own story.

9. Avoid using generalizations. Be specific

10. Evaluate the evidence. Check what witnesses say with the conditions you observed at the accident scene. Investigate all clues and do not overlook any aspect of the accident.

11. Stress that you are not looking to place blame on someone but are seeking the cause to prevent a reoccurrence.

12. Close the interview in a courteous manner. Make sure what was said during the interview was recorded and have the statement signed by the person being interviewed. Encourage the person to contact you if any other information concerning the accident comes to mind.

Analyzing the Testimony

When analyzing the testimony, remember that the individuals interviewed are human and are capable of being mistaken or misleading, exaggerating, or withholding information. The investigator shall determine how much valid factual evidence exists and how much of the testimony is conflicting. Only substantial testimony shall be relied upon when determining the cause of the accident.

Documentation

1. If the owner of the property where the accident occurred is against the taking of photographs/video, conduct the investigation without their use and document the owner's request.

2. Prior to taking any pictures/video, determine if the accident scene has been altered for rescue purposes or for any other reason. If the area has been changed since the accident, note what alterations were done and the individual's name and social security number referencing the change.

3. When taking pictures it is beneficial to incorporate a scale for the picture to indicate vertical or horizontal dimension. Obviously this is not always an option, but shall be done if possible. A ruler or tape measure will suffice.

4. After developing the photographs, the following information shall be attached to or written on the back of each picture:
   a) Subcontractor employer's name and address.
   b) Location on the jobsite in which the accident occurred.
   c) Month, day, time, and year picture was taken.
   d) A description of what the photograph is identifying.
   e) Signature and social security number of the person who took the picture.

Correction Procedures

Determining the cause or causes of an accident or incident is important to prevent similar occurrences from taking place in the future. Once root causes of an accident are identified,

a training session will be held to implement new procedures and/or to provide awareness training to all appropriate field, yard, and management staff.

Completed accident reports, correspondence, and subsequent training attendance sheets which indicate what training was performed shall be filed with RL Baxter's main office.

Jobsite Safety Inspections

Daily project safety inspections shall be conducted by the project superintendent as an important part of RL Baxter's risk reduction plan. In addition to the inspection responsibilities of jobsite superintendents outlined below, representatives of RL Baxter's insurance carriers, and professional safety consultants may also perform jobsite inspections.

Jobsite Superintendent Inspection Responsibilities

The job superintendent shall perform daily inspections. If the job superintendent is unavailable, a competent person designated by RL Baxter who is familiar with the inspection process shall conduct the inspections.

During the inspection, pre-planning meetings shall be done with subcontractors to discuss what safety requirements shall be met to perform upcoming construction activities. The pre-planning process is important to address safety hazards prior to employee exposure. In cases where there are questions as to what safety measures are needed, the superintendent shall contact the main office. Available resources will be utilized to identify what safety measures will be taken to ensure employee safety.

Frequency

All jobsites shall be inspected by the superintendent at least daily. The frequency of inspections may be increased as the job progresses, for specific areas of a job, or for special critical high risk work.

Documentation

Superintendent will complete the Jobsite Inspection report at the conclusion of each inspection. A copy of the report, which shall include any disciplinary action taken against employees, shall be forwarded to the main office. Letters sent to subcontractors due to violations observed during a jobsite inspection shall include a copy of the safety inspection form describing the violation.

Corrective Actions

If any concerns are observed during the inspection they shall be immediately addressed and corrected. Safety violations shall be corrected so the operation is performed in a safe manner. The employee(s) shall be informed of what the violation is and made aware of acceptable methods. The consequences for repeat or serious safety violations also need to be addressed with the employee(s). If there is a person or party responsible for any observed concern(s), that information shall be documented on the inspection report form.

Handling OSHA Inspections

Purpose

Outline site specific procedures for the management of OSHA inspections on all projects. Additionally, this program will provide the superintendent with the information needed to handle an OSHA jobsite inspection in the event that a representative from RL Baxter's main office is unable to accompany the Compliance Safety and Health Officer during the inspection process.

Reasons for an OSHA Inspection

There are a number of reasons why a worksite may be selected for an OSHA inspection, including the following:

1. *Fatality or Catastrophe:* OSHA received a report of a fatality or catastrophe (an accident involving the hospitalization of three or more employees), both of which are required to be reported by the employer to OSHA, or an imminent danger situation is reported.

2. *Formal Complaint:* OSHA receives a formal (written) complaint filed by an employee or employee representative that addresses unsafe workplace conditions.

3. *Informal Complaint:* OSHA sent the company a letter asking it to respond to allegations of a hazard made in an informal (unwritten) employee complaint and the company failed to respond.

4. *Referral:* A referral has been made by another government agency concerning unsafe conditions at the jobsite. Referrals can be generated from government personnel, such as building inspectors, district attorneys, and emergency response personnel. Publicized accidents or accidents that result in contact with public emergency agencies may considered as referrals and lead to an OSHA inspection.

5. *Programmed:* Your jobsite has been selected at random by OSHA from information obtained from Dodge reports for an inspection.

6. *Follow-Up Inspection:* OSHA conducts a follow-up inspection to confirm that violations noted in previous inspections or items to be corrected as a result of a settlement agreement with OSHA have been abated.

7. *Special/Local/National Emphasis Programs:* OSHA conducts an inspection due to any one of these OSHA emphasis programs.

Procedure

When OSHA arrives on site, the compliance officer will locate the designated point of contact (Superintendent) and present his/her credentials. The OSHA compliance officer shall be invited into the job trailer. The superintendent shall inform the compliance officer that a representative from the main office accompany OSHA during the walkthrough. Superintendent may request a delay of the inspection until a company representative is on site or has had an opportunity to speak to the compliance officer.

The project superintendent shall be polite and make sure the compliance officer understands that he is following a company policy requiring a representative from the main office be present during inspections and that the request is not a delay tactic.

In the event no one from the main office is able to accompany the compliance officer during the walkthrough, the superintendent will be required to handle the inspection. The procedures for handling an inspection shall be fully understood by the Project Superintendent.

Opening Conference

An inspection begins with an opening conference. During this conference the appropriate information shall be documented on the OSHA Inspection Management Form. The objective of the opening conference is to provide affected employers and employees with an explanation of the scope and purpose of the inspection and how the inspection will be conducted. The compliance officer is required to inform the employer of what type of inspection will be conducted. Inspection types include:

- General scheduled inspection;
- Fatality/catastrophe investigation;
- Complaint investigation;
- Referral inspection;
- Special emphasis inspection; and
- Abatement (follow-up) inspection.

The compliance officer will request background information to fill out their inspection report, which includes:

- Jobsite name and address;
- Corporate office address and telephone number;
- Number of employees;
- Accident and illness information (form 200); and
- Names of employees and employee representatives.

If an inspection results from a formal employee complaint, the employer will receive a copy of the complaint from the OSHA compliance officer at the opening conference. Copies of the complaint shall be furnished as follows:

- Copy of every complaint to the general contractor;
- Copy of every complaint against the general contractor to all subcontractors whose employees are exposed to the alleged hazards; and
- Copy of every complaint against a subcontractor to that subcontractor and to others whose employees are exposed.

If the compliance officer does not offer a copy of the complaint, the superintendent shall request it. If none is provided, inform OSHA that company policy requires a copy of the complaint be provided before granting an inspection. Inform the compliance officer that you will be happy to grant an inspection upon receiving a copy of the formal complaint.

The Inspection

It is very important that during the opening conference you find out why the inspection is being conducted and what the scope of the inspection will cover. For a focused inspection, please refer to the attached document.

Inspections conducted due to alleged imminent danger and complaint inspections shall be limited to the area of the alleged violative condition and fatality/accident investigations shall be limited to the area of the accident. An expanded inspection may be done if the inspection record of the employer indicates a history of significant violations or other legitimate reasons. An expanded inspection in this case requires authorization by the OSHA Area Director.

Referral inspections shall be limited to the specific items addressed in the original inspection.

Special emphasis inspections shall be limited to the areas covered by the program.

NOTE: The compliance officer shall be limited to inspect only the areas addressed during the opening conference. The Project Superintendent shall request another opening conference to explain any inspection activities that reach beyond the scope of the original inspection.

The Walkaround

A representative from the main office or the Project Superintendent will accompany the compliance officer during the walkaround. As discussed, it shall be clearly understood from the beginning which areas the compliance officer intends to inspect. These areas are the only areas that the compliance officer shall be allowed to inspect. If work is not being performed in certain areas, inform the compliance officer that these areas are inactive. Do not leave a compliance officer unattended and do not volunteer any extra information or expand the scope of the inspection. Anything that is said during the walkthrough could help the compliance officer prove a violation exists.

The compliance officer is required to follow all safety rules as detailed in RL Baxter's site specific safety plan. This includes requiring proper personal protective equipment. If the compliance officer cannot comply with RL Baxter's rules and regulations, you shall insist compliance to further prove the company's commitment to safety and health.

Do not allow the compliance officer to interfere with production activities unless those activities are endangering the employee(s).

If a violation is mentioned by the compliance officer, diplomatically demand a means or method of abatement. Get technical and ask questions about the compliance officer's background in each apparent violation. It is the compliance officer's responsibility to know how to abate the alleged violation. If there are any undisputed violations pointed out during the walkaround, they shall be corrected immediately, if possible. This shows good faith and may help in future negotiations with OSHA. Do not admit any fault when taking corrective actions.

If a compliance officer feels a violation exists, do not argue but politely disagree with an interpretation and try to convince the compliance officer to understand and accept your point of view. Once a citation is issued, it is difficult to get it withdrawn.

During the inspection, the compliance officer is authorized to talk to employees about working conditions. You cannot forbid your employees to talk to the compliance officer but you are within your rights to inform employees that they are not required to talk to OSHA.

The compliance officer may use a video camera or a camera to document violations. A camera shall be used to take the same photographs the compliance officer takes from the same angle at the same time. After the inspection, additional photos may be taken from different vantage points which may offer some insight into OSHA's case if citations are issued.

Closing Conference

At the conclusion of the inspection, the compliance officer will hold a closing conference to inform all contractors of alleged violations. The violations shall be described and the appropriate section of the standard violated shall be indicated. The compliance officer shall inform you if there will be a referral to another compliance officer to check on potential violations outside his/her expertise. Ask for a copy of the compliance officer's notes from the inspection. The compliance officer is not required to provide these notes but your request may be honored.

Immediately after the compliance officer leaves the jobsite, document your point of view about the alleged violations. Take additional pictures from different vantage points and obtain written statements from employees. If any employee(s) were interviewed by OSHA during the inspection, re-interview those employees and document what was discussed.

OSHA Inspection Report Form

Project:_____Project Superintendent:_____

Address:_____

Compliance Officer (CSHO) Information:

Name:_____CSHO#:_____

Office:_____Phone Number:_____

Area Office:_____Project Superintendent:_____

Address: _____

Arrival Time:_____Date:_____

First Person Contacted:_____

Was the compliance officer asked to wait for the arrival of a company representative?
Yes___ No____

If Yes, did the CSHO wait for the arrival of a company representative? Yes___No____

Explain: _____

_____

Was an opening conference held to discuss the reason for the inspection? Yes___No____

List those present at the opening conference:

Name:	Company:
_____	_____
_____	_____
_____	_____
_____	_____

Route copies of this report to:
π President π Vice President π Area Safety Director π Insurance Carrier

Reason for Inspection

Complaint: _____ Fatality: _____ Accident: _____ Referral: _____
Program: _____ Follow-Up: _____ Other: _____

Walk-around Attendees

Name:	Company:
_____	_____
_____	_____
_____	_____
_____	_____

Was a camera or video used by the CSHO officer to document the walkthrough?
Yes___ No____

Were any pictures taken, of the alleged violation, by an employee or RL Baxter employee?
Yes___ No____

If pictures were not taken, explain why:_____

_____

_____

_____

List Employees Interviewed during the inspection:

Name:	Company:
_____	_____
_____	_____
_____	_____
_____	_____

Describe what was discussed at the closing conference:_____

Report completed by: _____ Date: _____

USE ADDITIONAL PAGES IF NECESSARY.

MAKE SURE TO DOCUMENT EVERYTHING.

General Safety Rules

1. Safety related tools and/or equipment shall be available, used, and maintained to ensure work is performed in a safe manner. OSHA Standards govern what safety tools and/or equipment are required when performing any operation. Where appropriate, jobsite safety requirements may exceed applicable OSHA Standards. In these circumstances, employees are required to follow the jobsite safety requirements.

2. Report unsafe conditions to your Project Superintendent or project superintendent.

3. The use, possession, or sale of alcohol or illegal drugs is prohibited.

4. If asbestos, lead, PCBs or other potentially hazardous materials are encountered during operations, stop work immediately and notify the project superintendent.

5. Be aware of the project emergency response plan. Know the alarm signals, evacuation routes, and locations of emergency numbers.

6. All injuries, no matter how minor, shall be immediately reported to the project superintendent.

7. Near miss incidents shall be reported to the superintendent as soon as possible.

8. Do not enter barricaded areas and obey all warning signs.

9. Proper clothing shall be worn at all times on site.

10. Always remove nails from scrap lumber before stacking.

11. Do not stand under or beside suspended loads.

12. Horseplay of any kind is forbidden.

13. Firearms and weapons are forbidden.

14. **THINK SAFETY FIRST**

Personal Protective Equipment

1. Approved hardhats (not bump caps), in good condition, shall be worn at all times.

2. Metal hard hats shall never be worn near energized overhead power lines or other high voltage sources.

3. ANSI Z 87.1 approved eye protection shall be worn whenever operations present potential eye or face injury from physical, chemical, or radiation agents.

4. Additional protection such as face shields and goggles shall be worn while performing high hazard tasks including grinding, chipping, overhead drilling and working with caustics.

5. Gas and electric welding and cutting require the use of burning goggles or a welder's hood with lenses having the proper color density.

6. Ear protection shall be worn in high noise-level areas and when using certain tools and equipment. Refer to your companies written Hearing Conservation program

7. Approved work boots or proper footwear as designated by specific jobsite requirements shall be worn at all times.

8. Where needed, work gloves, in good condition and suitable for the task to be performed, shall be worn.

9. Respirators are required under assessed conditions and while performing certain types of work. If you are required to wear a respirator you shall comply with RL Baxter's respiratory protection requirements.

Housekeeping

1. Materials shall be kept in neat stockpiles for easy access. Aisles shall be kept clear of loose materials, tools, cords, and waste.

2. Remove waste from site on a frequent basis and dispose of it in a suitable manner. Failing to maintain a clean work area will not be tolerated and means will be taken to correct the condition.

3. Protruding nails shall be removed from material and forms. Stack clean lumber in orderly piles.

Tools

I. Hand Tools

A. Every tool is designed for a certain job and shall only be used for that purpose.
B. Keep tools in peak condition. Worn tools are dangerous.
C. Don't force tools beyond their capacity or use cheaters to increase leverage.

II. Power Tools

A. Do not use power tools unless you are completely familiar with them.
B. Before using a power tool, examine it for damaged parts, loose fittings, frayed or cut electric cords. Tag and remove defective tools from service.
C. Do not use tools with improper or damaged guards, or with guards removed.
D. When using power tools make sure Ground Fault Circuit Interrupter Protection (GFCI) is provided.
E. Use bits and blades designed to handle the RPM's of the tool in use.
F. Assess the work condition and utilize the proper tool for the work being performed.

III. Powder Actuated Tools

A. Only trained and qualified people may use powder actuated tools. Training cards shall be provided for employees indicating the training was completed.
B. Eye, face, and hearing protection shall be worn by operators.
C. Tool shall remain unloaded until ready for use. Do not leave loaded tool unattended.
D. Do not drive fastener into hard or brittle material, or into material it will pass through.

Electrical Safety

1. Ground fault circuit interrupters shall be used for electrical tools and equipment. When using an extension cord off permanent power, the extension cord is considered to be temporary power and therefore shall have GFCI protection.

2. Examine all cords prior to use. Cords which are frayed, worn, or contain exposed wires shall not be used. Damaged cords shall be tagged and removed from service immediately.

3. All cords shall be of the three-wire type and designed for hard or extra-hard usage. Flat yellow extension cords and Romex extension cords are prohibited.

4. All live electrical installations, such as receptacles, switches, and panel boxes, shall be protected by a faceplate or cover. Cardboard is not an acceptable cover.

5. Bulbs used for temporary lighting shall be covered by protective cage guards.

6. Cords shall be kept clear of walkways and other locations where they may be subject to damage or present a tripping hazard.

7. Protect cords from foot and vehicle traffic, and sharp corners and edges.

8. All electric equipment and materials shall be of an approved type.

9. All plugs, outlets, switches, and panel boxes shall be installed according to the national electric code. This includes assuring that receptacle boxes are permanently affixed, Romex type NM cable is not used in damp or wet locations, and that temporary wiring is located where it will not be subject to damage.

10. Only qualified workers shall be allowed to perform any type of electrical work.

11. All ground fault circuit interrupters shall be inspected on a weekly basis.

12. Receptacles shall be tested for polarity and continuity of the ground. Receptacles whose polarity is reversed or whose ground is not continuous shall be tagged out until repaired.

13. Missing knockouts inside panel boxes, on receptacle boxes and on all other equipment containing live parts shall be covered or otherwise protected.

Lockout Tagout

⇒ See the site specific Lockout-Tagout Plan for specific rules and procedures.

1. Locks and tags shall be used to prevent operation of a switch, valve, or piece of equipment in cases where someone may get hurt or equipment may be damaged.

2. Never operate any tagged-out piece of equipment.

3. Place your lock personally; never have somebody else do it.

4. Do not remove someone else's tag.

5. All locks and tags shall be labeled to identify their owner.

6. Follow all switching and locking procedures to remove a piece of equipment from service.

Material Handling, Storage and Disposal

I. **By Hand**

A. Know the weight of any object to be handled. If it is too heavy or bulky, get help.

B. Establish firm footing, keep your back straight and lift with your legs. Lift gradually; do not jerk or twist. Reverse the motion when setting the object down.

C. Know the weight of the object to be handled, and the capacity of the equipment you intend to use.

D. When placing blocks under raised loads, make sure blocking material is large enough to support the load safely. Additionally, ensure that the load is not released until employees have clearly moved away from the load.

II. Storage

A. Store materials so as not to block exits, aisles and passageways, and access to fire extinguishers and electrical panels.

B. Materials stored in tiers shall be secured to prevent sliding, falling, and collapse.

C. Materials stored inside shall not be placed within 6 feet of any hoistway or inside storage area, or within 10 feet of an exterior wall which does not extend above the materials stored.

D. Brick stacks shall not be more than 7 feet in height. Loose brick stacks shall be tapered back 2 feet in every foot above 4 feet level.

E. When masonry blocks are stacked higher than 6 feet, measures shall be taken to prevent employee exposure. A fence shall be provided.

F. Lumber shall not be stacked more than 16 feet high if it is handled manually; 20 feet is the maximum stacking height if a forklift is used.

G. Bags and bundles shall be stacked in interlocking rows to remain secure. Bagged material shall be stacked by stepping back the layers and cross-keying the bags at least every 10 feet.

H. Drums, barrels, and kegs shall be stacked symmetrically. If stored on their sides, the bottom tiers shall be blocked to keep them from rolling. If stored on end, put planks, sheets of plywood, or pallets between each tier to make a firm, flat, stacking surface.

I. Nails shall be removed from used lumber prior to stacking, and from formwork being stripped.

III. Rigging

A. Slings shall be inspected before use.

B. Slings and other rigging equipment shall be removed from service if damage or defects are visible.

C. Slings shall not be shortened with knots, bolts, or other makeshift devices.

D. Slings shall not be loaded beyond their rated capacity, according to the manufacturer's instructions.

E. Job or shop hooks and links, or makeshift fasteners, formed from bolts, rods, or other such attachments shall not be used.

F. When wire rope clamps are used for eye splices, the U-bolt portion of the wire rope clamp shall be so applied so that the "U" section is in contact with the dead end of the wire rope. The saddle portion of the clamp shall be on the live end of the wire rope. Make sure the proper number of clamps are provided for the gauge of wire rope being used. Refer to the diagram on the following page.

LPG Liquified Petroleum Gas

1. Containers shall be placed upright on firm foundations or otherwise firmly secured.
2. Storage of LPG within buildings is prohibited.
3. Storage locations shall have at least one approved portable fire extinguisher, rated not less than 20-B:C.
4. A “No Smoking” Sign shall be posted at LPG storage areas.
5. LPG containers shall be separated from oxygen cylinders a minimum distance of 20 feet or by a noncombustible barrier at least five feet high having a fire-resistance of at least one-half hour.
6. Take precautions to protect LPG hoses from damage caused by equipment, tools and employees.
7. Storage of LPG outside of buildings:
   a) Propane tanks shall be located away from the building in accordance with the following:

Quantity of LPG Stored	Distance (feet away from building)
500 lbs. or less	0
501 to 6,000 lbs.	10
6,000 to 10,000 lbs.	20
over 10,001 lbs.	25

8. LPG containers stored next to roads or in the areas where vehicles and heavy equipment are in use shall be barricaded or otherwise protected from damage.

Welding & Cutting

I. General

A. You shall be instructed in the safe use of welding equipment before using it.

B. Each welder is responsible for containing sparks and slag and/or removing combustibles to prevent fire.

C. All employees engaged in welding and burning operations shall use a face shield, goggles, or appropriate welding helmet and welding gloves.
D. No arc or flame welding operation is permitted in areas where the application of flammable paints is taking place or where combustible dust or flammable liquids are present.
E. A suitable fire extinguisher shall be located in welding areas at all times.
F. When practical, objects to be welded, cut, or heated shall be moved to a designated safe location or, if the object to be welded, cut, or heated cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place, or otherwise protected.

