

Selzer-Ornst Construction Company



Health & Safety Program

(Detail Version)



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HEALTH & SAFETY POLICY

It is the policy of Selzer-Ornst Construction Company to provide a safe and healthful work environment for its employees, customers, and visitors. In order to maintain a successful safety program, all work will comply with regulations, protect against personal injury and property damage, and limit the company's risk. Only through a cooperative effort can a safety record in the best interest of all be maintained.

OBJECTIVES

In keeping with Selzer-Ornst's commitment to safety, we have implemented this policy to meet the following objectives:

1. To provide a safe and healthful work environment for all employees and third parties.
2. To reduce the potential of accidental injuries and minimize the occurrence of future incidents.
3. To cooperate with subcontractors and other clients in their efforts to contribute to safe and efficient operations.
4. To comply with all applicable state, local, federal, and client regulations regarding safe work practices.
5. To exercise good judgment in the application of Selzer-Ornst's Health and Safety Policy.
6. To ensure unsafe conditions will be abated as soon as possible.

This manual contains detailed procedures and guidelines that have been designed to implement our Health and Safety Policy. Each employee of Selzer-Ornst has specific responsibilities to ensure the successful implementation of the program.

It shall be our philosophy that production, quality, safety, and health must be inseparable. Through the implementation of this program, every attempt will be made to reduce the possibility of an accident or illness occurring on any of our jobsites and facilities.

A handwritten signature in black ink, appearing to read 'Matthew Tadisch', is written over a horizontal line.

Matthew Tadisch
President & CEO
Selzer-Ornst Construction Company

08/18/2021



HEALTH & SAFETY POLICY RESPONSIBILITY

PURPOSE

An effective health and safety program includes a complete and clear description of responsibilities for all employees. It is important for all employees to understand not only their responsibilities, but also the responsibilities of fellow employees as well.

POLICY

All levels of management and supervision hold the responsibility of preventing conditions that could lead to occupational injuries or illness. While the ultimate success of our health and safety program depends upon the full cooperation of each employee, it is management's responsibility to see that effective training and education programs are employed to the best advantage.

RESPONSIBILITY

SELZER-ORNST CONSTRUCTION COMPANY MANAGEMENT

- Set an example of safe working habits and follow all safety regulations.
- Follow-up on safety violations to ensure corrective action is taken.
- Review the safety program annually and recommend improvements.
- Review accidents and prepare investigation reports.
- Track safety and workers compensation metrics.

GENERAL SUPERINTENDENT / FOREMAN

- Set an example of safe working habits and follow all safety regulations.
- Communicate and enforce safety policies and procedures within their operations.
- Inspect work areas periodically.
- Take corrective action whenever unsafe acts and conditions are noted.
- Assist in training both new and established employees upon hiring and every year thereafter.
- Investigate the causes of all accidents.

EMPLOYEES

- Perform all duties in a safe manner.
- Read, understand, and follow company safety policies and procedures.
- Wear all personal protective equipment that is required.
- Report all unsafe acts and conditions.
- Report all accidents and injuries to foreman or site superintendent immediately.

SUBCONTRACTORS/VISITORS

- Abide by safety regulations of all local, State, and Federal agencies.
- Notify Selzer-Ornst when activities could affect others.
- Inform Selzer-Ornst of all injuries to workers.
- Report any unsafe conditions that come to their attention.
- Attend meetings to review and establish safe practices for site.



SAFETY STOP WORK PROGRAM

PURPOSE

Selzer-Ornst is committed to providing a safe place of work for all employees and contractors through the implementation of standards and controls that continuously improve the application and performance of the Health, Safety, and Environment Management System.

POLICY

All levels of management and supervision hold the responsibility of preventing conditions that could lead to occupational injuries or illness. While the ultimate success of our health and safety program depends upon the full cooperation of each employee, it is management's responsibility to see that effective training and education programs are employed to the best advantage.

Selzer-Ornst fully supports the right of all employees and contractors to exercise their "Stop Work Authority" when an unsafe condition or act could result in an undesirable event or a situation where it affects service quality.