II. Oxyacetylene Torches

A. All connections shall be clean and free from grease and oil.
B. Hoses shall not be laid across traffic areas.
C. Where a special wrench is required to operate the acetylene cylinder valve, the wrench shall be kept in position on the valve to allow for emergency shutoff.
D. For quick closing, valves on fuel gas cylinders shall not be opened more than one and a half turns.
E. Check valves and flash arrestors shall be located at the torch.

III. Electric Arc Welders

A. When electrode holders are left unattended, the electrodes shall be removed and the holders placed or protected so that they cannot make contact with each other, conductive objects, or people.
B. Arc welding and cutting operations shall be shielded by noncombustible or flameproof shields to protect fellow employees from direct arc rays.
C. All welding cable shall be insulated completely. Any splices or repairs shall have insulation with a resistance equal to or greater than the original insulation. No repairs are permitted within 10 feet of the electrode holder.
D. Insulated boot covers or other suitable protection shall be provided to protect terminals where welding cables are connected to arc welder.

IV. Compressed Gas Cylinders

A. Valve protection caps shall be in place when compressed gas cylinders are not in use.
B. Cylinder valves shall be closed when work is finished and when cylinders are empty or moved.
C. Compressed gas cylinder gauges shall be in good working order.
D. Compressed gas cylinders shall be secured in an upright position at all times, except if necessary for short periods of time when cylinders are actually being moved or carried.
E. Cylinders shall be kept at a safe distance or shielded from welding and cutting operations. Cylinders shall be placed where they cannot become part of an electrical circuit.
F. When oxygen cylinders are stored, they shall be separated from other fuel gas or highly combustible materials by 20 feet or by a noncombustible barrier (a wall at least 5 feet tall with a half hour resistance).

Stairways & Ladders

I. General

A. A stairway or ladder shall be provided at all points of access where there is a change in elevation of 19" or more and no ramp, runway, sloped embankment or personnel hoist is provided.

II. Stairways

A. Stairways shall be kept free of hazardous projections such as nails and screws.

B. Slippery conditions on stairways shall be eliminated before the stairways are used.

C. Stairways greater than 30" high or with four or more risers shall be equipped with a stair-rail system along unprotected sides or edges.

D. Stairrail system toprails shall be positioned between 36 and 37 inches high (in line with the face of the riser at the forward edge of the tread) and be capable of withstanding a 200 lb. load applied in a downward and outward direction. Midrails shall be positioned in-between.

E. Stairways greater than 30" high, or with four or more risers, that do not have an unprotected edge shall be provided with at least one handrail. Handrails shall be positioned between 36 and 37 inches high as mentioned above. Handrails shall maintain a clearance of 3 inches between the inside of the handrail to the wall.

F. A platform shall be provided wherever a door opens directly into a stairway. The platform shall extend 20" beyond the swing of the door and be protected by a standard guardrail system. This includes doors to field offices and storage trailers.

G. Except during construction, pan treads, stairs, and landings shall be filled with wood or other solid materials, and shall be installed the full width and depth if the stairs are going to accommodate any other foot traffic.

III. Ladders

A. Inspect ladders before use. Ladders with broken or missing rungs, cleats or steps, broken or split rails, or corroded parts shall be tagged out and removed from the jobsite immediately.

B. Ladders used to access an upper floor or platform shall extend three feet above the upper landing surface.

C. When in position, a ladder shall be securely tied at the top to prevent slipping or secured at the base by a fellow employee.

D. Portable ladders shall be erected exercising the 4:1 ratio: For every four feet of working length of the ladder, the base will be placed one foot from vertical.

E. The area at the top and bottom of ladders shall be kept clear at all times.

F. Always face a ladder when ascending or descending and maintain at least three points of contact with the ladder at all times (example: two feet and one hand).

G. Make sure ladders are free from ice, snow, mud, or other slippery materials before use.
H. Never use a ladder in a horizontal position as a platform or scaffold.
I. A double cleated ladder or two or more separate ladders shall be provided if ladders are the only means of access/exit from a working area of 25 employees, or the ladder serves simultaneously two-way traffic.
J. Ladders shall be used only for the purpose for which they were designed.
K. Ladder rungs shall not be used to support the ends of planks or other similar work platforms.

IV. Step Ladders

A. Do not use ladders in the folded position as a straight ladder would be used. Open the legs and secure the locking mechanism.
B. Do not stand on the top or top step of a step ladder.
C. Step ladders shall be used only for the purpose for which they were designed. Rungs between step ladders shall not be used to support the ends of planks or other similar work platforms.

Hazard Communications

- **See attached Hazard Communication Program for specific information.**

1. Be aware of hazardous chemicals being used on site.

2. Know where the hazard communication program, hazardous materials list and material safety data sheets are maintained on site.

3. Employees shall not work with a material until they have been informed of the hazards they may be exposed to and the steps personnel may take to protect themselves. Be knowledgeable of appropriate work practices, emergency procedures and personnel protective equipment when working with hazardous chemicals and refer to the Safety Data Sheet for additional information.

4. Employees shall be willing to share their knowledge of Hazard Communication and of materials with which they work with other employees and officials.

5. Notify your Project Superintendent if you bring hazardous materials on site.

6. The integrity of labels on the worksite shall be maintained by all personnel and shall contain the chemical name and associated hazards

Fire Protection and Prevention Program

1. Employees shall know where fire extinguishers are located and know how to operate them.

2. Only approved containers and portable tanks shall be used for the storage and handling of flammable and combustible liquids. Refer to SDS (Safety Data Sheet) for approved container type.

3. One 2A rated fire extinguisher shall be present for every 3000 square feet of protected building area. Travel distance to the nearest fire extinguisher shall not exceed 100'.

4. Firefighting equipment shall be conspicuously located.

5. Materials shall not be stored in front of fire extinguishers. Access to fire fighting equipment shall be maintained at all times.

6. Fire extinguishers shall be inspected on a regular basis and serviced annually.

7. No more than 25 gallons of flammable or combustible liquids shall be stored in a room outside of an approved storage cabinet. No more than 60 gallons of flammable or 120 gallons of combustible liquids shall be stored in any one storage cabinet.

8. Flammable liquids shall be kept in closed containers when not actually in use.

9. Conspicuous and legible signs prohibiting smoking shall be posted in service and refueling areas.

Flammable Liquid- Having a flashpoint below 100 Degrees Fahrenheit. (Refer to SDS)

Combustible Liquid- Having a flashpoint at or above 100 Degrees Fahrenheit. (Refer to SDS)

Motor Vehicles

I. General

A. Seat belts shall be worn at all times by employees operating or riding on motor vehicles or machinery. (Exception: equipment designed for stand-up operation.)

B. Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried. Employees shall not ride on fenders or running boards of equipment.

C. Horns shall be in working order on all bi-directional machinery.

D. Motor vehicle equipment with an obstructed view to the rear shall not be operated unless the vehicle has a reverse signal audible above the surrounding sound or the vehicle is backed up only when an observer signals that it is safe to do so.

E. Operators of all motor vehicle equipment are responsible for the safe operation of their vehicle at all times.

II. Forklift and Lull Operation

Operators of forklifts and Lulls shall be certified to insure they are properly trained to operate the equipment. Employees who operate forklifts or lulls shall comply with RL Baxter's Powered Industrial Truck Operator requirements. Using a forklift or a lull without being certified on a RL Baxter project is prohibited.

III. Heavy Equipment Operation

A. Heavy equipment such as backhoes and dump trucks will only be operated by authorized personnel.

B. Unauthorized persons are not permitted to ride in the cabs of heavy equipment.

C. Lower any movable buckets when you stop the vehicle.

D. Always blockout/lockout any movable parts if it is being inspected or having maintenance.

E. Report all operating malfunctions immediately.

F. If the operator's compartment is designated a high noise level area, hearing protection shall be worn.

G. Maintenance or repairs shall not be done with the engine running.

Cranes

1. Crane usage shall comply with OSHA's Subpart CC standards and the manufacturer's specifications and limitations where available.

2. As per New York State Code Rule 23, crane operations performed in New York State shall have an operator who is licensed with the Department of Labor. Operators shall possess a card indicating that they are licensed with the New York State

3. Rated load capacities, recommended operating speeds, and special hazard warnings or instructions shall be conspicuously posted on all equipment. Instructions or warnings shall be visible from the operator's station.

4. Equipment shall be inspected daily by a competent person prior to and during use. A complete inspection shall be performed annually. Documentation of daily, monthly, and annual inspections shall be available upon request.

5. Accessible areas within the swing radius of the crane shall be properly barricaded.

6. A fire extinguisher rated 5:BC or better shall be provided in the cab of the crane.

7. No one is permitted to ride loads.

8. Never operate equipment closer than 2' from the edge of an excavation. Cranes shall not be left near the edge of excavations or in an area that may become unstable.

9. Minimum clearance between power lines rated 50 KV. and below and any part of a crane shall be 10'. For power lines rated greater than 50 KV., the clearance shall be 10' plus 0.4" for every 1 KV. above 50 KV.

10. The operator shall avoid swinging load over workers and bystanders.

11. Taglines shall be used on all loads and shall be insulated to prevent shock.

12. Only one person shall be permitted to give signals to the operator.

NOTE: A copy of the standard hand signals is located on the following page. A copy of hand signals shall be posted at the jobsite trailer.

Concrete and Masonry Construction

1. All protruding reinforcing steel, onto or into which employees could fall, shall be guarded to eliminate the hazard of impalement. Fall protection shall be the primary means to preventing an impalement hazard.

2. No employee shall work under concrete buckets while buckets are being elevated or lowered into position.

3. Formwork shall be designed, fabricated, erected, supported, braced, and maintained so that it will be capable of supporting without failure all vertical and lateral loads that may reasonably be anticipated to be applied to the formwork.

4. A limited access zone shall be constructed when a masonry wall is being constructed.

5. The limited access zone shall be established prior to the construction of the wall.

6. The limited access zone shall be equal to the height of the wall to be constructed plus four feet, and shall run the entire length of the wall.

7. The limited access zone shall be established on the side of the wall without scaffolding.

8. The limited access zone shall be restricted to entry by workers actively engaged in constructing the wall. No other workers shall be permitted to enter.

9. The limited access zone shall remain in place until the wall is adequately supported.

10. All masonry walls over 8 feet in height shall be adequately braced unless the wall is supported by other means. The bracing shall remain in place until permanent supporting elements of the structure are in place.

11. Workers shall frequently wash exposed skin to prevent irritation from cement dust.

12. If respirators are used while working, employees shall be part of RL Baxter's respiratory protection program.

Sanitation

Potable Water

1. An adequate supply of potable water shall be provided in all places of employment.
2. Potable containers used to dispense drinking water shall be capable of being tightly closed and equipped with a tap.
3. Common drinking cup is prohibited.

Toilets

Toilets shall be provided for employees according to the following table:

NUMBER OF EMPLOYEES	MINIMUM NUMBER OF FACILITIES
20 or less	1 Toilet
20 to 199	1 Toilet Seat and 1 Urinal per 40 Workers.
200 or more	1 Toilet Seat and 1 Urinal per 50 Workers.

Jobsites not provided with a sanitary sewer shall be provided with one of the following toilet facilities unless prohibited by local codes:

1. Privies (where their use will not contaminate ground or surface water)
2. Chemical toilets

3. Recirculating toilets
4. Combustible toilets

Signs and Signals

Signs

Signs and symbols shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazard no longer exists. The types of signs and their use are as follows:

- *Danger signs*: Danger signs shall be used only where an immediate hazard exists.
- *Caution signs*: Caution signs shall be used only to warn against potential hazards or to caution against unsafe practices.
- *Exit signs*: Exit signs, when required, shall be placed at all exits.
- *Traffic signs*: Construction areas shall posted with legible traffic signs at points of hazard.

Signals

When operations are being performed and signs, signals, and barricades do not provide the necessary protection on or adjacent to a highway or street, flagmen or other appropriate traffic controls shall be provided. Signaling requirements are as follows:

- Signaling directions by flagmen shall conform to ANSI requirements.
- Hand signaling by flagmen shall be by use of red flags at least 18 inches square or sign paddles, and in periods of darkness, red lights.
- Flagmen shall be provided with and shall wear a red or orange warning garment while flagging. Warning garment worn at night shall be a reflective material.

NOTE: Signs, signals, and barricades are to be used to warn and protect employees and the public from jobsite hazards. These warning measures shall remain in place at the end of the workday if the public is exposed to the hazard.

Fall Protection

1. 100% fall protection systems shall be utilized when workers perform activities at or above six feet above the working surface. Fall protection systems include guardrail systems, netting, and personal fall arrest systems (Body harnesses, lanyards, and an anchorage points rated for 5000 pounds).
2. Access to any roof areas on all projects, Loading, and Controlled Access Zones, or any areas that do not have permanently affixed guardrails where a fall exposure exists, shall be authorized only by the project Superintendent, and/or the assigned Site Safety Manager.
3. Tying off when working in a scissors lift is not required. However, if for any reason an employee is standing above the bed of the lift he/she must be tied off to an anchorage point rated to at 5000 lbs.
4. Tying off when working in an Articulating Boom Lift is required at all times.
5. Any fall exposure greater than six feet will require fall protection.
6. Elevator pits will require fall protection.

7. Where a wall opening, whether exterior or interior is protected by the placement of studs and the spacing of the studs does not exceed eighteen inches, and if metal studs are no less than 22 gauge, then no additional fall protection is required.

ENVIRONMENTAL EXPOSURES (LEAD/RESPIRABLE DUST)

1. Some painted surfaces in the building are presumed to contain lead paint. These areas include, but are not limited to, steel beams.
2. All subcontractors will be required to perform a negative exposure assessments for any planned "Trigger tasks" as defined by OSHA respirable dust standard, on all painted surfaces it they do not possess historical data which has been obtained within a year of the scheduled work date.
3. All workers on the project will be required to have lead awareness training.
4. RL Baxter workers may need to perform work on these painted surfaces. They may need to disturb this paint by drilling, sawing, demo, fastening, or carpentry. In doing so they will use saws, drills, screw guns, impact wrenches, sawzalls, hand wrenches crowbars, hammers, and other hand tools
5. RL Baxter or subcontractor workers performing activities other than those listed above must be monitored to insure they are not being exposed to a respirable dust hazard.
6. RL Baxter employees will be provided with tyvek suits and gloves at their request.
7. If paint flakes or silica dust is generated from manual demolition, grinding, cutting or lead paint, then the area must be cleaned using HEPA vacuums or wet washing using TSP. Areas should not be dry swept. They may be swept using a sweeping compound as long as lead dust and respirable dusts are not made airborne and other methods are infeasible.
8. Workers who contact potential lead paint or other contaminated surfaces should use proper hand and face washing procedures prior to eating, drinking, smoking, chewing tobacco, chewing gum or applying cosmetics
9. Subcontractor foremen are responsible for reviewing hazmat reports with their employees and ensuring their compliance with the safety rules.

ACCIDENT REPORTING AND FIRST AID

10. All contractors are to have First Aid supplies available for their employees.
11. Any employee injured in the course of their employment on this job site will report the incident to their supervisor immediately. The employee's supervisor will in turn immediately report the incident to the project Superintendent.
12. The supervisor's accident report, supervisor's incident investigation report, & employee's injury report shall be submitted to the project Superintendent whenever a Sub-contractor employee is injured. These forms need to be completed by end of the workday of that accident.
13. Any accident involving damage to property shall be reported to the project Superintendent immediately.

Purpose

To establish fall protection requirements for RL Baxter and employees performing work activities on a walking/working surface that is 6 feet or more above lower levels. These requirements do not pertain to ladder use, working from scaffolds, or steel erection activities. These activities have their own fall protection criteria.

Responsibilities

The job superintendent is responsible for making sure that measures are taken to provide for fall protection.

Duty to Have Fall Protection

1. Employees on **walking or working surfaces** in excess of 6' above lower levels shall be protected from falls by one or more of the following:

    a) Guardrail Systems

    b) Safety Net Systems

    c) Personal Fall Arrest Systems (includes harnesses, safety lines, retractable lifelines, anchorage points, etc.)

2. Employees engaged in **leading edge work** 6' above lower levels shall be protected by one or more of the systems listed above unless it can be demonstrated that the use of these systems is infeasible or creates a greater hazard. In these circumstances a fall protection plan will be developed to cover the leading edge activities. (See Appendix A)

3. Employees working in **hoist/loading areas** 6' or more above lower levels shall be protected from falls by a guardrail system or personal fall arrest system. If guardrails are used, a removable system is recommended. In some circumstances, both a guardrail system and a personal fall arrest system will need to be utilized to safely perform activities at material handling areas.

4. Employees working on **formwork or reinforcing steel** six feet or more above adjacent levels shall be protected by personal fall arrest systems, safety net systems, or positioning device systems.

5. **Ramps, runways, and** other **walkways** 6 feet or more above lower levels shall be protected by guardrail systems. If multiple planks are used to create a walkway, cleats shall be provided to prevent displacement and uneven deflection.

5. **Excavations** six feet or more in depth whose edges are not easily seen shall be protected by guardrail systems, fences, or barricades. If fences or barricades are used they shall be positioned at least six feet back from the excavation edge unless they are capable of withstanding the strength requirements for guardrail systems.

7. **Wells, shafts, pits and similar excavations** shall be protected by guardrail systems, fences, barricades or covers. Excavations six feet or more in depth whose edges are not easily seen shall be protected by guardrail systems, fences, or barricades. If fences or barricades are used, they shall be positioned at least six feet back from the excavation edge unless they are capable of withstanding the strength requirements for guardrail systems. Covers shall meet the requirements provided in the Fall Protection Systems section.

8. **Overhand bricklaying** operations shall be protected by guardrail systems, safety net systems, personal fall arrest systems, or shall take place in a controlled access zone. Employees reaching more than 10" below the level on which they are working shall be protected by a guardrail system, safety nets, or fall arrest system.

   Definition: Overhand Bricklaying and Related Work: The process of laying bricks and masonry units such that the surface of the wall to be jointed is on the opposite side of the wall from the mason, requiring the mason to lean over the wall to complete the work. Related work includes mason tending and electrical installation incorporated into the wall during the overhand bricklaying process.

9. **Wall openings** whose inside bottom edge height is 39", and whose outside edge height is six feet or greater shall be protected by guardrail systems, safety nets, or fall arrest systems. Areas such as window openings and door openings leading to a porch area shall be checked to ensure fall protection is provided.

10. **Low-slope roofs** with unprotected sides and edges greater than six feet above a lower level shall be protected by guardrail systems, safety nets, slide guards, personal fall arrest systems, or warning line systems in conjunction with a safety monitor. A low slope is a roof having a slope less than or equal to 4 in 12 (vertical to horizontal). See the Fall Protection Systems section for specific requirements.

11. **Steep roofs** with unprotected sides and edges greater than six feet shall be protected by guardrail systems, safety nets, slide guards, or personal fall arrest systems. A steep roof is a roof having a slope greater than 4 in 12 (vertical to horizontal). See the Fall Protection Systems section for specific requirements.

12. Employees engaged in **built-up roofing work** on roofs with a ground-to-eave height greater than 6' shall be protected by one of the following:

    a) Motion Stopping System(s) (MSS) - MSS are fall protection using any one or more of the following: standard guardrails, scaffolds or platforms with guardrails, safety nets, safety harness systems.

    b) Warning Line Systems installed in accordance with OSHA standards.

    c) Safety Monitoring System on roofs less than 50' wide where no mechanical equipment is being used.

13. Employees engaged in **precast concrete erection** at heights greater than six feet shall be protected by guardrail systems, safety nets, or personal fall arrest systems unless the use of these systems is infeasible or creates a greater hazard, in which case a written fall protection plan shall be implemented. (See Appendix A)

Floor Holes

1. Floor holes which employees may fall through shall be protected by guardrail systems, covers, or personal fall arrest systems.

2. Floor holes to which employees may trip in or step into shall be protected by covers.

3. Floor holes through which objects may fall shall be protected by covers.

Fall Protection Systems

1. **Guardrail Systems**

    a) Toprails shall be installed between 39 and 45 inches in height and shall not deflect below 39 inches under an outward and downward force of 200 pounds.

    b) Midrails shall be installed midway between the toprail and the walking/working surface. Midrails shall be able to withstand 150 pounds of force applied in an outward and downward direction.

    c) If wire rope is used for toprails, it shall be flagged every 6 feet with highly visible materials. Wire rope toprails and midrails shall be at least 1/4" diameter.

    d) If 2x4's are used for guardrails, it is recommended that posts do not exceed 8 feet on center. Lumber used in the construction of guardrails shall be sound and shall not contain large or loose knots. All nails shall be driven in completely. Double-headed nails are not permitted. Using sinker nails or screws is recommended.

    Note: Prior to erecting any guardrail system, consider what height the guardrail shall be positioned, taking into account the height of a slab that may be poured. Also consider how access and loading activities will be done so measures can be taken to accomplish these activities in a safe manner. Also consider where guardrails shall be positioned so they do not interfere with future operations.

2. **Covers**

    Covers shall be capable of withstanding two times the weight of any object or employee, which may pass over them, and be color coded or marked **"hole"** or **"cover."** Covers also shall be secured from movement. Securing the cover to prevent access to a manhole, vault, or other similar opening is suggested where practical.

3. **Controlled Access Zones (CAZ)** for overhand bricklaying shall be erected as follows:

    a) The controlled access zone shall be defined by a control line not less than 10 feet, no more than 15 feet from the working edge.

    b) The control line shall extend a sufficient distance to completely enclose the overhand bricklaying operations including the ends of the controlled access area.

    c) The line shall be made of rope, wire, or tape with a minimum tensile strength of 200 lbs.

d) Stanchions or some other means of support will be used to support the control line at a height no less than 39" and no more than 45". The control line will be flagged every 6 feet with high visibility material.

e) On floors where guardrails have not yet been erected, the controlled access zone shall be enlarged, as necessary, to enclose all points of access, materials handling areas, and storage areas.

f) On floors where guardrails are already in place but need to be removed to allow overhand bricklaying work or other leading edge work to take place, only that portion of the guardrail necessary to accomplish the day's work shall be removed.

Note: Employees removing guardrails or other fall protection devices are responsible for replacing those devices when their work is complete.

4. **Warning line systems** for roofing work.

a) Warning lines shall be erected along all sides of the low slope roof work area and positioned at least 6 feet from the roof edge when mechanical equipment is not being used. If mechanical equipment is being used, the warning line shall be positioned at least 10 feet from the roof edge in the direction in which the equipment is being used.

b) Mechanical equipment shall only be used on a low slope roof if it is inside a warning line system or in areas where employees are protected by a guardrail system or personal fall arrest system.

c) Warning lines shall be rigged and supported in such a way that its lowest point (including sag) is not less than 34 inches from the roof surface and its highest point is not higher than 39 inches from the roof surface.

d) Points of access, material handling areas, storage areas, and hoisting areas shall be shall be connected to the work area by an access path formed by two warning lines. Guardrails shall be provided along the perimeter of the roof where these activities are being performed.

e) No employee shall be allowed in the area between a roof edge and a warning line system unless guardrails, safety nets, personal fall arrest systems, or a safety monitor system is provided.

5. **Safety Monitors**

Safety monitors can only be used on low slope roofs (4 in 12 pitch or less -vertical to horizontal). Safety monitors cover work activities performed outside the warning line system and cannot be used if mechanical equipment is being used. Mechanical equipment is anything bigger than a mop cart or a wheelbarrow. Safety monitors can be used without warning lines if the roof is 50 feet or less in width.

Safety Monitors shall be competent and comply with the following:

a) The safety monitor shall be able to recognize fall hazards and be capable of warning employees when it appears an employee is unaware of a fall hazard or is acting in an unsafe manner.

b) The safety monitor shall be on the same working level and within visual sighting distance of employees. Safety monitors also shall be close enough to communicate audibly to employees. This means on a multilevel roof, a safety monitor may be required at each roof level.

c) The safety monitor shall not have any other responsibilities, which could distract him/her from monitoring employees work activities.

d) No employees, other than those engaged in roofing work or covered by a fall protection plan, shall be in the area where the safety monitoring system is being utilized.

6. **Fall Arrest Systems**

a) Lanyards, vertical lifelines, D-rings, and snap hooks shall have a 5000 lbs. tensile strength.

b) All lanyard snap-hooks shall be of the locking type.

c) Body belts, harnesses, lanyards and other fall protection equipment are not to be used for any purpose other than employee fall protection.

d) As of January 1, 1998, using body belts as part of a fall arrest system is prohibited.

e) Fall arrest anchorage points shall be able to withstand 5000 lbs. per employee or shall be designed as a system, which maintains a safety factor of at least 2.

f) Fall protection systems shall be erected under the supervision of a competent person. Any employee who is unsure whether an anchorage point is appropriate shall ask their supervisor.

g) The length of lanyard's and safety lines shall be limited so as not to allow a free fall greater than 6 feet. Additionally, care shall be given when designing a system to ensure that an employee will not strike lower levels prior to, or during, the activation of the fall arrest system. This is especially of concern when using shock-absorbing and retractable lanyards due to their elongation when arresting a fall.

h) Positioning devices shall allow for a free fall of no more than 2 feet.

i) Employees climbing built-up walls of reinforcing steel shall tie-off when they reach their work location. Continuous fall protection shall be used when climbing above 24 feet vertically.

Fall Protection Training

1. All employees shall be trained in the following items:

    a) The nature of fall hazards in the work area.

    b) The correct procedures for erecting, maintaining, disassembling and inspecting the fall protection systems to be used.

    c) The use and operation of guardrail systems, personal fall arrest systems, controlled access zones and other protection to be used.

    d) The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection.

    e) The role of employees in fall protection plans.

    Note: Employees engaged in built-up roofing operations will require additional training.

Purpose

To provide protection to RL Baxter steel employees from the hazards associated with steel erection activities involved in the construction, alteration, and/or repair of single and multi-story buildings, bridges, and other structures where steel erection occurs.

NOTE: This plan does not cover electrical transmission towers, communication and broadcast towers or tanks.

Steel Erection Activities

Steel erection activities include:

- *Hoisting*
- *Laying out*
- *Placing*
- *Connecting*
- *Welding*
- *Burning*
- *Guying*
- *Bracing*
- *Bolting*
- *Plumbing and rigging structural steel*
- *Steel joists and metal buildings*

Installing

- *Metal decking;*
- *Curtain walls*
- *Window walls*
- *Siding system*
- *Miscellaneous metals*
- *Ornamental iron and similar materials*
- *Moving point-to-point while performing these activities*

Controlling Contractor

Definition: Controlling Contractor is a prime contractor, general contractor, construction manager or any other legal entity which has the overall responsibility for the construction of the project-its planning, quality and completion.

When RL Baxter operates as a controlling contractor as defined by 29 CFR 1926.751 (see above definition), RL Baxter will be responsible for ensuring the following:

1. Before authorizing commencement of steel erection, the controlling contractor shall provide written notification to the steel erector that the concrete in the piers, walls, and footings and the mortar in the masonry walls and piers has reached 75% of its intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection. Also, written notification shall be provided for any repairs, replacements and modifications to anchor bolts.
2. The controlling contractor shall provide and maintain adequate access roads into and through the site for safe delivery and movement of cranes, derricks, trucks and other necessary equipment, and the material to be erected and means and methods for pedestrian and vehicular traffic.
3. The controlling contractor shall provide a firm, properly drained area, readily accessible to the work with adequate space for the safe storage of materials and safe operation of equipment.
4. Fall protection provided by the steel erector shall remain in place, to be used by other trades, only if the controlling contractor has directed the steel erector to leave the fall protection in place and has inspected and accepted control and responsibility of it before authorizing persons other than steel erectors to work in the area.
5. *The controlling contractor shall bar other construction processes below the steel erection unless overhead protection is provided.*

Site-Specific Erection Plan

A site-specific erection plan may be used to deviate from the requirements of the standard ONLY for the following activities: (To do so a *qualified person* shall design the alternative method and document this in the site-specific erection plan)

1. Safety latches on hooks can be deactivated only when a qualified rigger has determined that the hoisting and placing of purlins and single joists can be performed more safely by doing so and documents this in a site-specific erection plan.
2. Steel joists at or near columns spanning 60 feet or more shall be set in tandem with all bridging installed except when a qualified person develops an alternate method of erection which ensures equivalent stability of the steel joist is maintained and documents this in a site-specific erection plan.
3. No bundle of decking may be placed on steel joists until all bridging has been installed and anchored and all joist bearing ends attached; except when a qualified person determines and documents in the site-specific erection plan the following:
   a) The structure or portion of the structure is capable of supporting the load;

   b) The bundle of decking is placed on a minimum of three steel joists;

c) The joists supporting the bundle of decking are attached at both ends;
d) At least one row of bridging is installed and anchored
e) The total weight of the bundle of decking does not exceed 4,000 pounds;
f) The edge of the construction load shall be placed within one foot of the bearing surface of the joist end.

Steel Erection Controlling Contractor Checklist

Project:	Superintendent:
Steel Subcontractor:	Erection Start Date:

This checklist is designed to assist the project superintendent in meeting the controlling contractor requirements outlined in the 29 CFR 1926.750 Standards for Steel Erection. This checklist shall be completed on all projects where steel erection activities will be performed.

Approval to Begin Steel Erection:

Before authorizing the commencement of steel erection, the controlling contractor shall ensure the steel erector is provided with the following:

1) **Written** Notification that the concrete in the footings, piers, and walls and the mortar in the masonry piers and walls has attained, 75 percent of the intended minimum compressive design strength to support the loads imposed during steel erection.
Notification Provided: _____

2) **Written** Notification of any repaired, replaced, or field modified anchor bolts. Note: Approval from the structural engineer is required.
Notification Provided: _____

Site Layout:

The controlling contractor shall ensure that the following is provided and maintained:

1) Adequate access roads into and through the site for the safe delivery and movement of necessary equipment and materials to be erected, as well as means and methods for pedestrian and vehicular traffic.
Provided and Maintained: _____

2) A firm, properly graded, drained area, readily accessible to the work with adequate space for the safe storage of materials and the safe operation of the erector's equipment.
Provided and Maintained: _____

Protection from Falling Objects and Custody of Fall Protection:

The controlling contractor shall bar other construction processes below steel erection. Fall protection provided by the steel erector shall remain in the area where steel erection activity has been completed, to be used by other trades, only if the controlling contractor or its authorized representative has done the following:

1) Has directed the steel erector to leave the fall protection in place.

2) Has inspected and accepted control and responsibility of the fall protection prior to authorizing persons other than steel erectors to work in the area.
Status of Fall Protection: _____

Scaffolding

1. General

a) Scaffolding shall be erected plumb and secure on sound rigid ground under the supervision of a competent person.

b) Precautionary measures, including fall protection, to be used during the erection and dismantling of scaffolds shall be planned out prior to beginning work. The competent person will decide the feasibility of using fall protection during the erection and dismantling of scaffolds and whether the use of fall protection creates a greater hazard.

c) No work shall occur on any scaffold until the erection competent person has certified the complete installation of all necessary fall protection and turned the scaffold over to the production crews.

d) The front edge of all platforms shall not be more than 14" from the face of the work unless a guardrail system is erected along the front edge or personal fall arrest systems are used. The distance from the face for plastering and lathing operations shall not exceed 18".

e) Standard guardrails and toeboards are required on all open sides and edges of scaffolds greater than 10' tall. Cross bracing is acceptable in place of a midrail when the crossing point of two braces is between 20" and 30" above the work platform or as a toprail when the crossing point of the two braces is between 38" and 48" above the work platform. To utilize the cross braces as partial guardrail protection, the endpoints at each upright shall be no more than 48" apart.

f) Screen shall be installed where tools or materials are stacked above the toeboard and workers are required to pass below scaffold (i.e., to access building).

g) A ladder, stairtower, ramp or other safe means shall be used to access scaffold platforms more than 24" above or below a point of access. Climbing on end frames is prohibited unless the frames are designed with integral ladder frames. Integral ladder frames have a rung length of at least 8"; a uniform rung spacing of no more than 16 ¾" (non-uniform rung spacing caused by joining end frames together is allowed provided rung spacing does not exceed 16 ¾"); and rest platforms shall be provided at 35' maximum intervals.

h) Ladders and stair towers shall be positioned such that their bottom step/rung is not more than 24" above the scaffold supporting level.

i) Cross braces on tubular welded scaffolds shall not be used as a means of access or egress.

j) Scaffold planks shall overhang end supports no less than 6" and no more than 12" unless cleated or otherwise secured in place. The 12" overhang may be exceeded where guardrails block the cantilevered portion of the platform or where the platform length exceeds 10" the maximum overhang increases to 18".

k) Any scaffolding component damaged or weakened by any cause shall be braced and if possible removed or repaired.

l) All scaffold platforms shall be fully planked between the front uprights and the guardrail supports. Platforms shall be decked so that no space between

the planks or scaffold supports exceeds 1". Where platforms shall fit around scaffold uprights or similar components, the space between the platform and the uprights shall not exceed 9 ½".

m) Each scaffold platform and walkway shall be at least 18" wide. Exceptions to this rule are on ladder jack, pump jack, and top plate bracket scaffolds whose platform shall be at least 12" wide. One further exception occurs where the area in which the scaffold is located is so narrow the platform or walkway cannot be at least 18" wide.

n) All planking shall be scaffold grade or equivalent. Cracked or split planks shall be immediately replaced.

o) Do not overload scaffold. Materials shall be brought up as needed.

p) Unstable objects shall not be used as working platforms.

2. Supported Scaffolds (i.e., Tubular Welded Frame)

a) Scaffold legs shall be set on adjustable bases or plain bases set on mud sills or foundations adequate to support the maximum rated load.

b) Where uplift may occur, panels shall be locked together vertically by pins or other equivalent means.

c) Scaffolds shall be properly braced by cross-braces, diagonal braces or both.

d) Scaffolds shall be tied off at the closest horizontal scaffold member to a 4:1 height to minimum base dimension ratio, then repeated every 26' vertically at locations of horizontal members. Ties and braces shall be located at each end of a scaffold and at 30' intervals horizontally.

e) Scaffold ties shall brace the scaffold from moving into or away from the building structure. To accomplish this, ties shall be constructed of tie wire to prevent movement away from the structure and a rigid "standoff" to provide compressive strength to prevent movement into the building. Other methods may be used to construct tie-offs provided they meet the above support requirements.

3. Mobile Scaffolds

a) The height of mobile scaffolds shall not exceed four times their minimum base dimension.

b) Scaffolds shall be braced by cross, horizontal, and diagonal braces to prevent racking or collapse and to automatically square and align the vertical members.

c) Platforms shall be tightly planked.

d) An access ladder shall be affixed to the scaffold in a location where its usage will not have a tendency to tip the scaffold.

e) When in use, casters or wheels shall be locked to prevent movement. Only in rare instances are employees allowed to ride mobile scaffolds. 1926.452 (w) shall be consulted and jobsite supervisor's approval shall be obtained to ensure that operations meet the requirements of this standard prior to employees riding on a mobile scaffold.

4. Ramps and Walkways

a) Ramps and walkways 6' or more above a lower level shall be equipped with a standard guardrail system.

b) No ramp or walkway shall be sloped greater than 1 vertical to 3 horizontal

c) If the slope of the ramp or walkway is steeper than 1:8, cleats shall be securely fastened to the walkway spaced no further than 14" apart to provide footing.

Appendix A

Scaffolding Diagram

Code of Safe Practices for
Frame Scaffolds, System Scaffolds,
Tube and Clamp Scaffolds & Rolling Scaffolds

Developed for Industry by
Scaffold Industry Association, Inc.

It shall be the responsibility of all users to read and comply with the following common-sense guidelines which are designed to promote safety in the erecting, dismantling and use of scaffolds. These guidelines do not purport to be all-inclusive, nor to supplant or replace other additional safety and precautionary measures to cover usual or unusual conditions. If these guidelines in any way conflict with any state, local, federal or other government statute or regulation, said statute or regulation shall supersede these guidelines and it shall be the responsibility of each user to comply therewith.

General Guidelines

A. POST THESE SCAFFOLDING SAFETY GUIDELINES in a conspicuous place and be sure that all persons who erect, dismantle, or use scaffolding are aware of them.

B. FOLLOW ALL STATE, LOCAL AND FEDERAL CODES, ORDINANCES AND REGULATIONS pertaining to scaffolding.

C. SURVEY THE JOBSITE. A survey shall be made of the job site for hazards, such as untamped earth fills, ditches, debris, high tension wires, unguarded openings, and other hazardous conditions created by other trades. These conditions shall be corrected or avoided as noted in the following sections.

D. INSPECT ALL EQUIPMENT BEFORE USING. Never use any equipment that is damaged or defective in any way. Remove it from the job site.

E. SCAFFOLDS SHALL BE ERECTED IN ACCORDANCE WITH DESIGN AND/OR MANUFACTURER'S RECOMMENDATIONS.

F. DO NOT ERECT, DISMANTLE, OR ALTER A SCAFFOLD unless under the supervision of a qualified person.

G. DO NOT ABUSE OR MISUSE THE SCAFFOLD EQUIPMENT.

H. ERECTED SCAFFOLDS SHALL BE CONTINUALLY INSPECTED by users to be sure that they are maintained in a safe condition. Report any unsafe condition to your supervisor.

I. NEVER TAKE CHANCES! IF IN DOUBT REGARDING THE SAFETY OR USE OF THE SCAFFOLD, CONSULT YOUR SCAFFOLD SUPPLIER.

J. NEVER USE EQUIPMENT FOR PURPOSES OR IN WAYS FOR WHICH IT WAS NOT INTENDED.

K. DO NOT WORK ON SCAFFOLDS if your physical condition is such that you feel dizzy or unsteady in any way.

GUIDELINES FOR ERECTION AND USE OF SCAFFOLDS

A. SCAFFOLD BASE SHALL BE SET ON AN ADEQUATE SILL OR PAD to prevent slipping or sinking and fixed thereto where required. Any part of a building or structure used to support the scaffold shall be capable of supporting the maximum intended load to be applied.

B. USE ADJUSTING SCREWS or other approved methods instead of blocking to adjust to uneven grade conditions.

C. BRACING, LEVELING, & PLUMBING OF FRAME SCAFFOLDS -

1. Plumb and level all scaffolds as the erection proceeds. Do not force frames or braces to fit. Level the scaffold until proper fit can easily be made.
2. Each frame or panel shall be braced by horizontal bracing, cross bracing, diagonal bracing or any combination thereof for securing vertical members together laterally. All brace connections shall be made secure, in accordance with the manufacturer's recommendations.

A. BRACING, LEVELING & PLUMBING OF TUBE & CLAMP AND SYSTEM SCAFFOLDS –

1. POSTS SHALL BE ERECTED PLUMB in all directions, with the first level of runners and bearers positioned as close to the base as feasible. The distance between bearers and runners shall not exceed manufacturer's recommended procedures.
2. PLUMB, LEVEL, AND TIE all scaffolds as erection proceeds.
3. FASTEN ALL COUPLERS AND/OR CONNECTIONS securely before assembly of next level.
4. VERTICAL AND/OR HORIZONTAL DIAGONAL BRACING SHALL BE INSTALLED according to manufacturer's recommendations.

B. TIE CONTINUOUS (RUNNING) SCAFFOLDS TO THE WALL OR STRUCTURE at each end and at least every 30 feet of length when scaffold height exceeds the maximum allowable free standing dimension.

Begin ties or stabilizers when the scaffold height exceeds that dimension, and repeat at vertical intervals not greater than 16 feet. The top anchor shall be placed no lower than four (4) times the base dimension from the top of the completed scaffold. Anchors shall prevent scaffold from tipping into or away from wall or structure. Stabilize circular or irregular scaffolds in such a manner that completed scaffold is secure and restrained from tipping.

When scaffolds are partially or fully enclosed or subjected to overturning loads, specific precautions shall be taken to insure the frequency and accuracy of ties to the wall and structure. Due to increased loads resulting from wind or overturning loads the scaffolding component to which ties are subjected shall be checked for additional loads.

C. WHEN FREE STANDING SCAFFOLD TOWERS exceed four (4) times their minimum base dimension vertically, they shall be restrained from tipping. (CAL/OSHA and some government agencies require stricter ratio of 3:1).

D. DO NOT ERECT SCAFFOLDS NEAR ELECTRICAL POWER LINES UNLESS PROPER PRECAUTIONS ARE TAKEN. Consult the power service company for advice.

E. A MEANS OF ACCESS TO ALL PLATFORMS SHALL BE PROVIDED.

F. DO NOT USE ladders or makeshift devices on top of scaffolds to increase the height.

G. PROVIDE GUARDRAILS AND MID-RAILS AT EACH WORKING PLATFORM LEVEL where open sides and ends exist, and toeboards where required by code.

Excavations & Trenching

Purpose

The purpose of this site specific management control is to protect RL Baxter's employees that are exposed to hazards associated with excavation and trenching activities.

Policy

When subcontracted site company working for RL Baxter is performing excavation or trenching activities, a designated competent person assigned by the subcontractor employer will be responsible for classifying soil type as well as performing daily inspections.

Specific Requirements

1. **CALL BEFORE YOU DIG!!** (UFPO 1-800-962-7962) Prior to opening an excavation, the exact location of underground utilities shall be determined. Call the local centralized utility agency before you dig or drill.

2. Excavations exceeding 20 feet in depth shall have protective systems designed by a registered professional engineer.

3. **Benching/Sloping:** All excavations and trenches 5 feet or deeper shall be sloped or benched wide enough to achieve stable bank conditions according to the following ratios (Horizontal : Vertical):

4.
   a) Type C soil, at least 1-1/2 : 1
   b) Type B soil, at least 1 : 1
   c) Type A soil, at least 3/4 : 1
   d) Or, if it is not possible to cut back to the angles prescribed, all trenches 5 feet or more in depth shall be shored or shielded.
   e) Unclassified soils shall be sloped or benched at least 1-1/2 : 1.
   f) **For instructions on how to classify soil, refer to Appendix A, Soil Classification, of Subpart P - Excavations, 29 CFR 1926, 650-652.**

5. **Inspections:** No employee shall enter an excavation until it has been inspected by a competent person and declared safe to enter. Excavations shall be inspected daily before employees are allowed to enter and after every rainstorm or other hazard-causing occurrence.
   * Definition: *Competent Person* means one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

6. **Access/Egress:** A stairway, ladder, ramp or other safe means of egress shall be located in excavations that are 4' or more in depth so as to allow no more than 25' of lateral travel for employees. Earthen ramps shall be sloped so that employees do not have to climb on hands and feet when accessing or egressing an excavation or trench.