SITUATIONS

- **A change:** A modification or alteration that deviates from the way the assigned task is normally performed.
- **An unplanned event:** An unplanned event that distracts employees from the assigned task being performed which may cause unsafe work actions or conditions.
- **An observation with Health, Safety, and Environment impact:** Whenever an employee observes a condition or situation that has an impact on health, safety, and environment.
- **An incomplete understanding:** Whenever an employee or colleague does not completely understand instructions, procedures, or ongoing activities.
- **Convey information:** Whenever a situation requires critical information to be conveyed pertaining to any unsafe work action or condition that may occur.
- **New hazards observed or arise unexpectedly:** Whenever an employee encounters risks that have not been addressed during pre-job briefing, previous Job Hazard Analysis, or Risk Assessments.
- **A need to ask for support/assistance:** Whenever a job requires additional people, or the experience level of the person performing the assigned task requires support, and unsafe work action or condition may occur.

All Selzer-Ornst employees are obligated to apply Stop Work Authority where they have identified a perceived unsafe condition, act, error, omission, or lack of understanding that could result in an undesirable event. They must immediately initiate a Stop Work intervention with the person(s) potentially at risk and shall be reported to the immediate Supervisor/Manager for resolution.



HEALTH & SAFETY RULES

PURPOSE

The purpose of the health and safety rules is to acquaint each employee with a set of safe working rules and procedures that will help you to provide a safe workplace. It is well understood that employees and their families are the beneficiaries of a good health and safety program.

No health and safety program can cover all conditions that might arise; therefore, it is necessary for employees to use their best judgment along with the observance of established job safety practices. It is necessary to have the cooperation of employees in order to promote workplace health and safety. If employees do not completely understand all the job procedures and safety rules, they should ask their supervisor for an explanation prior to starting work. It is management's responsibility to provide employees with equipment and methods that result in safe work performance. However, it is the employee's responsibility to work according to established procedures.

GENERAL COMPANY RULES

Compliance with the following health and safety rules and guidelines are required of all employees as a condition of employment with Selzer-Ornst. These rules are minimum requirements and are only intended to cover anticipated conditions. Employees shall use good judgment in dealing with conditions not covered in these rules, and when in doubt should consult their supervisor.

1. Employees shall use care in the performance of their duties and act in a safe manner.
2. Report all injuries and illnesses, no matter how minor, to their supervisor.
3. Work areas shall be kept clean.
4. Report any unsafe act or condition to their supervisor.
5. Wear the proper personal protective equipment for the job.
6. Use the right tool for the right job. Keep tools in good, clean, condition.
7. Use only tools \ equipment for which one has been trained and authorized to use.
8. Employees follow company instructions to safely perform their jobs.
9. No jewelry should be worn during work that affects or impedes ability to work safely.
10. Observe and obey all posted "No Smoking" areas, offices, and buildings.
11. Know the location of emergency phone numbers, first aid kits, fire extinguishers, emergency equipment, fire alarms, and emergency evacuation routes.
12. Use the sanitation facilities, keep them clean, and do not abuse them.
13. Lift correctly - with the legs, not the back.
14. Running on the job is prohibited, except in emergencies.
15. Unauthorized tampering with any machinery or equipment is not allowed.



16. Carrying explosives or weapons on company property or worksites is prohibited.
17. Sabotage, theft, or willful destruction of company property is grounds for immediate dismissal and prosecution.
18. Horseplay or practical jokes shall not be permitted.
19. The use, abuse, transportation, concealment, sale or dispensation of illegal, unauthorized drugs (including detectable amounts in employees' system while working) on company property, jobsites or work areas is prohibited and shall be grounds for dismissal.
20. The use of alcoholic beverages or illicit drugs during work on company property, jobsites, or work areas, is prohibited and can be grounds for dismissal.