7. **Loose Debris:** Spoil piles, loose rock and soil, tools, and other debris shall be kept at least 2' back from excavation edges, secured or removed to prevent it from falling into excavation where it could cause injuries.

8. **Vehicular Traffic:** All employees working near traffic shall wear vests or garments made of or marked with reflective or high visibility material.

9. **Falling Loads:** No employee shall be permitted beneath a load handled by loading or digging equipment, and operators remaining in their vehicles shall have adequate canopy protection.

10. **Fall Protection:** Trenches which are not readily visible will be protected by barricades, covers or other suitable means. Also, where ramps or walkways are utilized to cross over excavations and a fall hazard of 6 feet or more exists, guardrails or some other form of fall protection will be provided.

11. **Hazardous Atmosphere:** When it is expected or reasonably predictable to expect that a hazardous atmosphere exists, or an atmosphere containing less than 19.5% oxygen, precautions necessary to ensure employee safety will be taken. Examples include:

    a) Ventilation
    b) Air purifying respirators will be provided in accordance with RL Baxter's Respirator Program.
    c) Supplied air respirators will be provided in accordance with RL Baxter's Respirator Program.
    d) **When a hazardous atmosphere exists, refer to the Confined Space section of this program.**

12. **Water Accumulation:** Employees will not be permitted to work in excavations where water is accumulating. The designated competent person shall determine what safeguards will be taken to protect against the hazards of water accumulation.

13. **Mechanical Equipment:** When mechanical equipment is operated adjacent to an excavation and the operator does not have a clear view of the edge barricades, stop logs or someone providing signals will be utilized.

14. **Surface Encumbrances:** Sidewalks, trees, and other miscellaneous surface encumbrances whose stability may be weakened by excavation operations shall be braced, secured or removed to prevent their falling into the open excavation.

15. **Stability of Adjacent Structures:** Whenever excavating operations could weaken adjoining buildings, wall or structures, support systems such as shoring, bracing or underpinning will be utilized.

Support Systems

1. **Timber Shoring:** All timber shoring systems will be designed in accordance with Appendices A and C of **Subpart P - Excavations** from 29 CFR 1926 Standards for Construction.

2. **Aluminum Hydraulic Shoring (AHD):** All aluminum hydraulic shoring systems will be designed from *Manufacturers Tabulated Data* or when not available in accordance with Appendix D of **Subpart P - Excavations** from 29 CFR 1926 Standards for Construction.

Aluminum hydraulic shoring systems designed from the manufacturer's tabulated data will be in accordance with the manufacturer's recommendations, specifications and limitations.

a) **Important:** Any deviation from the manufacturer's recommendations or specifications shall be approved by the manufacturer.
b) Altered systems with the manufacturer's approval shall have a written copy of that approval on site during construction of the system and a copy kept at the main office.

3. **Registered Professional Engineer:** Systems designed by a registered professional engineer shall include the following:

a) A plan indicating the sizes, types and configurations of the materials to be used in the protective system; and
b) The identity of the professional engineer designing the system.
c) A copy of the design shall be kept onsite during the construction of the system and a copy will be kept at the main office.

4. **Trench Boxes:** Trench Boxes will be used in accordance with the loads for which they were designed.

a) Trench Boxes shall be installed to prevent lateral movement in the event of cave-ins, etc.
b) Employees shall not enter or exit a trench box from any part of the trench that is unprotected.
c) Employees will not be allowed inside of trench boxes when they are being installed, removed or moved vertically.
d) Trench boxes shall extend at least 18 inches above the top of the vertical side to prevent tools and/or debris from falling into the excavation/trench.
e) Excavations of earth material to a level not greater than two feet below the bottom of the shield or trench box shall be permitted, but only if the shield or support system is designed to resist the forces calculated for the full depth of the trench, and there are no indications of soil movement from behind the shield or support system.

Daily Excavation Checklist

Competent Person(s) _____ Date_____

Use one or more of the following Comment Codes listed below to describe your trench inspection. Use a "checkmark" to indicate yes, or fill in the blank with applicable information or description. Leave blank if not applicable.

DESCRIPTIONS:	(G) Good	(P) Poor	(S) Stable	(U) Unstable
SOIL TYPE:	Rock	"A"	"B"	"C"
MOISTURE CONDITIONS	(M) Moist (D) Dry	(SA) Saturated (PS) Partial Saturation	(R) Rain	

PROJECT SITE DESCRIPTION

LOCATION_____ AREA CONGESTED_____

BLUE STAKE DATE_____ LOG #:_____ RIGHT OF WAY & CLEARANCE OK_____

TRENCH DEPTH_____ WIDTH_____ LENGTH_____ INTERSECT OR ANGULAR _____

CROSSING TRENCH: LINES_____ ROAD/ALLEY_____

PARALLEL TO TRENCH: LINES_____ ROAD/ALLEY_____ BUILDING(S) _____

POLE BRACING_____ OVERHEAD LINES_____ STRUCTURAL BRACING_____

OPEN DATE/TIME_____ JOB #_____

RPE CONSULTED_____ REASON: _____

TRENCH/EXCAVATION INSPECTION COMMENTS:
Describe any changing conditions, plans, or shoring equipment damage in space below using COMMENT CODES defined above.

Soil Type _____ Time(s) Inspected _____ _____ _____

EMPLOYEE & PUBLIC SAFETY INSPECTION

Air Quality Test	____	Cones	____	Ladders	_____	Steel Plating	____
Barricades	____	Emergency Equipment	____	Ramp/Employee	_____	Traffic Control	____
Barricade Type	____	Fencing	____	Ramp/Equipment	_____	Water Removal	____
Weekend Protection	____						

PROTECTION SYSTEM SELECTION

Installed according to Excavation Safety Resource Manual

Hydraulic Uprights:		**Sloping:**		**Compound Slope:**		**Other:**	
No Sheeting	____	Simple Slope ____H:____V		Upper Slope ____H:____V		Hydraulic Wales	____
Closed Sheeting	____	Slope/Bench ____H:____V		Lower Slope ____H:____V		Timber Shores	____
Spaced Sheeting	____	Multiple Benches	____			Trench Shield	____
		Slope w/Support	____			Unsupported Wall	____

SOIL CONDITIONS

Results (circle one type) of Visual & Manual tests indicate soil is Type…..Rock A B C

If no Manual & Visual tests performed, trench shall be shored for Type "C" soil (ESRM) _____

Manual Tests (OSHA requires one or more)

		Cohesive Fissured	Cohesive Unfissured	Granular
1.	PLASTICITY/PAT		_____	_____
2.	DRY STRENGTH	_____	_____	_____
3.	DRYING	_____	_____	_____
4.	THUMB PENETRATION			
	Type "A", ¼" or less	_____		
	Type "B", ¼" to 1"	_____		
	Type "C", 1" or more	_____		
5.	POCKET PENETROMETER	_____		
6.	OTHER tests	_____		

VISUAL TESTS(OSHA requires one or more. Do as many as possible.)

		Cohesive Soil Presence indicates more stability	Granular Soil Presence indicates less stability
1.	Spoil Pile:	Remains in clumps _____ (Fine Grained Clay)	Breaks up easily _____ (Coarse grained sand or gravel: silt)
2.	Trench Sides:	Stands Vertical _____ for over 2 hours (Fine Grained Clay)	Sloughs into trench _____ (Coarse grained sand or gravel: silt)

Presence indicates less trench stability

3.	Fissures:	Cracks or spalls	trench side _____	trench top	_____	
4.	Soil layers slope into trench estimated at 4H:1V or steeper					_____
5.	Rock layer above soil layer					_____
6.	Sloughing or caving of sides into trench during excavation					_____
7.	Seepage into trench from	sides _____	surface _____	bottom	_____	
8.	Water up to bottom half of trench within last 24 hours					_____
9.	Vibration sources near trench may affect stability					_____
10.	Prior or existing excavation	crossing trench _____	parallel to trench		_____	
11.	Organics present in soil can result in trench failure or hazardous air					_____

CONSTRUCTION/DESIGN COMMENTS

Tailboard _____ On-site review with construction supervisor & design _____

The "Competent Person" is responsible for all items in checklist.
CP has authority to make prompt, corrective decisions to remedy any existing or predictable hazard.

SELECTION OF PROTECTIVE SYSTEMS

The following figures are a graphic summary of the requirements for excavations 20 feet or less in depth. Protective systems for use in excavations more than 20 feet in depth shall be designed by a registered professional engineer in accordance with § 1926.652(b) and (c).

Figure 1. Preliminary Decisions

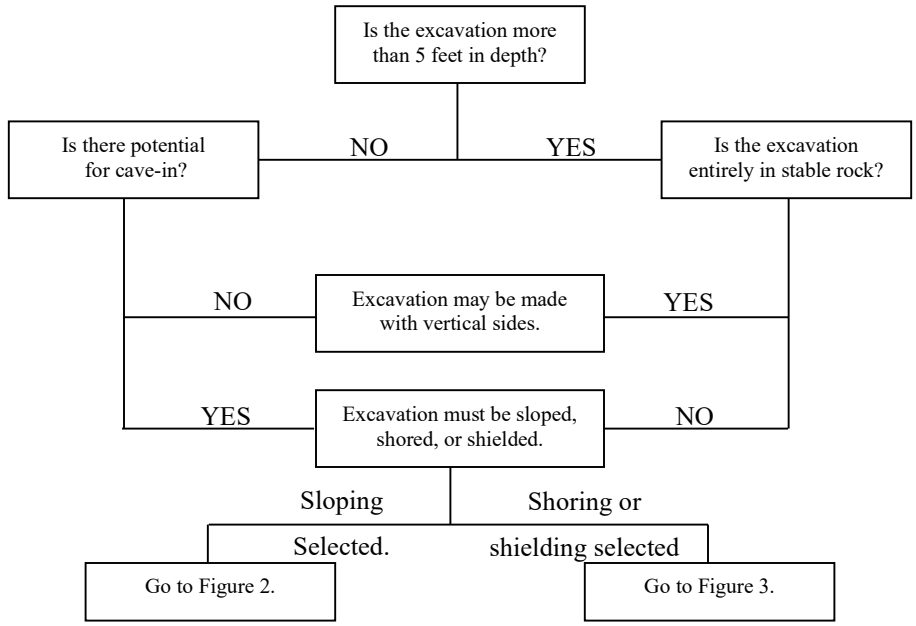
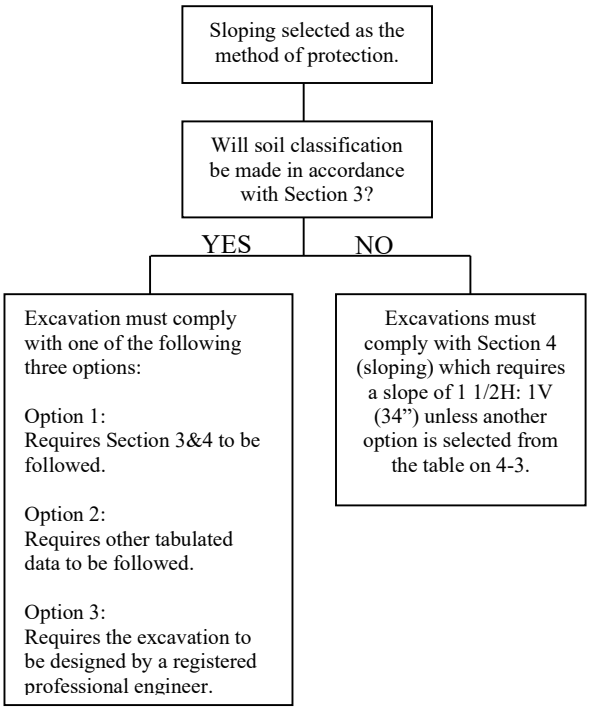
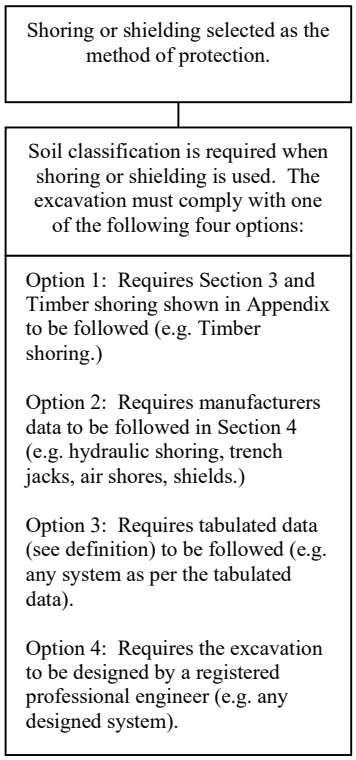


Figure 2. Sloping Options



EXCAVATION STANDARD

Figure 3. Shoring & Shielding Options



Hazard Communication

General Information

This written hazard communication program shall be available at the RL Baxter office to any interested employee, employee representative or OSHA personnel. This program was written to educate the employees concerning jobsite hazards relating to hazard communication. Project Superintendent has been designated to manage this program. This program has been broken into the following easily referenced sections to assist superintendents, foremen and all other employees.

1. List of hazardous chemicals
2. Container labeling
3. Safety data sheets (SDS)
4. Employee information and training
5. Hazardous non-routine tasks
6. Informing contractors / multi-employer workplaces

This program covers any chemical and materials known to be present at the workplace to which employees and/or contractors may be exposed under normal as well as emergency conditions.

List of Hazardous Chemicals

This section of the hazard communication program contains a list of all known or potentially hazardous chemicals used at the jobsite. A hazardous chemical is any chemical which is a physical hazard or a health hazard. It is required that each hazardous chemical used on the jobsite be recorded on a hazardous chemical list. The chemical identity used on the list of hazardous chemicals shall be consistent with the name found on the safety data sheet for that product.

The jobsite superintendent shall be responsible for maintaining the list of hazardous chemicals. When products are brought onto the jobsite, the list shall be checked. If the product is not on the list, it will be added and the superintendent shall confirm that an appropriate SDS for that product is obtained. In the event that an SDS is not readily available for a product arriving on site, the superintendent shall contact the manufacturer and request an SDS for that product and indicate the date on which the call was made on the list of hazardous chemicals.

The form to be used to maintain the list of hazardous chemicals is located at the end of this section. This list of hazardous chemicals form has a designated area for SDSs on file for the corresponding chemical. This will enable the site superintendent to ensure that there is an SDS for each product on the list of hazardous chemicals.

Container Labeling

The site superintendent will verify that all stationary tanks, drums, vessels, and portable containers, and bulk materials are labeled as follows.

1. Container shall be clearly labeled as to contents and associated hazards.

2. The label used to identify the chemical shall coincide with the chemical's name used on the Safety Data Sheet (SDS) for that product.

NOTE: If an employee removes a product from a labeled container, the secondary container in which the product is put for use shall be properly labeled. The employee who removes the product is responsible to ensure that all secondary containers are labeled. The site superintendent shall review the labeling system in place on the jobsite, and provide additional training as needed.

Safety Data Sheets (SDS)

The site superintendent shall be responsible for obtaining and maintaining current SDSs for each chemical used at the jobsite. If an SDS is missing for a particular product, the manufacturer of the chemical shall be contacted by the site superintendent so an SDS can be obtained. If the manufacturer cannot get the SDS to the jobsite that day, then the date the call was made shall be documented, as well as when the SDS is expected to arrive at the jobsite.

Copies of SDSs for all hazardous chemicals to which employees may be exposed will be kept at RL Baxter's office trailer.

SDSs will be available for review to all employees during each work shift. If SDSs are not available or new chemicals in use do not have SDSs, immediately contact a supervisor.

If during the course of construction an employee is required to perform any task that involves the use of a hazardous chemical, the MSDS shall be referred to prior to using that chemical so the proper safety measures are taken.

A sample Safety Data Sheet is included in the hazard communication program for employee review.

Employee Information and Training

RL Baxter has developed an information and training program to help educate employees in hazard communication. This program intends to communicate the necessary tools that each employee will need to work safely with hazardous chemicals and to increase employee awareness.

Employee information shall include:

1. Informing employees of the chemicals present in their workplace operations.

2. Location and availability of RL Baxter's hazard communication program, Safety Data Sheets and list of hazardous chemicals.

Employee training shall include:

1. Physical and health effects of the hazardous chemicals.
2. Methods and observation techniques used to determine the presence or release of hazardous chemicals in the work area.
3. How to lessen or prevent exposure to these hazardous chemicals through the use of control/work practices and personal protective equipment.
4. The use of Safety Data Sheets to obtain appropriate hazard information.
5. How to properly read and label containers (primary and secondary).
6. Emergency procedures to follow if they are exposed to hazardous chemicals.

Prior to a new chemical hazard being introduced into the workplace, all employees will be given information and training as outlined above.

Hazards of Non-Routine Tasks

During the course of construction, there are times when employees are required to perform hazardous non-routine tasks. Prior to starting work on such projects, each affected employee will be given information and training by the site superintendent about hazardous chemicals to which the employee(s) may be exposed during such activity.

The information and training that shall be covered for hazardous non-routine tasks include:

1. Specific chemical hazards.
2. Protective/safety measures that can be utilized to reduce the exposure.
3. Measures RL Baxter has taken to reduce the hazards, which may include ventilation, personal protective equipment, presence of another employee, and emergency procedures.

Informing Contractors / Multi-Employer Workplaces

All employers/contractors shall review appropriate hazard communication materials such as the written hazard communication program, list of hazardous chemicals, container labeling and Safety Data Sheets. Any precautionary measures shall be taken to protect employees during normal operating conditions and enforceable emergencies prior to commencement of work.

INVENTORY OF HAZARDOUS CHEMICALS

Project Name: _____

	Common Name	Manufacturer Common Name	SDS On File Section	Date Obtained*
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

*Date Obtained section shall be used to indicate the date on which the SDS is received. In the event that an SDS is not readily available for a product arriving on site, the superintendent shall contact the manufacturer and request an SDS for that product and indicate in this section the date the call was made.

Glossary

Absorption – The process by which a substance can be readily taken into the body, for example, some chemicals can be absorbed through unbroken skin.

Acid – A fundamental category of chemicals characterized by having available reactive hydrogen and requiring an alkali to neutralize them. Acids turn litmus paper red and have pH values of 0 to 6. They may cause severe burns.

Acute Effect – Adverse effect which has severe symptoms developing rapidly and coming quickly to a crisis. Compare "Chronic Effect."

Acute Toxicity – Acute effects resulting from a single dose of or exposure to a substance. Ordinarily used to denote effects in experimental animals.

ACGIH – American Conference of Governmental Industrial Hygienists is an organization of professional personnel in governmental agencies or educational institutions who are employed in occupation safety and health programs.

Adenocarcinoma – A tumor originating in a gland.

Adenosis – Any disease of a gland.

Adhesion – A union of two surfaces that are normally separate.

Aerosol – A fine spray of particles sufficiently small in size to resist settling or sedimentation (for example: smoke or fog).

Air Line Respirator – A respirator that is connected to a compressed breathing air source by a hose. The air is delivered continuously or intermittently in a sufficient volume to meet the wearer's breathing requirements.

Air Purifying Respirator – A respirator that uses chemicals to remove specific gases and vapors from the air or that uses a mechanical filter to remove particulate matter. An air purifying respirator must only be used when there is sufficient oxygen to sustain life and the air contaminant level is below the concentration limits of the device.

Alkali – A substance capable of combining with hydrogen ions. They are also called bases, and may cause severe burns to the skin. Alkalis turn litmus paper blue and have pH values from 8 to 14.

Allergic Reaction – An abnormal physiological response to a chemical or physical stimuli by a sensitive person.

Alopecia – loss of hair.

Amenorrhea – absence of menstruation.

Analgesia – loss of sensitivity to pain.

Anaphylaxis – extreme sensitivity resulting from prior contact with a chemical or protein.

Anemia – a deficiency of red blood cells.

Anesthetic – A chemical that causes a total or partial loss of sensation. Over exposure to anesthetics can cause impaired judgment, dizziness, drowsiness, headache, unconsciousness, and even death. Examples include: alcohol, paint remover, and degreasers.

Anhydride – An oxide or compound which when combined with water produces an acid or base.

Anhydrous – does not contain water.

Anosmia – loss of the sense of smell.

Anorexia – loss of appetite.

Anoxia – A lack of oxygen from inhaled air – literally without oxygen. See Hypoxia.

ANSI – American National Standards Institute is a privately funded, voluntary membership organization that identifies industrial and public needs for national consensus standards and coordinates developments of such standards.

Antidote – A remedy to relieve, prevent, or counteract the effects of a poison.

Appearance – A description of a substance at normal room temperature and normal atmospheric conditions. Appearance includes the color, size, and consistency of a material.

API – American Petroleum Institute is a voluntary membership organization of the petroleum industry.

Aquatic Toxicity – The adverse effects to marine life that result from being exposed to a toxic substance.

Aqueous – A water-based solution.

Argyria – local or generalized impregnation (gray-blue color) of the body tissues with silver.

Aromatic – Fragrant or of marked odor. Often applied to a group of hydrocarbons and their derivatives, such as benzene, toluene, xylene.

Asphyxia – Unconsciousness due to interference with the oxygen of the blood.

Asphyxiant – A vapor of gas that can cause unconsciousness or death by suffocation (lack of oxygen). Most simple asphyxiants are harmful to the body only when they become so concentrated that they reduce oxygen in the air (normally about 21%) to dangerous levels (18% or lower). Asphyxiation is one of the principal potential hazards of working in confined and enclosed spaces.

Asphyxiation – A condition that causes asphyxia, suffocation. See also Asphyxiant.

ASTM – American Society for Testing and Materials is the world's Largest source of voluntary consensus standards for materials, products, Systems, and services. ASTM is a resource for sampling and testing methods, health and safety aspects of materials, safe performance guidelines, effects of physical and biological agents and chemicals.

Asthma – A disease characterized by recurring attacks of difficult breathing, wheezing, and cough due to spasmodic contraction of the bronchioles.

Asymptomatic – showing no symptoms.

Atoxia – loss of power of muscle coordination.

Atm – Atmosphere, a unit of pressure equal to 760 mmHg (mercury) at sea level.

Atmosphere Supplying Respirator – A respirator that provides breathing air from a source other than the surrounding atmosphere. There are two types: airline and self-contained breathing apparatus.

Atrophy – A wasting or diminution in the size of a part of the body.

Auto-Ignition Temperature – The temperature to which a closed, or nearly closed container must be heated in order that the flammable liquid, when introduced into the container, will ignite spontaneously or burn.

BAL – British Anti-Lewisite – a name for the drug dimecaprol – a treatment for toxic inhalations.

Barrier Cream – A cream used for use on human skin to protect against injury from contact with specific types of harmful agents.

Base – See Alkali.

BCM – Blood-clotting mechanism effects.

Benign – Not recurrent or not tending to progress.

Biodegradable – Capable of being broken down into innocuous products by the action of living things.

Biohazard – This is a combination of the words biological and hazard; and is used to describe infectious agents presenting a risk or potential risk to the well-being of man or animals either directly through infection, or indirectly though disruption of the ??

Biologic Half-Life – The time required for a given species, organ, or tissue to eliminate half of a substance which it takes in.

Biopsy – Removal and examination of tissue from the living body.

BLD – Blood effects.

Boiling Point – The temperature at which a liquid changes to vapor state at a given pressure. The boiling point is usually expressed in degrees Fahrenheit at sea level pressure (760mmHg, or one atmosphere). For mixtures, the *initial* boiling point or the boiling range may be given. Flammable materials with low boiling points generally present special fire hazards. Some approximate boiling points:

Propane	-44°F
Anhydrous Ammonia	-28°F
Butane	31°F
Gasoline	100°F
Allyl chloride	113°F
Ethylene Glycol	387°F

BOM or BuMines – Bureau of Mines, U.S. Department of Interior.

Bonding – The interconnecting of two objects by means of a clamp and bare wire. Its purpose is to prevent a static discharge (spark) when transferring a flammable liquid from one container to another. The conductive path is provided by clamps which make contact with the charged object and a low resistance flexible cable which allows the charge to equalize. See Grounding.

Bradycardia – A slow heartbeat in which the pulse rate falls below 60. See also Tachycardia.

Breathing Zone – The area of the ambient environment in which a person breathes.

Bronchitis – Inflammation of the bronchial tubes in the lungs.

Buffer – A substance capable in solution of neutralizing both acids and bases and thereby maintaining the original acidity or basicity of the solution.

Bulk Density – Mass of powdered or granulated solid material per unit of volume.

C – Degrees Centigrade, a temperature scale where water boils at 100°C and freezes at 0°C. °C = 5/9(°F – 32).

"C" or Ceiling – The maximum allowable human exposure limit for an airborne substance which is not to be exceeded even momentarily. Also see PEL and TLV.

ca – Approximately.

CAA – Clean Air Act was enacted by Congress to regulate/reduce air pollution. CAA is administered by the Environmental Protection Agency (EPA).

Carcinogen – A substance or agent capable of causing or producing cancer in mammals, including humans. A chemical is considered to be a carcinogen if:

(a) It has been evaluated by the International Agency for Research on Cancer (IARC) and found to be carcinogenic or a potential carcinogen.
(b) It is listed as a carcinogen or potential carcinogen in the Annual Report on carcinogens (latest edition) published by the National Toxicology Program (NTP).
(c) It is regulated by OSHA as a carcinogen.

Car – cancer or carcinogen.

Carcinogenicity – The ability to produce cancer.

Carcinoma – a malignant tumor. A form of cancer.

CAS – Chemical Abstracts Service is an organization under the American Chemical Society. CAS abstracts and indexes chemical literature from all over the world in "Chemical Abstracts." "CAS Numbers" are used to identify specific chemicals or mixtures.

Catalyst – A substance which, without changing itself, causes a chemical reaction to proceed faster.

Cataract – A loss of transparency of the crystalline lens of the eye or of its capsule.

Caustic – The ability of an alkali to cause burns. See Alkali.

cc – Cubic centimeter is a volume measurement in the metric system which is equal in capacity to one milliliter (ml). One quart is about 946 cubic centimeters.

Ceiling Limit – A concentration that is not to be exceeded. See also "C" or Ceiling.

Ceiling Value(s) – A maximum established level which no human exposure should ever exceed.

Central Nervous System – The brain and spinal cord. These organs supervise and coordinate the activity of the entire nervous system. Sensory impulses are transmitted into the central nervous system, and motor impulses are transmitted out.

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act of 1980. The Act requires that the Coast Guard National Response Center be notified in the event of a hazardous substance release. The Act also provides for a fund (the Superfund) to be used for the cleanup of abandoned hazardous waste disposal sites.

Cervix – The lower end of the uterus extending into the vagina.

CFR – Code of Federal Regulations. A collection of the regulations that have been promulgated under U.S. Law.

Chemical – Any element, chemical compound or mixture of elements and/or compounds where chemical(s) are distributed.

Chemical Cartridge Respirator – A respirator that uses various chemical substances to purify inhaled air of certain gases and vapors. This type of respirator is effective for concentrating no more than ten times the TLV of the contaminant, if the contaminant has warning properties (odor or irritation) below the TLV.

Chemical Change (Reaction) – Change of composition in properties due to rearrangement of elements, atoms, or molecules.

Chemical Compound – A substance composed of definite proportions by weight of two or more elements, and whose properties differ from those of its elements. Also see Mixture.

Chemical Family – A group of individual elements or compounds with a common general name. Example: ketones, alcohols.

Chemical Name – The name given to a chemical in the nomenclature developed by the International Union of Pure and Applied Chemistry (IU or the Chemical Abstracts Service (CAS)).

Chemical Pneumonitis – Inflammation of the lungs caused by accumulation of fluids due to chemical irritation.

CHEMTREC – Chemical Transportation Emergency Center is a national center established by the Chemical Manufacturers Association (CMA) to relay pertinent emergency information concerning specific chemicals on requests from individuals. CHEMTREC has a 24-hour toll-free telephone number *800-424-9300) to help respond to chemical transportation emergencies.

Chloracne – An acne-like eruption from contact with chlorinated naphthalenes and polyphenyls acting on sweat glands.

Chronic – Persistent, prolonged, and/or repeated effects which are the result of repeated exposure to low concentrations of a chemical substance over a long period of time. Compare with Acute.

Chronic Effect – An adverse effect on a human or animal body, with symptoms which develop slowly over a long period of time or which recur frequently. Compare with Acute.

Chronic Exposure – long-term contact with a substance.

Chronic Toxicity – Adverse effects resulting from repeated doses of or exposures to a substance over a relatively prolonged period of time. Ordinarily used to denote effects in experimental animals.

Clean Air Act - See CAA.

Clean Water Act – Federal law enacted to regulate/reduce water pollution. CWA is administered by the Environmental Protection Agency (EPA).

CMA – Chemical Manufacturers Association. See CHEMTREC.

CO – Carbon monoxide. A colorless, odorless, flammable and very toxic gas produced by the incomplete combustion of carbon. It is also a by-product of many chemical processes.

CO_2 - Carbon dioxide is a heavy, colorless gas which is produced by the combustion and decomposition of organic substances and as a byproduct of many chemical processes. **CO_2** will not burn and is relatively non-toxic (although high concentrations, especially in confined spaces, can create hazardous oxygen deficient environments.)

COC – Cleveland Open Cup is a flash point test method.

Combustible – A term used by NFPA, DOT, and others to classify certain liquids that will burn, on the basis of flash points. Both NFPA and DOT generally define "combustible liquids" as having a flash point of 100° F (37.8° C) or higher but below 200° F (93.3° C). Also see Flammable. Non-liquid substances such as wood and paper are classified as "ordinary combustibles" by NFPA.

Combustible Liquid – Any liquid having a flash point at or above 100° F (37.8° C), but below 200° F (93.3° C), except any mixture having components with flash points of 200° F (93.3° C) or higher, the total volume of which make up 99% or more of the total volume of the mixture.

Common Name – Any identification, such as code name, code number, trade name, brand name, or generic name, other than its chemical name, used to identify a chemical.

Compressed Gas – (a) A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70° F (21.1° C); or (b) A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130°F (54.4°C) regardless of the pressure at 70° F (21.1° C); or (c) A liquid having a vapor pressure exceeding 40 psi at 100°F (37.8°C) as determined by ASTM D-323-72.

Conc. – see Concentration.

Concentration – The relative amount of a substance when combined or mixed with other substances. Examples: 2 ppm hydrogen sulfide in air, or a 50% caustic solution.

Conditions to Avoid – Conditions encountered during handling or storage which could cause a substance to become unstable.

Confined Space – Any area which has limited openings for entry and exit that would make escape difficult in an emergency, has a lack of ventilation, contains known and potential hazards, and is not intended nor designated for continuous human occupancy.

Conjunctivitis – Inflammation of the conjunctiva, the delicate membrane that lines the eyelids and cover the eyeballs.

Contact Dermatitis – Caused by contact with a primary irritant, a skin irritant at the area of skin contact.

Container – Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of MSDS or HazCom, pipes or piping systems are not considered to be containers.

Cornea – Transparent structure of the external layer of the eyeball.

Corrosive – A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of the contact. This term shall not refer to action or inanimate surfaces.

CPSC – Consumer Products Safety Commission has responsibility for regulating hazardous materials when they appear in consumer goods. For CPSC purposes, hazards are defined in the Hazardous Substances Act and the Poison Prevention Packaging Act of 1970.

Curetiage – Cleansing of diseased surface.

Cutaneous Hazards – Chemicals which irritate the skin.

Cutaneous Toxicity – See Dermal Toxicity.

CWA – Clean Water Act was enacted to regulate/reduce water pollution. It is administered by the EPA.

Cyanosis – Blueness of the skin, generally caused by lack of oxygen.

Cyst – A sac containing a liquid. Most cysts are harmless.

Cytology – The scientific study of cells.

DASHO – Designated Agency Safety and Health Official is the executive official of a Federal Department or Agency who is responsible for safety and occupational health matters within a Federal Agency, and is so designated or appointed by the head of the agency.

Decomposition – Breakdown of a material or substance (by heat, chemical reaction, electrolysis, decay, or other processes) into parts or elements or simpler compounds.

Density – The mass (weight) per unit volume of a substance. For example, lead is much denser than aluminum.

Depressant – A substance that reduces a bodily functional activity or an instinctive desire, such as appetite.

Dermal – Relating to the skin.

Dermal Toxicity – Adverse effects resulting from the skin exposure to a substance. Ordinarily used to denote effects in the experimental animals.

Dermatitis – Inflammation of the skin. Also see Irritant, Sensitizer, and Contact Dermatitis.

DHHS – U.S. Department of Health and Human Services (replaced U.S. Department of Health, Education and Welfare.) NIOSH and the Public Health Services (PHS) are part of DHHS.

Dike – A barrier constructed to control or confine hazardous substances and prevent them from entering sewers, ditches, streams, or other flowing waters.

Dilution Ventilation – Air flow designed to dilute contaminants to acceptable levels. Also see General Ventilation or Exhaust.

DOL – U.S. Department of Labor. OSHA and MSHA are part of DOL.

Dose – The term used to express the amount of energy or substance absorbed in a unit volume or an organ or individual dose rate is the dose delivered per unit of time.

DOT – U.S. Department of Transportation regulates transportation of chemicals and other substances.

Dry Chemical – A powdered fire extinguishing agent usually composed of sodium bicarbonate, potassium bicarbonate, etc.

Dysfunction – Any abnormality or impairment of an organ.

Dysmenorrhea – painful menstruation.

Dysplasic – An abnormality of development.

Dyspriea – labored or difficult breathing, shortness of breath.

Ectopic Pregnancy – The fertilized ovum becomes implanted outside of the uterus.

Eczema – A skin disease or disorder; one specific type of dermatitis.

Edema – An abnormal accumulation of clear watery fluids in the tissues.

Element – A substance composed entirely of one kind of atom. Elements are designated by chemical symbols.

Emphysema – A lung disease in which the presence of air in the connective tissues of the lungs causes swelling or inflammation.

Endocrine Glands – Glands that regulate body activity be secreting hormones.

Endometrium – The mucous membrane lining the uterus.

Environmental Toxicity – Information obtained as a result of conducting environmental testing designed to study the effects on aquatic and plant life.

EPA – U.S. Environmental Protection Agency.

Epidemiology – Science concerned with the study of disease in a general population. Determination of the incidence (rate of occurrence) and distribution of a particular disease (as by age, sex, or occupation) which may provide information about the cause of the disease.

Epitoxis – Nosebleed; hemorrhage from the nose.

Epithelium – The thin membrane covering internal and external surfaces of the body.

Estrogen – Principal female sex hormone.

Evaporation Rate – The rate at which a material will vaporize (evaporate) when compared to the known rate of vaporization of a standard material. The evaporation rate can be useful in evaluating the health and fire hazards of a material. The designated standard material is usually normal butyl acetate (NBUAC or n-BuAc) with a vaporization rate designated to 1.0 Vaporization rates of other solvents or materials are then classified as:

FAST evaporating if greater than 3.0. Examples: Methyl Ethyl Ketone (MEK) = 3.8, Acetone = 5.6, Hexane = 8.3.

MEDIUM evaporating if 0.8 to 3.0. Examples: 190 proof (95%) Ethyl Alcohol = 1.4, VM & P Naphtha = 1.4, MIBK = 1.6.

SLOW evaporating if less than 0.8. Examples: Xylene = 0.6, Isobutyl Alcohol = 0.6, Normal Butyl Alcohol = 0.4, Water = 0.3, Mineral Spirits = 0.1.

Explosive – A chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

Exposure or Exposed – State of being open and vulnerable to a hazardous chemical in the course of employment by inhalation, ingestion, skin contact, absorption, or any other course; includes potential (accidental or possible) exposure.

Extinguishing Media – The firefighting substance to be used to control a material in the event of a fire. It is usually named by its generic name, such as fog, foam, water, etc.

Eye Protection – Recommended safety glasses, chemical splash goggles, face shields, etc. to be utilized when handling a hazardous material.

F – Fahrenheit is a scale for measuring temperature. On the Fahrenheit scale, water boils at 212° and freezes at 32°. °F = 9/5 (°C) +32.

f/cc – Fibers per cubic centimeter of air.

FACOSH – Federal Advisory Council for Occupational Safety and Health is a joint management-labor council that advises the Secretary of Labor on matters relating to the occupational safety and health of federal employees.

FDA – U.S. Food and Drug Administration.

Fetal – pertaining to the fetus.

Fetus – The developing young in the uterus from the seventh week of gestation until birth.

FFSHC – Field Federal Safety and Health Councils are organized throughout the country to improve federal safety and health programs at the field level and within a geographic location.

FHCP – Federal Hazard Communication Program.

Fibrosis – An abnormal thickening of fibrous connective tissue, usually in the lungs.

FIFRA – Federal Insecticide, Fungicide and Rodenticide Act requires that certain useful poisons, such as chemical pesticides, sold to the public contain labels that carry health hazard warnings to protect users. It is administered by EPA.

First Aid – Emergency measures to be taken when a person is suffering from overexposure to a hazardous material, before regular medical help can be obtained.

Flammable – A chemical that includes one of the following categories:
(a) "Aerosol Flammable." An aerosol that yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening.
(b) "Gas, Flammable." (1) a gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of 13 percent by volume or less; or (2) a gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than 12 percent by volume, regardless of the lower limit;
(c) "Liquid, Flammable." Any liquid having a flashpoint below 100°F, except any mixture having components with flashpoints of 100°F or higher, the total of which make up 99 percent or more of the total volume of the mixture.
(d) "Solid, Flammable." A solid, other than a blasting agent or explosives that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A solid is a flammable solid if it ignites and burns with a self-sustained flame at a rate greater than one tenth of an inch per second along its major axis.

Flashback – Occurs when flame from a torch burns back into the tip, the torch, or the hose. It is often accompanied by a hissing or squealing sound with a smoky or sharp-pointed flame.

Flashpoint – The minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested by any of the following methods:
(a) Tagliabue Closed Tester
(b) Pensky-Martens Closed Tester
(c) Setaflash Closed Tester.

Foreseeable Emergency – Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace or environment.

Formula – The scientific expression of the chemical composition of a material (e.g. water is H_2O, Sulfuric Acid is H_2SO_4, Sulfur Dioxide is SO_2).

Fume – Smoke, vapor or gas, especially when irritating or offensive.

Fume Fever – An acute condition caused by a brief high exposure to the freshly generated fumes of metal such as lead or magnesium.

Gangrene – Death of tissue combined with putrefaction.

Gastroenteritis – Inflammation of the stomach and intestines.

g – Gram is a metric unit of weight. One ounce U.S. is about 28.4 grams.

General Exhaust – A system for exhausting air containing contaminants from a general work area. Also see Local Exhaust.

Generic Name – A designation or identification used to identify a chemical by other than its chemical name (e.g. code name, code number, trade name, and brand name.)

Genetic – Pertaining to or carried by genes. Hereditary.

Gestation – The development of the fetus from conception to birth.

g/kg – Grams per kilogram is an expression of dose used in oral and dermal toxicology testing to denote grams of a substance dosed per kilogram of animal body weight. Also see kg (kilogram).

Grounding – The procedure used to carry an electrical charge to ground through a conductive path. A typical ground may be connected directly to a conductive water pipe or to a grounding bus and grounding rod. See Bonding.

Gynecology – The study of reproductive organs in women.

Hand Protection – Specific type of gloves or other hand protection required to prevent harmful exposure to hazardous materials.

Hazardous Chemical – Any chemical whose presence or use is a physical hazard or a health hazard.

Hazardous Material – A material that is characterized by one or more of the following (1) has a flashpoint below 140° F, closed cup, or subject to spontaneous heating; (2) has a threshold limit value below 500 ppm for gases and vapors, below 500 mg/m for fumes, and below 25 mppcf for dusts; (3) single oral does LD50 or below 500 mg/kg of body weight; (4) is subject to polymerization which results in the release of large amounts of energy; (5) is a strong oxidizing or reducing agent; (6) causes first degree burns to skin in short time exposure, or is systematically toxic on contact with the skin; and/or (7) in the course of normal operations may produce dusts, gases, fumes, vapors, mists, or smoke which have one or more of the above characteristics.

Hazard Warning – Words, pictures, symbols, or combination thereof presented on a label or other appropriate form to inform of the presence of various materials or hazards.

HCS – Hazard Communication Standard is an OSHA regulation.

Health Hazard – A chemical for which there is significant evidence, based on at least one study conducted in accordance with established scientific principles, that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatoxins, nephrotoxins, neurotoxins, agents which act on the hemtopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes.

Hematology – The study of blood.

Hematoma – A blood clot under the surface of the skin.

Hematopoietic System – The blood forming mechanism of the human body.

Hematuria – The presence of blood in the urine.

Hemoglobin – An iron-containing conjugated protein or respiratory pigment occurring in the red blood cells of vertebrates.

Hepatoxin – A substance that causes injury to the liver.

Highly Toxic – A chemical falling within any of the following categories:
(a) A chemical with a median lethal dose (LD50) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
(b) A chemical with a median lethal dose (LD50) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.
(c) A chemical that has a median lethal concentration (LC50) in air of 200 ppm by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

HMIS – Hazardous Material Information System is an MSDS file maintained by the Department of Defense and contains MSDSs and transportation data for products purchased by DOD and GSA.

Hormones – Act as chemical messengers to body organs.

Hydrocarbons – Chemicals composed solely of carbon and hydrogen, which are the basic building blocks of all organic chemicals.

Hygroscopic – Readily absorbs moisture from the air.

Hyperplasia – Increase in volume of a tissue or organ caused by the growth of new cells.

Hypoxia – Insufficient oxygen, especially as applied to body cells.

IARC – International Agency for Research on Cancer.

Ignitable – Capable of being set afire.

Immiscible – Liquids which will not mix with each other but will form 2 separate layers or will result in cloudiness or turbidity.

Impervious – A material that does not allow another substance to pass through or penetrate it.

Incompatible – Materials that could cause dangerous reactions by direct contact with one another.

Inflammation – A morbid series of reactions produced in the tissues by an irritant. It is marked by an afflux of blood with exudation of plasma and leukocytes.

Ingestion – Taking in by mouth.

Inhale/Inhalation – Breathing in of a substance in the form of a gas, vapor, fume, mist, or dust.

Inhibitor – A chemical added to another substance to prevent an unwanted chemical change.

Inorganic – A term used to designate compounds that generally do not contain carbon. Source matter other than vegetable or animal. Examples are sulfuric acid and salt.

Insoluble – Incapable of being dissolved in liquid.

Irodocyclitis – Inflammation of both iris and ciliary body of the eye.

Irritant – A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact.

Irritating – An irritating material, as defined by DOT, is a liquid or solid substance which, upon contact with fire or when exposed to air, gives off dangerous or intensely irritating fumes (not including poisonous materials).