JOB SITE SPECIFIC RULES

1. Wear the proper personal protective equipment for the job and conditions. This includes approved hard hats, eye and face protection, hearing protection, gloves, hard-soled work boots or safety shoes, and comfortable clothes in good repair.
2. Use a safety harness and fall arrest system when there is exposure to a fall of six (6) feet or more where guardrails, safety nets, or other approved fall protection systems are not in use.
3. All scaffolding must be provided with appropriate decking. Toe boards, mid-rails, and handrails are required on all scaffolds over 10 feet in height. Ladder access shall be provided.
4. Gasoline shall be stored and transported in labeled, self-closing, safety cans fitted with spark arrestor screens in the spout. Engines must be shut off when refueling. No smoking near flammable liquids.
5. Tools shall only be used for the purposes for which they are designed. The employee is responsible for checking the tool's general condition prior to use. All employee-owned tools and extension cords must be inspected and approved by the supervisor prior to use.
6. Prior to use, the employee shall inspect all ladders. No defective ladders shall be used. Straight ladders shall be placed on secure footing at a 4 to 1 pitch (75-degree angle) with at least 3 feet extending above the work surface. The ladder shall also be tied off at the top. Folding ladders shall be used only in the open and locked position and the last step prior to the top shall never be used. Only non-conductive ladders should be used when working on or near electrical equipment.
7. Selzer-Ornst employees are prohibited from working on or around live electrical circuits (power lines, electrical distribution, electrical circuits, live electrical equipment, etc.).
8. Unless double insulated, all electric power tools and equipment shall be grounded and connected to ground power cords and receptacles. Power extension cords shall be protected from crushing, cuts, and other damage. Ground fault circuit interrupters should be used. Electrical equipment shall be maintained in safe operating condition.
9. Employees shall not operate any machine unless they are trained and authorized to use the equipment. All guards and safety devices must be in place and in operating condition.
10. All compressed gas cylinders shall be chained in an upright position to the wall or other stationary object.



11. Riding on loads, fenders, running boards, sideboards, and gates with legs dangling over the sides of trucks will not be tolerated.
12. Do not use power tools and equipment until employees have been properly instructed in safe work methods and become authorized to use them.
13. Be sure that all guards are in place. Do not remove, displace, damage, or destroy any safety device or safeguard provided for use on the job, nor interfere with the use thereof.
14. Do not enter an area which has been roped off or barricaded.
15. Selzer-Ornst employees are not permitted to enter into permit required confined spaces, excavations, or trenches.
16. All hazardous chemical containers on the job site must be labeled to identify the name of the chemical and the appropriate hazards associated with the chemical. Safety Data Sheets must be available on site.
17. Only trained and authorized Selzer-Ornst employees are authorized to operate powered industrial vehicles such as material handling equipment, cranes, forklifts, etc.

Selzer-Ornst's health and safety rules, regulations, and procedures are illustrative and should not be viewed as an exclusive listing to encompass situations not specifically mentioned. Management reserves the right at all times, when circumstances warrant it, to promulgate new rules or modify existing ones in order to ensure a safe, healthy, and productive work environment for all employees, contractors, or visitors.

In addition, any similar guidelines provided and required by the general contractors, owner, or by specifications are to be observed. Any conflict between these guidelines and those of any applicable state regulations will mean that the applicable state regulation will supersede.



HEALTH, SAFETY, AND ENVIRONMENT POLICY

Our company is committed to ensuring a safe and healthful workplace and protecting the environment. We believe that safety and protecting the environment is good business and that all work-related injuries, illnesses, property losses and adverse environmental impacts are preventable.

To fulfill this commitment, our Company will:

- Ensure that management accepts full responsibility for protecting workers and the environment.
- Give health, safety and environmental considerations equal status with the Company's other business objectives and integrate them into all aspects of our work.
- Work actively to continuously improve health, safety, and environmental performance.
- Only start work after confirming that essential health, safety, and environmental protection systems are in place, and willingly suspend activities if safety, health or the protection of the environment would be compromised.
- Encourage supervisors and workers (employees and contractors) to be individually responsible for identifying and eliminating hazards, preventing injury to themselves and others, and preventing adverse environmental impacts.
- Provide personnel with sufficient training, resources, and systems.
- Provide and maintain properly engineered facilities, plants, and equipment.
- Minimize waste generation, air emissions and other discharges from our activities to the environment.
- Actively monitor, audit and review to improve systems, processes, health, safety, and environmental performance.
- As a minimum, ensure regulatory compliance at all times.
- Hold contractors and third parties accountable for adhering to the Company's health, safety and environmental policy and audit contractor systems and procedures to ensure satisfactory health, safety, and environmental performance.
- Hold supervisors accountable for ensuring and promoting a safe and healthful workplace and the protection of the environment within their areas of responsibility by ensuring that workers are knowledgeable and have access to:
 - publications of the latest applicable laws and regulations
 - health, safety and environment rules and safe work standards of operating and critical task procedures
 - emergency response procedures
 - environmental protection requirements
- Hold workers at all levels accountable for being fit for work at the beginning and throughout their shifts and when on call.
- Develop, implement, and manage a system of accountability for health, safety and environment



roles and responsibilities at all levels of the company. Inform employees and contractors of this policy and make it available at all Company worksites.