Iscemia – Local and temporary anemia due to the obstruction of the circulation in a part of the body.

kg – Kilogram is a metric unit of weight, about 2.2 U.S. pounds.

L – Liter is a metric unit of capacity or volume. A U.S. quart is about 9/10 of a liter.

Label – Notice attached to a container, bearing information concerning its contents.

Lacrimation – Secretion and discharge of tears.

Latent Period – The period of time between exposure and the first manifestation of damage.

Lavage – A washing of a hollow organ, such as the stomach.

LC – Lethal Concentration is the concentration of a substance being tested that will kill.

LCL – Lethal Concentration Low, lowest concentration of a gas or vapor capable of killing a specified species over a specified time.

LC50 – The concentration of a material in air that will kill 50 percent of a group of test animals with a single exposure (usually 1 to 4 hours). The LC50 is expressed as part of material per million parts of air, by volume (ppm) for gases and vapors, or as micrograms of material per liter of air (g/1) or milligrams of material per cubic meter of air (mg/m) for dusts and mists, as well as for gases and vapors.

LD – Lethal Dose is the quantity of a substance being tested that will kill.

LDL – Lethal Dose Low, lowest administered dose of a material capable of killing a specified test species.

LD50 – A single dose of material expected to kill 50 percent of a group of test animals. The LD dose is usually expressed as milligrams or grams of material per kilogram of animal body weight (mg/kg or g/kg). The material may be administered by mouth or applied to the skin.

Lower explosive limit (LEL) - The lower limit of flammability of a gas or vapor at ordinary ambient temperatures expressed in percent of the gas or vapor in air by volume. This limit is assumed constant for temperatures up to 120ºC (250ºF). Above this, it should be decreased by a factor of 0.7 because explosibility increases with higher temperatures.

Malignant - As applied to a tumor. Cancerous and capable of undergoing metastasis, or invasion of surrounding tissue.

Metastasis - Transfer of the causal agent (cell or microorganism) of a disease from a primary focus to a distant one through the blood or lymphatic vessels. Also, spread of malignancy from site of primary cancer to secondary sites.

Meter - A metric unit of length, equal to about 39 inches.

Micron (micrometer, m) - A unit of length equal to one millionth of a meter, approximately 1/25,000 of an inch.

Milligram (mg) - A unit of weight in the metric system. One thousand milligrams equals one gram.

Milligrams per cubic meter (mg/m^3) - Unit used to measure air concentrations of dusts, gases, mists, and fumes.

Milliliter (mL) - A metric unit used to measure volume. One milliliter equals one cubic centimeter.

Millimeter of mercury (mmHg) - The unit of pressure equal to the pressure exerted by a column of liquid mercury one millimeter high at a standard temperature.

Mists - Suspended liquid droplets generated by condensation from the gaseous to the liquid state or by breaking up a liquid into a dispersed state, such as by splashing, foaming, or atomizing. Mist is formed when a finely divided liquid is suspended in air.

MSDS - Material Safety Data Sheet.

MSHA - Mine Safety and Health Administration, U.S. Department of Labor.

Mucous membranes - Lining of the hollow organs of the body, notably the nose, mouth, stomach, intestines, bronchial tubes, and urinary tract.

NFPA - The National Fire Protection Association is a voluntary membership organization whose aim is to promote and improve fire protection and prevention. The NFPA publishes 16 volumes of codes known as the National Fire Codes.

NIOSH - The National Institute for Occupational Safety and Health is a federal agency. It conducts research on health and safety concerns, tests and certifies respirators, and trains occupational health and safety professionals.

NTP - National Toxicology Program. The NTP publishes an Annual Report on carcinogens.

Nuisance dust - Have a long history of little adverse effect on the lungs and do not produce significant organic disease or toxic effect when exposures are kept under reasonable control.

OSHA - U.S. Occupational Safety and Health Administration, U.S. Department of Labor.

Oxidizer - A substance that gives up oxygen readily. Presence of an oxidizer increases the fire hazard.

Oxygen deficiency - That concentration of oxygen by volume below which atmosphere supplying respiratory protection must be provided. It exists in atmospheres where the percentage of oxygen by volume is less than 19.5 percent oxygen.

Oxygen-enriched atmosphere - An atmosphere containing more than 23.5 percent oxygen by volume.

Particulate matter - A suspension of fine solid or liquid particles in air, such as dust, fog, fume, mist, smoke or sprays. Particulate matter suspended in air is commonly known as an aerosol.

PEL - Permissible exposure limit. An exposure limit that is published and enforced by OSHA as a legal standard.

Personal protective equipment (PPE) - Devices worn by the worker to protect against hazards in the environment. Respirators, gloves, and hearing protectors are examples.

PH - Means used to express the degree of acidity or alkalinity of a solution with neutrality indicated as seven.

Polymerization - A chemical reaction in which two or more small molecules (monomers) combine to form larger molecules (polymers) that contain repeating structural units of the original molecules. A hazardous polymerization is the above reaction, with an uncontrolled release of energy.

ppm - Parts per million parts of air by volume of vapor or gas or other contaminant. Used to measure air concentrations of vapors and gases.

psi - Pounds per square inch (for MSDS purposes) is the pressure a material exerts on the walls of a confining vessel or enclosure. For technical accuracy, pressure must be expressed as psig (pounds per square inch gauge) or psia (pounds per square absolute; that is, gauge pressure plus sea level atmospheric pressure, or psig plus approximately 14.7 pounds per square inch).

RCRA - Resource Conservation and Recovery Act of 1976. (U.S.EPA)

Reactivity (chemical) - A substance's susceptibility to undergo a chemical reaction or change that may result in dangerous side effects, such as an explosion, burning, and corrosive or toxic emissions.

Respirable size particulates - Particulates in the size range that permits them to penetrate deep into the lungs upon inhalation.

Respirator (approved) - A device which has met the requirements of 30 CFR Part 11 and is designed to protect the wearer from inhalation of harmful atmospheres and has been approved by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA).

Respiratory system - Consists of (in descending order) - the nose, mouth, nasal passages, nasal pharynx, pharynx, larynx, trachea, bronchi, bronchioles, air sacs (alveoli) of the lungs, and muscles of respiration.

Route of entry - The path by which chemicals can enter the body. There are three main routes of entry: inhalation, ingestion, and skin absorption.

SARA - Superfund Amendments and Reauthorization Act of 1986. (U.S.EPA)

SCBA - Self-contained breathing apparatus.

Sensitizer - A substance which on first exposure causes little or no reaction but which on repeated exposure may cause a marked response not necessarily limited to the contact site. Skin sensitization is the most common form of sensitization in the industrial setting.

Short-term exposure limit (STEL) - ACGIH-recommended exposure limit. Maximum concentration to which workers can be exposed for a short period of time (15 minutes) for only four times throughout the day with at least one hour between exposures.

"Skin" - A notation (sometimes used with PEL or TLV exposure data) which indicates that the stated substance may be absorbed by the skin, mucous membranes, and eyes -- either airborne or by direct contact -- and that this additional exposure must be considered part of the total exposure to avoid exceeding the PEL or TLV for that substance.

Solubility in water - A term expressing the percentage of a material (by weight) that will dissolve in water at ambient temperature. Solubility information can be useful in determining spill cleanup methods and re-extinguishing agents and methods for a material.

Solvent - A substance, usually a liquid, in which other substances are dissolved. The most common solvent is water.

Sorbent - (1) A material that a removes toxic gases and vapors from air inhaled through a canister or cartridge. (2) Material used to collect gases and vapors during air-sampling.

Specific gravity - The ratio of the mass of a unit volume of a substance to the mass of the same volume of a standard substance at a standard temperature. Water at 4ºC (39.2ºF) is the standard usually referred to for liquids; for gases, dry air (at the same temperature and pressure as the gas) is often taken as the standard substance. See Density.

Stability - An expression of the ability of a material to remain unchanged. For MSDS purposes, a material is stable if it remains in the same form under expected and reasonable conditions of storage or use. Conditions which may cause instability (dangerous change) are stated. Examples are temperatures above 150ºF, shock from dropping.

Synergism - Cooperative action of substances whose total effect is greater than the sum of their separate effects.

Systemic - Spread throughout the body, affecting all body systems and organs, not localized in one spot or area.

Threshold - The lowest dose or exposure to a chemical at which a specific effect is observed.

Time-weighted average concentration (TWA) - Refers to concentrations of airborne toxic materials which have been weighted for a certain time duration, usually 8 hours.

TLV. Threshold Limit Value - A time-weighted average concentration under which most people can work consistently for 8 hours a day, day after day, with no harmful effects. A table of these values and accompanying precautions is published annually by the American Conference of Governmental Industrial Hygienists.

Toxicity - A relative property of a chemical agent and refers to a harmful effect on some biologic mechanism and the conditions under which this effect occurs.

Upper explosive limit (UEL) - The highest concentration (expressed in percent vapor or gas in the air by volume) of a substance that will burn or explode when an ignition source is present.

USDA – U.S. Department of Agriculture.

Vapor – The gaseous form of a solid or liquid substance as it evaporates.

Vapor Density – The weight of a vapor or gas compared to the weight of an equal volume of air is an expression of the density of the vapor or gas. Materials lighter than air have vapor densities less than 1.0, and will rise. Materials heavier than air have a vapor density of more than 1.0, and will concentrate in low places.

Vapor Pressure – The pressure exerted by a saturated vapor above its own liquid in a closed container.

Vermiculite – An expanded mica (hydrated magnesium-aluminum-iron-silicate) used as sorbent for spill control and clean-up.

Vertigo – A feeling of revolving in space; dizziness, giddiness.

Viscosity – Resistance to flow exhibited by a fluid.

Volatility – A measure of how quickly a substance forms a vapor at ordinary temperatures.

Water Disposal Methods – Proper disposal methods for contaminated material, recovered liquids or solids, and their containers.

Water-Reactive – A chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

Work Area – A room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

Workplace – An establishment at one geographical location containing one or more work areas.

Zinc Fume Fever – A condition brought on by inhalation of zinc oxide fume characterized by flulike symptoms with a metallic taste in the mouth, coughing, weakness, fatigue, muscular pain, and nausea, followed by fever and chills. The onset of symptoms occurs four to twelve hours after exposure.

Respiratory Protection Program

Purpose
The primary objective of this site specific requirement is to protect employees from inhalation and ingestion of harmful levels of air contaminants.

Policy
Employees shall not be exposed to air contaminants which exceed the limits detailed in OSHA Regulation CFR 1910.1000. When there is a probability of exposure to air contaminants exceeding these limits, proper respiratory protection shall be required.

Scope
This policy applies to all employees and field personnel in the performance of their jobs with RL Baxter.

Procedures for Selecting Respiratory Protection

1. Determination of Need for Respiratory Protection

a) The Project Superintendent of any operation involving the release, or possible release, of airborne contaminants such as dusts, gases, fumes, mists, etc. shall contact the Job Superintendent or management for advice on precautions to be taken.

b) The Job Superintendent shall evaluate the hazard and determine if exposure to contaminants can be eliminated by environmental or engineering controls. Example: Substitution of a less hazardous procedure or material, use of general and local ventilation, enclosing or isolating the operation(s), or employee rotation.

c) When effective engineering controls have reduced exposures to the lowest possible level and the air quality still exceeds a PEL (Permissible Exposure Limit), the job superintendent will make a decision on the need for respirators based on Safety Data Sheets, industrial hygiene monitoring, medical experience, or other pertinent information.

2. Operations Requiring Respiratory Protection

a) All subcontractor and RL Baxter employees performing jobs which are designated mandatory respirator jobs shall be informed of this requirement. This shall be done through:

- Specifying the correct respirator in the Job Specifications report or other such written procedures for the Job and/or Project Safety meetings.

- Postings at the worksite or signs in the area where the job exists.

3. Selection and Procurement of Respirators

a) Respirators shall be selected according to the hazard(s) to which workers are exposed, keeping in mind the physical and chemical properties of the air contaminant(s) and concentration(s) likely to be encountered.

b) Prior to donning a respirator, all onsite employees utilizing respirators are required to be medically evaluated and fit-tested. After successfully passing the medical examination and the fit-test, respirators are then authorized for use by assigned workers. Respirators for operations involving short-term use will be temporarily assigned to employees by their employer and returned upon completion of the task, where they will be cleaned and properly stored for future worker use. Replacement air purifying respirators will be issued when needed.

c) The respirators utilized by RL Baxter and employees are to be NIOSH-certified Air Purifying Respirators which remove particulate or gaseous contaminants by passing ambient air through the air-purifying filter, cartridge, or canister. Air purifying respirators shall not be used in atmospheres containing less than 19.5% oxygen by volume.

d) In cases where air purifying respirators are not utilized due to the presence of a hazardous atmosphere, contaminant hazards have not been identified, or employee exposure and protection needed has not been identified or reasonably estimated, the atmosphere shall be considered to be IDLH (Immediately Dangerous to Life and Heath). In these circumstances, a full facepiece pressure demand Self Containing Breathing Apparatus (SCBA) or a combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply will be utilized.

NOTE: Respiratory protection can be achieved through good work practices and the use of air purifying half-face or full-face respirators provided that respirator limitations are not exceeded. Use of a Self-Containing Breathing Apparatus or a Supplied Air Respirator typically does not apply to construction activities. In cases where the use of one of these respirators is required, the employee(s) who will be required to don the respirator will receive the necessary medical evaluation, fit-testing, and associated training prior to wearing the SCBA or SAR.

4. Respirator Approval

a) Only National Institute for Occupational Safety and Health (NIOSH) - and Mine Safety and Health Administration (MSHA)-approved (tested and certified) respirators shall be used. Respirators shall be used only for the substances for which they are designed.

5. Medical Approval

a) RL Baxter and employees will not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work while wearing a respirator. Persons who will be assigned to the mandatory use of respirators will have their medical history reviewed by a Medical Department before starting employment. The medical status of those required to use respirators shall be viewed periodically thereafter. Based on the overall health of the individual, a doctor shall determine if the employee is to be restricted from wearing respiratory protective equipment. If a restriction is applied, supervision is notified and this fact is indicated on the employee's medical records.

b) RL Baxter and employees required to wear any respirator will be required to fill out a medical questionnaire (see Appendix C to this Chapter) that will be sent to the physician after it is completed. The physician will review the questionnaire and determine whether a medical evaluation is needed. The employee will then be given an opportunity to discuss the questionnaire and the examination results with the physician.

c) RL Baxter and employees who voluntarily wear filtering facepieces (dust masks) and are not exposed to a PEL (Permissible Exposure Limit) will not be required to be medically evaluated. Employees who voluntarily wear any other type of respirator will be required to be medically evaluated.

6. Training

a) RL Baxter and employees required to use a respirator shall be trained at least annually by the respiratory protection program administrator for their respective office. Additional training will be provided when needed. This training shall be documented and shall include:

- Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effects of the respirator. (A copy of how to perform a positive and negative pressure check will be given to the employee.)
- What the limitations and capabilities of the respirator and the air purifying filters, cartridges, and canisters are.
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
- How to inspect, put on and remove, use, and check the seals of the respirator.

- What the procedures are for maintenance and storage of the respirator. (A copy of respirator cleaning procedures will be given to the employee.)

- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.

- Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations.

- Procedures to ensure adequate air quality.

- Instructions to employees who voluntary use filtering facepieces (dust masks) when not required to. (A copy of information pertaining to respirator use when not required will be given to the employee.) (See Appendix D to this Chapter.)

- Instructions from respirator manufacturer.

Fit Testing

1. Qualitative Fit Test

a) Prior to initial use of any tight-fitting respirator, each employee will be fit tested with the same make, model, style, and size of the respirator they will be using. Fit testing will be done annually or when changes in the employee's physical condition could affect respirator use. This is done to ensure that each employee is able to obtain a good facepiece-to-face seal. The fit test will be performed by the respiratory program administrator following protocol established under Appendix A. to 1910.134: Fit Testing Procedures. (See Appendix A to this Chapter.)

b) Documentation of fit tests performed will be maintained at RL Baxter's project site office. The records will contain information in accordance with the record-keeping requirements set forth in 1910.134(m)

2. Positive and Negative Pressure Tests

a) Respirator users shall be trained in how to perform positive and negative pressure tests and shall use them each time the respirator is donned as a means of quickly checking respirator fit. (See Appendix B-1 to this Chapter)

b) Positive Pressure Test: This test is performed by closing off the respirator exhalation valve using the palm of the hand and exhaling gently into the facepiece. The fit is considered satisfactory if slight positive pressure can be built up inside the facepiece without any evidence of outward leakage.

c) Negative Pressure Test: In this test, the user closes off the air inlet of the respirator by covering it so that it cannot pass air; inhales gently so that the facepiece collapses slightly; and holds breath for about 10 seconds. If the facepiece remains slightly collapsed and no inward leakage is detected, a suitable fit exists.

3. Inspecting, Cleaning, Storing, and Maintaining Respirators

a) Employees shall inspect their respirator each day it is used for proper function, including checking inhalation and exhalation valves, facepiece, and wear and condition of head straps. Rubber elastomer parts shall be inspected for pliability and signs of deterioration.

b) Filter, cartridge, or canister life shall not be exceeded. Gas and vapor cartridges shall be equipped with an ESLI (end of service life indicator) certified by NIOSH. When this type of cartridge is not available, they shall be replaced before the end of their service life. This will be determined by the superintendent on site.

c) Respirators permanently assigned shall be thoroughly cleaned with a sanitizing solution by the employee after each use. Respirators issued for temporary use will be cleaned when they are returned. Respirator cleaning procedures will follow the manufacturer's guidelines or the following protocol as per Appendix B-2 to 1910.134 will be utilized. (See Appendix B-2 to this Chapter.)

d) Clean respirators shall be stored either in a clean bag, a big coffee can, or in a clean storage cabinet. Respirators shall be stored properly to prevent deformation of the facepiece and exhalation valve. To prevent damage, respirators shall not be stored in toolboxes unless they are in carrying cases or cartons. Also protect respirators from dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals.

e) A selection of replacement parts, cartridges, and filters is available from your supervisor. Any repairs or replacement of parts shall be done in

accordance with the manufacturer's specifications and done by a trained person using NIOSH-approved parts designed for the respirator.

f) When repairs are made on respirators, NIOSH-approved repair parts shall be used which are designed for that specific respirator. Interchanging between different models will void the respirator's certification and may cause dangerous air leaks or equipment failure.

4. Program Evaluation

a) Random inspections shall be conducted regularly by the subcontractor supervisor to ensure that employee's respirators are properly selected, used, cleaned and maintained. Deficiencies will be noted and corrective measures taken. Failure to wear a respirator when required will result in disciplinary action as per RL Baxter's Disciplinary Program.

Appendix A

Fit Testing Procedures

Fit Testing Procedures
(Mandatory)
Appendix A to § 1910.134

Part I. OSHA-Accepted Fit Test Protocols

A. Fit Testing Procedures—General Requirements
The employer shall conduct fit testing using the following procedures. The requirements in this appendix apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

1. The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it shall be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.

3. The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

4. The test subject shall be instructed to hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.

5. The more acceptable facepieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in the following item A.6. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

(a) Position of the mask on the nose

(b) Room for eye protection

(c) Room to talk

(d) Position of mask on face and cheeks

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

(a) Chin properly placed;

(b) Adequate strap tension, not overly tightened;

(c) Fit across Nose Bridge;

(d) Respirator of proper size to span distance from nose to chin;

(e) Tendency of respirator to slip;

(f) Self-observation in mirror to evaluate fit and respirator position.

8. The test subject shall conduct a user seal check, either the negative and positive pressure seal checks described in Appendix B–1 of this section or those recommended by the respirator manufacturer which provide equivalent protection to the procedures in Appendix B–1. Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another facepiece shall be selected and re-tested if the test subject fails the user seal check tests.

9. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.

11. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be re-tested.

12. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

13. The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

14. Test Exercises.

(a) The following test exercises are to be performed for all fit testing methods prescribed in this appendix, except for the CNP method. A separate fit testing exercise regimen is contained in the CNP protocol. The test subject shall perform exercises, in the test environment, in the following manner:

(1) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.

(2) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.

(3) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.

(4) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

(5) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

Rainbow Passage
When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

(6) Grimace. The test subject shall grimace by smiling or frowning. (This applies only to QNFT testing; it is not performed for QLFT)

(7) Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as shroud type QNFT or QLFT units that do not permit bending over at the waist.

(8) Normal breathing. Same as exercise (1).

(b) Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test shall be repeated.

Bitrex™ (Denatonium Benzoate) Solution Aerosol Qualitative Fit Test Protocol

The Bitrex™ (Denatonium benzoate) solution aerosol QLFT protocol uses the published saccharin test protocol because that protocol is widely accepted. Bitrex is routinely used as a taste aversion agent in household liquids which children shall not be drinking and is endorsed by the American Medical Association, the National Safety Council, and the American Association of Poison Control Centers. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) Taste Threshold Screening. The Bitrex taste threshold screening, performed without wearing a respirator, is intended to determine whether the individual being tested can detect the taste of Bitrex.

(1) During threshold screening as well as during fit testing, subjects shall wear an enclosure about the head and shallers that is approximately 12 inches (30.5 cm) in diameter by 14 inches (35.6 cm) tall. The front portion of the enclosure shall be clear from the respirator and allow free movement of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts #14 and #15 combined, is adequate.

(2) The test enclosure shall have a ¾ inch (1.9 cm) hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

(3) The test subject shall don the test enclosure. Throughout the threshold screening test, the test subject shall breathe through his or her slightly open mouth with tongue extended. The subject is instructed to report when he/she detects a bitter taste.

(4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the Threshold Check Solution into the enclosure. This Nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

(5) The Threshold Check Solution is prepared by adding 13.5 milligrams of Bitrex to 100 ml of 5% salt (NaCl) solution in distilled water.

(6) To produce the aerosol, the nebulizer bulb is firmly squeezed so that the bulb collapses completely, and is then released and allowed to fully expand.

(7) An initial ten squeezes are repeated rapidly and then the test subject is asked whether the Bitrex can be tasted. If the test subject reports tasting the bitter taste during the ten squeezes, the screening test is completed. The taste threshold is noted as ten regardless of the number of squeezes actually completed.

(8) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the second ten squeezes, the screening test is completed. The taste threshold is noted as twenty regardless of the number of squeezes actually completed.

(9) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the third set of ten squeezes, the screening test is completed. The taste threshold is noted as thirty regardless of the number of squeezes actually completed.

(10) The test conductor will take note of the number of squeezes required to solicit a taste response.

(11) If the Bitrex is not tasted after 30 squeezes (step 10), the test subject is unable to taste Bitrex and may not perform the Bitrex fit test.

(12) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

(13) Correct use of the nebulizer means that approximately 1 ml of liquid is used at a time in the nebulizer body.

(14) The nebulizer shall be thoroughly rinsed in water, shaken to dry, and refilled at least each morning and afternoon or at least every four hours.

(b) Bitrex Solution Aerosol Fit Test Procedure.

(1) The test subject may not eat, drink (except plain water), smoke, or chew gum for 15 minutes before the test.

(2) The fit test uses the same enclosure as that described in 4. (a) above.

(3) The test subject shall don the enclosure while wearing the respirator selected according to section I. A. of this appendix. The respirator shall be properly adjusted and equipped with any type particulate filter(s).

(4) A second DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

(5) The fit test solution is prepared by adding 337.5 mg of Bitrex to 200 ml of a 5% salt (NaCl) solution in warm water.

(6) As before, the test subject shall breathe through his or her slightly open mouth with tongue extended, and be instructed to report if he/she tastes the bitter taste of Bitrex.

(7) The nebulizer is inserted into the hole in the front of the enclosure and an initial concentration of the fit test solution is sprayed into the enclosure using the same number of squeezes (either 10, 20 or 30 squeezes) based on the number of squeezes required to elicit a taste response as noted during the screening test.

(8) After generating the aerosol, the test subject shall be instructed to perform the exercises in section I. A. 14. of this appendix.

(9) Every 30 seconds the aerosol concentration shall be replenished using one half the number of squeezes used initially (e.g., 5, 10 or 15).

(10) The test subject shall indicate to the test conductor if at any time during the fit test the taste of Bitrex is detected. If the test subject does not report tasting the Bitrex, the test is passed.

(11) If the taste of Bitrex is detected, the fit is deemed unsatisfactory and the test is failed. A different respirator shall be tried and the entire test procedure is repeated (taste threshold screening and fit testing).

Appendix B-1

User Seal Check Procedures

User Seal Check Procedures
(Mandatory)
Appendix B-1 to § 1910.134

The individual who uses a tight-fitting respirator is to perform a user seal check to ensure that an adequate seal is achieved each time the respirator is put on. Either the positive and negative pressure checks listed in this appendix, or the respirator manufacturer's recommended user seal check method shall be used. User seal checks are not substitutes for qualitative or quantitative fit tests.

I. Facepiece Positive and/or Negative Pressure Checks

A. Positive pressure check. Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

B. Negative pressure check. Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

II. Manufacturer's Recommended User Seal Check Procedures

The respirator manufacturer's recommended procedures for performing a user seal check may be used instead of the positive and/or negative pressure check procedures provided that the employer demonstrates that the manufacturer's procedures are equally effective.

Appendix B-2

Respirator Cleaning Procedures

Respirator Cleaning Procedures

Appendix B-2 to § 1910.134
(Mandatory)

These procedures are provided for employer use when cleaning respirators. They are general in nature, and the employer as an alternative may use the cleaning recommendations provided by the manufacturer of the respirators used by their employees, provided such procedures are as effective as those listed here in Appendix B–2. Equivalent effectiveness simply means that the procedures used shall accomplish the objectives set forth in Appendix B–2, i.e., shall ensure that the respirator is properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user.

I. Procedures for Cleaning Respirators

A. Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.

B. Wash components in warm (43° C [110° F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.

C. Rinse components thoroughly in clean, warm (43° C [110° F] maximum), preferably running water. Drain.

D. When the cleaner used does not contain a disinfecting agent, respirator components shall be immersed for two minutes in one of the following:

1. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one tablespoon of laundry bleach to one gallon of water at 43° C (110° F); or,
2. Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6–8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43° C (110° F); or,
3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.

E. Rinse components thoroughly in clean, warm (43° C [110° F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.

F. Components shall be hand-dried with a clean lint-free cloth or air-dried.

G. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.

H. Test the respirator to ensure that all components work properly.

Appendix C

OSHA Respirator Medical Evaluation Questionnaire

OSHA Respirator Medical Evaluation Questionnaire

(Mandatory)
Appendix C to § 1910.134

To the employer: Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

To the employee: Can you read (circle one): Yes/No

Your employer shall allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor shall not look at or review your answers, and your employer shall tell you how to deliver or send this questionnaire to the health care professional who will review it.

Part A. Section 1. (Mandatory) The following information shall be provided by every employee who has been selected to use any type of respirator (please print).

Company _____
1. Your name: _____ 2. Today's date: _____
3. Your age (to nearest year): ___ 4. Sex (circle one): Male/Female
5. Your height: ___ ft. ___ in. 6. Your weight: ____ lbs.
7. Your job title: _____
8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code): _____
9. The best time to phone you at this number: _____
10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): Yes/No
11. Check the type of respirator you will use (you can check more than one category):
    a. __ N, R, or P disposable respirator (filter-mask, non-cartridge type only)
    b. __ Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus)
12. Have you worn a respirator (circle one): Yes/No
    If ''yes,'' what type(s): _____

Part A. Section 2. (Mandatory) Questions 1 through 9 below shall be answered by every employee who has been selected to use any type of respirator (please circle ''yes'' or ''no'').

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month: Yes/No
2. Have you ever had any of the following conditions?
    a. Seizures (fits): Yes/No
    b. Diabetes (sugar disease): Yes/No
    c. Allergic reactions that interfere with your breathing: Yes/No
    d. Claustrophobia (fear of closed-in places): Yes/No
    e. Trouble smelling odors: Yes/No
3. Have you ever had any of the following pulmonary or lung problems?
    a. Asbestosis: Yes/No
    b. Asthma: Yes/No
    c. Chronic bronchitis: Yes/No
    d. Emphysema: Yes/No
    e. Pneumonia: Yes/No
    f. Tuberculosis: Yes/No

g. Silicosis: Yes/No
h. Pneumothorax (collapsed lung): Yes/No
i. Lung cancer: Yes/No
j. Broken ribs: Yes/No
k. Any chest injuries or surgeries: Yes/No
l. Any other lung problem that you've been told about: Yes/No

4. Do you currently have any of the following symptoms of pulmonary or lung illness?
a. Shortness of breath: Yes/No
b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline: Yes/No
c. Shortness of breath when walking with other people at an ordinary pace on level ground: Yes/No
d. Have to stop for breath when walking at your own pace on level ground: Yes/No
e. Shortness of breath when washing or dressing yourself: Yes/No
f. Shortness of breath that interferes with your job: Yes/No
g. Coughing that produces phlegm (thick sputum): Yes/No
h. Coughing that wakes you early in the morning: Yes/No
i. Coughing that occurs mostly when you are lying down: Yes/No
j. Coughing up blood in the last month: Yes/No
k. Wheezing: Yes/No
l. Wheezing that interferes with your job: Yes/No
m. Chest pain when you breathe deeply: Yes/No
n. Any other symptoms that you think may be related to lung problems: Yes/No

5. Have you ever had any of the following cardiovascular or heart problems?
a. Heart attack: Yes/No
b. Stroke: Yes/No
c. Angina: Yes/No
d. Heart failure: Yes/No
e. Swelling in your legs or feet (not caused by walking): Yes/No
f. Heart arrhythmia (heart beating irregularly): Yes/No
g. High blood pressure: Yes/No
h. Any other heart problem that you've been told about: Yes/No

6. Have you ever had any of the following cardiovascular or heart symptoms?
a. Frequent pain or tightness in your chest: Yes/No
b. Pain or tightness in your chest during physical activity: Yes/No
c. Pain or tightness in your chest that interferes with your job: Yes/No
d. In the past two years, have you noticed your heart skipping or missing a beat: Yes/No
e. Heartburn or indigestion that is not related to eating: Yes/No
f. Any other symptoms that you think may be related to heart or circulation problems: Yes/No

7. Do you currently take medication for any of the following problems?
a. Breathing or lung problems: Yes/No
b. Heart trouble: Yes/No
c. Blood pressure: Yes/No
d. Seizures (fits): Yes/No

8. If you've used a respirator, have you ever had any of the following problems? (If you've never used a respirator, check the following space and go to question 9:) ___
a. Eye irritation: Yes/No
b. Skin allergies or rashes: Yes/No
c. Anxiety: Yes/No
d. General weakness or fatigue: Yes/No
e. Any other problem that interferes with your use of a respirator: Yes/No

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: Yes/No

Questions 10 to 15 below shall be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently): Yes/No
11. Do you currently have any of the following vision problems?
    a. Wear contact lenses: Yes/No
    b. Wear glasses: Yes/No
    c. Color blind: Yes/No
    d. Any other eye or vision problem: Yes/No
12. Have you ever had an injury to your ears, including a broken ear drum: Yes/No
13. Do you currently have any of the following hearing problems?
    a. Difficulty hearing: Yes/No
    b. Wear a hearing aid: Yes/No
    c. Any other hearing or ear problem: Yes/No
14. Have you ever had a back injury: Yes/No
15. Do you currently have any of the following musculoskeletal problems?
    a. Weakness in any of your arms, hands, legs, or feet: Yes/No
    b. Back pain: Yes/No
    c. Difficulty fully moving your arms and legs: Yes/No
    d. Pain or stiffness when you lean forward or backward at the waist: Yes/No
    e. Difficulty fully moving your head up or down: Yes/No
    f. Difficulty fully moving your head side to side: Yes/No
    g. Difficulty bending at your knees: Yes/No
    h. Difficulty squatting to the ground: Yes/No
    i. Climbing a flight of stairs or a ladder carrying more than 25 lbs: Yes/No
    j. Any other muscle or skeletal problem that interferes with using a respirator: Yes/No

Part B Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: Yes/No
    If ''yes,'' do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: Yes/No
2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals: Yes/No
    If ''yes,'' name the chemicals if you know them: _____

3. Have you ever worked with any of the materials, or under any of the conditions, listed below?
    a. Asbestos: Yes/No
    b. Silica (e.g., in sandblasting): Yes/No
    c. Tungsten/cobalt (e.g., grinding or welding this material): Yes/No
    d. Beryllium: Yes/No
    e. Aluminum: Yes/No
    f. Coal (for example, mining): Yes/No
    g. Iron: Yes/No

h. Tin: Yes/No
i. Dusty environments: Yes/No
j. Any other hazardous exposures: Yes/No
If ''yes,'' describe these exposures: _____

4. List any second jobs or side businesses you have: _____
5. List your previous occupations: _____
6. List your current and previous hobbies: _____
7. Have you been in the military services? Yes/No
If ''yes,'' were you exposed to biological or chemical agents (either in training or combat): Yes/No
8. Have you ever worked on a HAZMAT team? Yes/No
9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications): Yes/No
If ''yes,'' name the medications if you know them: _____
10. Will you be using any of the following items with your respirator(s)?
a. HEPA Filters: Yes/No
b. Canisters (for example, gas masks): Yes/No
c. Cartridges: Yes/No
11. How often are you expected to use the respirator(s) (circle ''yes'' or ''no'' for all answers that apply to you)?
a. Escape only (no rescue): Yes/No
b. Emergency rescue only: Yes/No
c. Less than 5 hours per week: Yes/No
d. Less than 2 hours per day: Yes/No
e. 2 to 4 hours per day: Yes/No
f. Over 4 hours per day: Yes/No
12. During the period you are using the respirator(s), is your work effort:
a. Light (less than 200 kcal per hour): Yes/No
If ''yes,'' how long does this period last during the average shift: ___hrs. ___ mins.
Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1–3 lbs.) or controlling machines.
b. Moderate (200 to 350 kcal per hour): Yes/No
If ''yes,'' how long does this period last during the average shift: ___ hrs. ___ mins.
Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.
c. Heavy (above 350 kcal per hour): Yes/No
If ''yes,'' how long does this period last during the average shift: ___ hrs. ___ mins.
Examples of heavy work are lifting a heavy load (about 50 lbs.) from the floor to your waist or smaller; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.).
13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator: Yes/No
If ''yes,'' describe this protective clothing and/or equipment: _____
_____
14. Will you be working under hot conditions (temperature exceeding 77° F): Yes/No
15. Will you be working under humid conditions: Yes/No
16. Describe the work you'll be doing while you're using your respirator(s): _____
_____

17. Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases): _____
_____
18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):
Name of the first toxic substance: _____
Estimated maximum exposure level per shift: _____
Duration of exposure per shift: _____
Name of the second toxic substance: _____
Estimated maximum exposure level per shift: _____
Duration of exposure per shift: _____
Name of the third toxic substance: _____
Estimated maximum exposure level per shift: _____
Duration of exposure per shift: _____
The name of any other toxic substances that you'll be exposed to while using your respirator:
_____
19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security): _____
_____

Appendix D

Information for Employees Using Respirators
When Not required Under the Standard

Information for Employees Using Respirators When Not required Under the Standard

Appendix D to § 1910.134
(Non-Mandatory)

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, of if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard. You shall do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.

2. Choose respirators certified for use to protect against the contaminant of concern.
NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification shall appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Lockout Tagout Program

Introduction

This site specific lockout/tagout plan establishes the requirements and procedures for isolating potentially hazardous energy during installation, service, or maintenance of machines and equipment in which the unexpected startup or the release of stored energy could cause injury to employees. These machines will be tagged or locked out before any employee performs any service or maintenance if unexpected startup or release of stored energy could cause injury.

Responsibility

The jobsite superintendent will have overall responsibility for the lockout-tagout program, and is in charge of the lockout-tagout procedure including helping other employees locate, lock and tag valves, switches, etc.

Training

Each employee who will be involved in lockout-tagout shall be given training by the designated jobsite superintendent before performing work on any mechanical, electrical, pressurized, etc. system.

Preparation for Lockout-Tagout

The jobsite superintendent shall conduct a survey to locate and identify all energy isolating devices. They shall be certain switches, valves, or other isolating devices designed to apply to the equipment. The lockout-tagout procedure involves, but is not limited to, electricity, motors, steam, natural gas, compressed air, hydraulic systems, digesters, sewers, etc.

Lockout Tagout Restrictions

1. The isolating devices locked and tagged shall include all of the devices which control energy, shall be singularly identified, and shall not be used for any other purpose.

2. Locks, hasps, and tags shall be able to withstand any kind of adverse environment in which they may be used. Tags which are to be located in adverse conditions shall not deteriorate to a point where they become illegible.

3. Lockout requirements are not met by the removal of fuses.

4. Locks and tags are not to be removed by any person other than the individual who applies the lock.

5. No employee shall rely on another employee's lock or tag.

Procedures of Lockout-Tagout System

1. The lockout tag is to be completed before any work is performed. The tag shall consist of the following information:

    a) Date and time lock was installed.
    b) Name of employee who applied the lock and tag.
    c) Name of employee's employer.
    d) Phone number.
    e) Review and compare visual identification data with the specific written procedures for the equipment and machinery.
    f) **More than one energy source may be involved.**

2. Notify all affected employees that a lockout-tagout system is going to be used and the reason for it. The authorized employee shall know the type and magnitude of energy connected to the machine or equipment and understands the hazards.

3. If the machine or equipment is operating, shut it down by normal stopping procedure.

4. Operate all switches, valves, or other energy isolating devices so that the equipment is totally isolated from its energy sources. Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) shall be dissipated or restrained by methods such as repositioning, blocking, bleeding, disconnecting, etc.

5. Place a lock on each energy isolating device. Only authorized employees may attach the locks. The locks shall hold the energy isolating devices in a "safe" or "off" position. Attach "Danger Do Not Operate" tags to each lock. On the tag write the name of the employee, employer, date and time of attachment, and phone number.

6. If more than one individual is required to lockout and tag the equipment, each person shall place a separate lock or tag on each energy isolating device. When an energy isolating device cannot accept multiple locks or tags, a multiple lock hasp shall be used. Individual locks are removed as each person no longer needs to maintain lockout protection.

7. ***No employee May Remove The Lock.***

8. After verifying that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate.

9. The system is now properly locked out. CAUTION: Return operating control(s) to "neutral" or "off" position after the test.

10. Implement a tagout system if a lock cannot be utilized. The tag is to be attached so it will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited. Employees are to be trained in the following limitations of the tagout system:

    a) Tags are warning devices and do not provide the physical restraint a lock does.
    b) Tags are not to be removed without authorization of the authorized person responsible for them.
    c) Tags shall be legible, understandable and made of a material which will withstand the environmental conditions.
    d) Tags are to be securely attached so that they cannot be inadvertently or accidentally detached during use.

11. Where a tag cannot be attached directly to the energy isolating device, the tag is to be located as close as safely possible to the device in a position immediately obvious to anyone attempting to operate the device.

Sequence for Restoring Machines to Normal Operation

1. When working on equipment that requires "inching" or "jogging" to move parts for adjustment or maintenance, special attention at the energy source shall be continued until work is completed. Special attention involves an employee stationed at the primary disconnect switch (the energy source) during "inching" and "jogging." In the event the secondary switch shall fail, he would switch the primary disconnect off.

2. After servicing and/or maintenance is complete and equipment is ready for normal operation, check the areas around the machines or equipment to ensure that no one is exposed.

3. After checking that all tools have been removed from the machines or equipment, guards have been reinstalled and employees are in the clear, notify the designated lockout/tagout coordinator before the removal of the tag and lock.

4. After authorization is given, remove all locks and tags. Operate the energy isolating devices to restore energy to the machine or equipment.

If An Employee forgets To Remove a Lock or Tag

No employee may remove the tag or lock of another employee. The only exception to this is if an employee has forgotten to remove the lock and is not available to do so. The designated lockout-tagout coordinator is the only person who may remove a lock or tag and then only after he/she verifies that:

1. It is safe to restore the energy to the machine or equipment,

2. The authorized employee who applied the device is not at the facility,

3. All reasonable efforts are made to contact the authorized employee, and

4. The authorized employee knows his or her lock and tag was removed before he or she resumes work at the facility.

Definitions

Affected Employee: An employee whose job requires operation or normal use of a machine or piece of equipment which may be locked out, or one whose job requires work in an area where a machine or piece of equipment is locked out.

Authorized and Designated Lockout-Tagout Coordinator: A person authorized and designated by the project manager or project superintendent for contacting the owner's representative to identify all systems to be locked-tagged out, and then assist other authorized employees to locate and lockout-tagout valves, switches, etc.

Authorized Employee: A person who locks out and tags, or tags out a machine or piece of equipment in order to perform service or maintenance on that piece of equipment. An authorized employee and an affected employee may be the same person when the affected employee's duties also include performing maintenance or service on a machine which shall be locked out.

Capable of Being Locked Out: An energy isolating device is capable of being locked out:

- If it can be held in the off or safe position by placing a lock, hasp, or similar part into it,
- If it has a built-in lock which holds the device in the off or safe position, and/or
- If a lock can be placed to hold the device in the "off" or "safe" position without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Energy Isolating Device: A mechanical device that physically prevents the transmission or release of energy, such as valves, manually operated electrical switch boxes, disconnect switches, blocks, and any similar device used to block or isolate energy. The term does not include push button, selector switch, and other devices.

Energy Source: Any electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Lockout: The placement of a lock and tag on an energy isolating device, in accordance with established procedure, so the energy isolating device and the equipment being controlled cannot be operated until the lock is removed.

Service and/or Maintenance: Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, maintaining, and servicing machines or equipment. These activities include lubrication, cleaning, unjamming, adjustments or tool changes, where the employee may be exposed to unexpected energizing, start up, or a release of hazardous energy.

Tag: A prominent warning device which can be securely fastened to any energy isolating device to indicate that the energy isolating device and the equipment being controlled may not be operated until the tag is removed. The tag shall include the name of the employer, name of employee, and date of attachment.

Hot Work

PURPOSE

To establish project specific requirements for safe welding, cutting, soldering, heating, etc.

RESPONSIBILITIES

The project superintendent is responsible for all aspects of the hot work program. The superintendent shall review the Hot Work requirements with subcontractors prior to performing any "HOT WORK" operation. Under all circumstances, a "HOT WORK" permit shall be issued prior to the start of work.

PROCEDURE

1) **General**

   a) All combustible materials shall be removed or protected by a welding blanket from the place where the flame or arc is to be:

      i) 15 feet horizontally

      ii) 45 feet below

      iii) 10 feet above

   b) No arc or flame operation is permitted in an area where painting is being done or where combustible dusts or flammable liquids are present.

   c) A fire watch with proper extinguishers shall be posted during all flame or electric arc work and for 30 minutes after such work. A fire watch shall also be posted for 25 minutes after use of temporary heaters.

   d) Mechanical ventilation and/or properly assessed respirators shall be provided when welding, cutting or heating:

      i) Hazardous materials such as stainless steel, cyanides, zinc, cadmium, heavy metals, etc.

      ii) In confined spaces.

2) **Oxy-acetylene torches**

   a) Fuel gas and oxygen hoses shall be easily distinguishable and connections cannot be interchangeable.

   b) All connections shall be clean and free of grease or oil.

   c) Flash Arrestors shall be installed at the mixing tube of all torches.

   d) Hoses shall not be laid across traffic areas.

e) All gas cylinders shall be secured in an upright position. When in storage the protective cap shall be on the cylinder.

3) **Propane torches**

a) Hoses shall not be laid across traffic areas.

b) All gas cylinders shall be secured in an upright position. When in storage the protective cap shall be on the cylinders and the cylinders protected against mechanical damage. Propane cylinders shall not be stored indoors.

4) **Electric arc welders**

a) All arc welding shall be protected by non-combustible shields or curtains to prevent people from viewing the arc.

b) When electrode holders are left unattended, the electrodes shall be removed and the holders placed or protected so that they cannot make contact with each other, conductive objects or people.

c) All welding cable shall be insulated completely. Any splices or repairs shall have insulation with a resistance equal to or greater than the original insulation.

5) **Propane fired heaters**

a) The propane fuel tank shall be located at least 20 feet from the burner.

b) Hoses shall not be laid across traffic areas.

c) All gas cylinders shall be secured in an upright position. When in storage the protective cap shall be on the cylinders and the cylinders protected against mechanical damage. Propane cylinders shall not be stored indoors.

6) **Liquid fueled heaters**

a) All liquid fuels shall have a flashpoint of 100º F or more. Refer to the fuel Safety Data Sheet (SDS) for flash point information.

b) Refueling shall only be done after the heater has been off for 15 minutes or more and a funnel shall be used.

c) Fuel storage shall be located well away from any heat source and protected from mechanical damage.

Regulated Materials

Asbestos/Lead

RL Baxter will not make use of, make contact with, or work in an area containing state or federally regulated materials such as Asbestos and Lead. In the event non-surveyed Asbestos Containing Materials (ACM) and Lead surfaces are found in any work area, all work will stop immediately and the superintendent shall be notified. The superintendent shall notify RL Baxter safety officer for confirmation and/or inspection of the area.

Work will resume only after RL Baxter is notified in writing that the suspect material has been declared safe or, if the suspect material is found to be hazardous, the material has been removed and the area confirmed through the monitoring third party to be safe for entry and the resumption of work.

DESCRIPTION/SCOPE OF WORK

Subcontractor's abatement work covered by the scope specifications shall consist of furnishing all labor, materials, tools, and equipment necessary to ensure the subcontractor controls and mitigates potential lead-based paint (LBP) hazards with workers during demolition/renovation activities.

The following is the identified Lead-based Paint(s) and/or Lead-containing Material(s), above the EPA action level of 1.0 mg/sq. cm., within the above-referenced locations: TBD by site specific plan.

The designated subcontractor shall implement the following, as required by specific work-related tasks and disturbance(s) of above-referenced Lead-based Paint(s) and/or Lead-containing Material(s), above the EPA action level of 1.0 mg/sq. cm:

1) Personnel air monitoring and analysis.
2) Waste characterization and classification.
3) Transportation/disposal off-site of LBP wastes/debris and lead-contaminated waste/debris generated from LBP disturbance(s).

B. Manual demolition, scraping and manual sanding of lead-based paint surfaces and power tool cleaning with dust collection systems by the subcontractor shall be performed in conjunction with engineering and work practice controls meeting the requirements of 29 CFR 1926.62(e)(1).

C. Components with lead-based paint shall be removed intact to the extent practicable. A 6-mil polyethylene drop cloth shall be placed on either side of the component, prior to its removal, to catch any paint chips that may become dislodged. The component shall be wrapped in a layer of 6-mil polyethylene for movement to the disposal container. Follow proper disposal requirements. The area around the component removal shall be wet wiped and HEPA vacuumed, including the tent enclosure. The polyethylene sheeting shall be carefully folded in on itself and placed in a 6-mil disposal bag. Containment debris shall be properly disposed of as lead-based waste.

D. Chemical stripping shall be used for LBP removal on surfaces that will be subjected to welding, cutting or torch burning. No chemical strippers containing methylene chloride shall be used by the subcontractor on this project. Abrasive blasting, heat stripping, uncontained hydro-

blasting, welding, cutting or torch burning shall not be performed on surfaces where LBP is present. Abrasive blasting, heat stripping, uncontained hydro-blasting, welding, cutting or torch burning shall only be performed on bare metal substrate.

E. Subcontractor may submit exposure assessment data obtained within the last twelve (12) months from previous jobs conducted under similar conditions, control methods, work practices and environmental conditions to be used in this contract. Other objective data may be used to demonstrate that work activities in this contract will not result in occupational exposures to airborne lead that exceeds the PEL. The assessment shall include comparable lead concentrations in coating materials, work practices, engineering controls and rates of work.

F. Until the exposure assessment is performed, the subcontractor shall provide to his workers the following: Respiratory protection with a minimum protection factor of 10, personal protective clothing, lead-free change areas, hand washing/shower facilities, biological monitoring and training per 29 CFR 1926.62.

G. This Guideline shall be for the use of the subcontractor who contracted to complete all demolition/renovation activities as detailed in project specifications. The intent is to maintain conformance with 29 CFR 1926.62 and to maintain an airborne concentration of lead-dust below the action level. This plan outlines the worst case scenario in regard to lead safe work practices. However, the work procedures section is written in a manner, which outlines the requirements that shall be necessary, at a minimum, to maintain an airborne concentration of lead dust below the action level.

H. The subcontractor shall ensure that any HVAC equipment intakes within and around the work areas are protected by shutting down the units and/or installing HEPA filters over the intake.
The subcontractor shall coordinate rebalancing of the HVAC equipment prior to installing the HEPA filters. The Contractor shall alter the size and extent of the isolation barriers as necessary due to weather conditions, functional space use and density of building occupants in the vicinity, as required.

Training

Training certification shall be provided prior to the start of work involving LBP abatement, for all of the Contractors' workers, supervisors and Competent Person. Training shall meet the requirements of 29 CFR Part 1926.62, 29 CFR Part 1926.59, 29 CFR Part 1910.1200, 29 CFR Part 1910.120 and 49 CFR 172, and that required by EPA or the state LBP course for the work to be performed. Training shall be provided prior to the time of job assignment and, at least, annually. The project specific training shall, at a minimum, include the following.

1. Specific nature of the operation which could result in exposure to lead.
2. Purpose, proper selection, fitting, use and limitations of respirators.
3. Purpose and description of the medical surveillance program and the medical removal protection program, including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for employees who are pregnant.)
4. Relevant engineering controls and good work practices.
5. The contents of any compliance plan in effect.
6. Instructions to employees that chelating agents shall not routinely be used to remove lead from their bodies and shall not be used at all except under the direction of a licensed physician.
7. The employee's right of access to records under 29 CFR Part 1910.20.

Lead Exposure Limits

OSHA has established maximum limits of exposure to lead for all workers covered, including a permissible exposure limit and action level.

Permissible Exposure Limit (PEL):

The PEL sets a maximum worker exposure to lead. No employee may be exposed to lead in airborne concentrations greater than 50 ug/m3 averaged over an eight-hour period.

Action level:

An action level is the level at which an employer shall begin certain compliance activities outlined in the standard. The action level, regardless of respirator use, for the lead in construction standard is an airborne concentration of 30 ug/m3 calculated as an eight-hour TWA.

The only way to determine airborne concentrations of lead is to perform air monitoring. RL Baxter's policy requires employees involved in the lead assessment to have blood work done to determine their baseline lead and ZPP levels. This shall be done prior to the assessment. When the exposure assessment is conducted, interim personal protective equipment shall be provided based on the operation performed during the assessment.
In some circumstances, potential lead hazards may be abated by a specialty contractor experienced in this area.

Under no circumstances shall non-related lead work be performed by subcontractors in areas that have not been identified as "Lead Free".

Vehicle Safety

Purpose

Establish and implement companywide requirements for vehicle use on all RL Baxter projects to ensure public, staff and worker safety during construction.

Responsibilities

1. Superintendent will manage and oversee compliance of vehicle safety.

2. All drivers shall comply with the New York State vehicle and traffic law.

3. Public shall be provided sidewalks and marked cross-walks where required which shall be consistently monitored and maintained to ensure safe passage in close proximity to daily construction activities.

4. Superintendent is to complete accident reports and corrective action reports for all accidents/incidents occurring on worksite property and/or involving an employee while he/she is working.

Procedure

1. All workers operating motorized equipment shall have a valid state driver's license to operate. All subcontracted workers operating said equipment are required to report to their employer if their license is suspended or revoked. RL Baxter employees are required to report to the site superintendent if they are unable to operate due to suspension/revocations.

2. Seat belts shall be used at all times by all drivers and passengers. Passengers may not ride except in proper seats with seat belts.

3. All traffic regulations shall be observed at all times including customer rules and flagmen directions.

4. All transported loads shall be properly secured at all times and for all trips of any length. All doors shall be closed and latched before a vehicle is moved.

5. Driving while using prescription drugs that may impair ability is not permitted.

6. Evidence of illegal drugs or alcohol may cause dismissal whether the employee is driving or not.

7. All vehicles shall be inspected daily by the driver for:

a. Proper operation of the vehicle lights,

b. Proper operation of windshield wipers and washers,

c. Condition of the tires,

d. Proper operation of the brakes, and

e. General appearance

8. No vehicle is to be operated in reverse until the driver has made certain that no people or obstructions are in the path of travel. The driver shall look in the direction of travel and sound the horn or other sound producing alarm while operating in reverse.

9. All accidents are to be reported the Main Office in accordance with the safety policy.

Powered Industrial Truck Operation

Purpose: To ensure equipment operators have the knowledge, skills and certifications necessary to operate a powered industrial trucks.

Definition*:* Powered Industrial Truck- A mobile, power-driven vehicle used to carry, Push, pull, lift, stack and tier material.

Classes of Powered Industrial Trucks

Class 1 - Electric motor, sit-down rider, counterbalanced trucks (solid, pneumatic tires).
Class 2 - Electric motor, narrow aisle trucks (solid tires).
Class 3 - Electric motor hand trucks or hand/rider trucks (solid tires).
Class 4 - Internal combustion engine trucks (solid tires).
Class 5 - Internal combustion engine trucks (pneumatic tires).
Class 6 - Electric and internal combustion engine tractors (solid, pneumatic tires)
Class 7 - Rough terrain forklift trucks (pneumatic tires). Construction site use

As of December 1, 1999, operators of power industrial trucks shall be certified by their employer that they have successfully completed training in the use of the equipment being utilized. Training shall consist of a combination of formal instruction (lecture, discussion, interactive learning, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace. All training has been conducted by person(s) who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

Training Program Content

Powered industrial truck operators shall have received initial training in the following topics unless they are not applicable to the safe operation of the truck in the workplace.

Truck Related Training shall have consisted of:

1) Differences between a powered industrial truck and an automobile.
2) Operating instructions, warnings, and precautions for the type of truck the operator will operate.
3) Truck controls and instrumentation: where they are located, what they do, and how they work.
4) Engine and motor operation.
5) Steering and maneuvering
6) Visibility, including restrictions due to loading.
7) Fork and attachment adaptation, operation, and use limitations.
8) Vehicle capacity and stability
9) Vehicle inspections and maintenance that shall be performed by the operator.
10) Refueling and/or charging and recharging of batteries.

11) Operating limitations.

12) Operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.

Workplace topics to be covered during training:

1) Surface conditions where the vehicle will be operated.
2) Composition of loads to be carried and load stability.
3) Load manipulation, stacking, and unstacking.
4) Pedestrian traffic in areas where the vehicle will be operated.
5) Narrow aisles and other restricted places where the vehicle will be operated.
6) Hazardous locations where the vehicle will be operated.
7) Ramps and other sloped surfaces that could affect the vehicle's stability.
8) Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.
9) Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.

Training Frequency

Training shall be provided prior to an employee operating a powered industrial truck and shall, at a minimum, be conducted at least every three years. Refresher training in relevant topics shall be provided to the operator when:

- The operator is observed to operate the vehicle in an unsafe manner.
- The operator has been involved in an accident or a near-miss incident.
- The operator has received an evaluation that reveals that the operator is not operating the powered industrial truck safely.
- The operator is assigned to drive a different type of powered industrial truck.
- A condition in the workplace changes in a manner that could affect the safe operation of the powered industrial truck.

NOTE: If an operator has previously received training, and such training is appropriate to the powered industrial truck and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the truck safely.

Certification

RL BAXTER shall certify that each operator has been trained and evaluated. The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training evaluation. A copy of the training material used to train RL Baxter employees shall be maintained at the main office.

Hearing Conservation

Purpose

To establish procedures and methods that will be utilized by all RL Baxter and employees who are exposed to noise levels that exceed the Time Weighted Average (TWA) of 85 decibels or more. Each subcontractor employer will be responsible for providing a written Hearing conservation Program and train his/her employees in the proper use of hearing protection equipment.

General

Exposure to high noise levels can cause hearing loss or impairment. There is no cure for noise-induced hearing loss, making prevention of excessive noise exposure the only way to avoid hearing damage. Earplugs shall be made available by each subcontractor employer for employees to use to help reduce exposure. Other forms of hearing protection, such as ear muffs, are to be made available if activities being performed require protection with a higher Noise Reduction Rate (NRR).

Control Methods

When employees are required to work with or near tools or equipment that produce sounds that exceed permissible exposure amounts, engineering controls and administrative controls shall be implemented first. If the use of the engineering and administrative controls fails to reduce the sound to permissible levels, then hearing protection equipment shall be used to reduce noise exposure to acceptable levels.

Hearing Protection

Manufacturers of hearing protection designate protection factors in terms of NRR, Noise Reduction Rate. The higher the NRR, the greater the level of protection. These values are based on the hearing protection fitting the user perfectly. Obviously, the hearing protection will not always provide a perfect fit for all users, so the NRR may be lower.

Consideration shall be taken for what type of work will be performed while wearing hearing protection. For instance, if work is being performed near vehicle traffic and hearing protection is being used, the wearer may not hear a warning signal from a piece of machinery. When conditions warrant hearing protection but the use of this protection creates an additional hazard, measures shall be taken to address this hazard.

Performing activities such as jackhammering, pile driving, and operating certain tools or equipment can expose an employee to higher decibel levels than are permitted over an eight-hour time period. If these activities are only performed for a short duration, the Time Weight Average (TWA) will not exceed permissible exposure limits but hearing protection use is encouraged provided its use does not create an additional hazard. A chart demonstrating limits for employee exposure to noise is provided at the end of the Hearing Conservation Program.

HEARING CONSERVATION PROGRAM

1. All RL Baxter and subcontracted employees exposed to an eight-hour time-weighted average of 85 decibels or greater shall be provided with and be required to wear hearing protection. Workers exposed to lower decibels are encouraged to utilize hearing protection if its use does not create additional hazards.

2. Hearing protection shall be available on project site for employee use by their respective employer. The superintendent shall ensure that hearing protection is being worn by all workers exposed to an eight-hour Time Weighted Average (TWA) of 85dB or greater.

3. All subcontracted employees shall be provided with training in the use and care of hearing protection equipment as well as their limitations by their employer.

4. Subcontracted employees who fail to wear hearing protection when its use is required will be disciplined as per RL Baxter's Disciplinary Program.

5. Employees who are required to regularly wear hearing protection to prevent an exposure to a TWA of 85dB or greater will be tested annually for hearing loss.

Training

All employees exposed to noise at or above an eight-hour TWA of 85 decibels shall have received a fitting training program provided by their employer. The training shall have covered the effects of noise on hearing and how through the use of hearing protection noise levels can be reduced. Additionally, the advantages and disadvantages of various types of hearing protection will be discussed as well as the use and care of often-used protectors.

Limits for Employee Exposure to Noise

Sound Level	Hours Of Exposure Per Day
83	21
85	16
87	12
90	8
92	6
95	4
97	3
100	2
102	1.5
105	1
110	0.5
115	0.25

Spill and Release Prevention

Purpose

Implement control measures for the prevention of spills and releases to the environment.

Responsibility

The project superintendent is responsible for controlling spills and releases. The Superintendent shall insure hazardous materials are stored properly on site.

Procedure

1. Superintendent shall maintain Safety Data Sheets for all materials brought to the project site. Subcontractors are responsible for maintaining up to date Safety Data Sheets for the products being used on-site. Subcontractors shall submit a copy of their Safety Data Sheets to RL Baxter for filing at the jobsite office trailer.

2. Develop a spill and release control plan if applicable that covers the hazardous materials on the project site, the storage requirements, the use methods, precautionary information, the appropriate regulations, the regulatory agency and the notification contact at the regulatory agency.

3. Only one day's supply of hazardous materials shall be stored on the project site.

4. All containers of liquids shall be labeled properly and in impervious secondary containment.

5. All hazardous material shall be stored away from sewers, drains, and pits. If hazardous material shall be located near sewers, drains, and pits, measures shall be planned and implemented to prevent the product from entering these areas in the event a spill occurs.

6. Secondary containment areas shall be inspected on a daily basis.

7. All hazardous waste materials shall be removed from the project site daily.

8. If a spill or release occurs, notify the main office and the appropriate authorities immediately.

Cleanup

1. Daily
Surfaces in the LBP control area shall be maintained free of accumulations of paint chips, LBP debris, blasting debris and dust. Spread of dust and debris shall be restricted; waste shall not be distributed over the work area. Dry sweep or compressed air shall not be used for cleanup. At the end of each shift, the area shall be cleaned of visible lead paint contamination by vacuuming with a HEPA filtered vacuum cleaner and wet wiping the area. LBP work procedures work shall cease during the cleanup.

1. At completion of all LBP work Procedure and a satisfactory visual inspection by the competent person, a clean-up shall be performed by the subcontractor. This clean-up includes removal of any contaminated material, equipment or debris including polyethylene sheeting from the work area. The polyethylene sheeting shall be sprayed or misted with water for dust control, construction debris removed and then the sheeting removed by folding it in upon itself.

    a) Lead-contaminated debris shall be containerized in accordance with paragraph 3.5.C.1, LBP Wastes and Lead-Contaminated Wastes. Waste bags shall not be overloaded, shall be securely sealed and stored in the designated area until disposal.

    b) Removal of surface polyethylene sheeting shall begin from top to bottom. Removal of floor polyethylene sheeting shall begin at the corners and folded in the middle to contain the dust. Polyethylene shall be disposed of properly.

    c) Cleaning Equipment. The Contractor shall decontaminate the lead abatement equipment and equipment used in the work area. The wastewater from cleaning shall be contained, sampled and disposed of properly.

Certification

The subcontractor shall certify in writing that the inside and outside the lead control area air monitoring samples are less than 30 micrograms per cubic meter of air, the respiratory protection for the employees was adequate, the work procedures were performed in accordance with 29 CFR Part 1926.62 and that there was no visible accumulations of lead based paint and dust on the worksite. There shall be no removal of warning signs at the lead control area or roped-off boundary signs prior to the clearance certification receipt... Re-clean areas showing dust, residual paint chips.

Disposal Procedures

1. Identify all waste materials that may need disposal or recycling during the job.

2. Determine the proper disposal/recycling method for all of these materials. If the proper disposal/recycling method is not known, contact the main office so the correct procedure can be identified.

3. Obtain the appropriate containers for the wastes.

4. Waste characterization (waste profile) form shall be completed by the subcontractor for the LBP waste and lead-contaminated waste and debris, and lead contaminated personal protective

equipment and clothing (if containerized separately) and the forms submitted to the main office. The Subcontractor shall process the forms and forward to the disposal facility for approval. The approved waste profile forms from the disposal facility shall be submitted to the main office prior to shipment of the wastes off-site.

5. The applicable waste transportation and disposal documents (i.e., hazardous waste manifest, bill of lading, non-hazardous waste manifest, land disposal restriction notification, etc.) shall be obtained and completed. An example of the completed waste transportation and disposal documents shall be submitted to the main office for approval prior to shipment of the waste off-site.

6. Pick-up of hazardous wastes shall be made as needed to ensure that containers do not remain on the work site longer than 90 calendar days from the date affixed to each container. The superintendent will assign an area for interim storage of waste containing containers.

7. Lead contaminated personal protective equipment/ clothing, lead contaminated polyethylene, filters and debris, which cannot be sampled, shall be handled, stored, transported, and disposed of in the same manner as the LBP wastes and lead-contaminated wastes and debris.

8. The LBP and lead contaminated waste/debris shall be handled, stored transported and disposed of in accordance with 40 CFR parts 260 to 265, 6 NYCRR Part 370 to 373, 6 NYCRR Part 364 and 6 NYCRR Part 360 as applicable.

R. L. Baxter Building Corp.

Date: _____

Acknowledgement
Receipt of Safety Plan

Name (Print): _____

I have received, read, reviewed and understand the Safety Plan. I can successfully fulfill each duty or task. I also agree that management retains the right to change this safety plan.

This acknowledgement **must** be signed and retuned to Human Resources within **10** working days of the above stated date.

_____ _____

Employee Signature **Date**

Employees who do not return this acknowledgement to HR within the stated period of time are subject to disciplinary action.