We firmly believe responsibility for application of this policy rests with the management, employees, and contractors associated with our Company.



PERSONAL PROTECTION EQUIPMENT

PURPOSE

To ensure the use of appropriate, company approved, personal protective equipment, wherever and whenever there is a potential for exposure to hazardous working conditions, or where a hazardous condition exists and a need is indicated for using such equipment to adequately reduce the hazard to its personnel, visitors, and/or subcontractors.

POLICY

Selzer-Ornst reserves the right to select and approve all personal protective equipment to be issued and used by its employees, visitors, and/or subcontractors. Only such equipment issued or approved will be allowed on its job sites. Failure to comply with this procedure will result in disciplinary action up to and including termination. Any damaged or defective PPE must be disposed of properly and removed from service.

HARD HATS

All construction workers must wear company issued hard hats at all times when working on construction projects where there is possible danger of head injury, or in areas of an existing facility that has been designated as a 'HARD HAT Area". This includes visitors, subcontractors, engineers, inspectors, and anyone else who has authorization to be on the project.

Hard hats that have been altered by drilling or cutting will not be permitted. When it is necessary to use additional personal, protective, equipment that must be attached to the hard hat, only those hard hats designed for this purpose may be used.

Headband assemblies must be in good condition and should be exchanged whenever they become broken or weakened. The area between the top of the headband and the top of the hard hat should never be used for storage.

SHOES AND BOOTS

Leather work shoes/boots are required, and safety shoes are recommended for use by all construction workers. All safety shoes shall meet nationally recognized standards.

Safety toe tennis shoes are not allowed on Selzer-Ornst projects.

EYE AND FACE PROTECTION

Approved eye protection must be worn while on site. ANSI approved safety glasses with full side shields must be worn in all circumstances. Face protection to be worn when there is potential for face injury.



Welders must wear a welder's hood with appropriate lenses that have the correct color density for the type of welding involved. Welders' helpers must wear the same, or at the minimum, must wear burning goggles with the correct color density lenses. See Exhibit A & B. Safety glasses must be worn behind the welders' shaded lenses.

GLOVES

When needed, construction workers should wear work gloves in good condition that are suited to the type of work involved. However, employees who are required to operate or work around drill presses, power saws, and similar rotating machinery, should not wear gloves. Use of special type gloves such as neoprene or rubber to handle chemicals shall be issued to those workers who have a need for them. Welders shall wear gloves during welding operations.

RESPIRATORS

Company issued respiratory protective devices must be used where airborne contaminants, such as fibers, dust, smoke, vapors, mist, etc., exist above permissible levels.

SAFETY BELTS/HARNESSES AND LANYARDS

Safety harnesses with lanyards, must be worn by all employees who are working at elevated levels that are not protected by standard handrails, safety nets, or when working from suspended scaffolds. Employees are required to wear and use safety harnesses to protect them from falling when they are exposed to falls from heights of six (6) feet or more, if they are working over machinery, moving equipment or objects posing an implement hazard, or in the case of entering a confined space, with an attended lifeline.

All safety harnesses and lanyards shall be inspected, and each inspection shall be documented with the harness serial number. Inspections shall be performed by the employee who is to wear and use the equipment. Quick release belts shall only be used when working over bodies of water. Lanyards shall have locking snaps requiring two actions to open.

FLOTATION VESTS

U.S. Coast Guard approved flotation vests must be worn by all employees who are working on barges, floating pipelines, or on structures extending over water that are not protected by adequate standard handrails. In addition, any employee who is working over the side of a vessel, or in any area where a drowning hazard exists, must wear an approved flotation vest.

TRAFFIC VESTS

Whenever employees are required to work in the immediate vicinity of moving traffic, all personnel must be required to wear, as a minimum, a fluorescent orange or lime green Class II traffic safety vest, which will be provided by the company.



PERSONAL WORK CLOTHING

The minimum work clothing that is acceptable for all employees working on a construction site is as follows:

- long pants
- good work shoes or boots
- a shirt that completely covers the worker's shoulders and provides adequate protection against hazards like concrete splash, abrasions to the skin, oil or grease spills, and slag from welding or cutting. (Tank top type shirts are not allowed on Selzer-Ornst projects).

Welders should be cautioned against wearing any type of combustible clothing such as polyesters, double-knits, etc. Clothing that has become torn, ragged, or frayed is not acceptable, since it presents a hazard of catching on rough corners or machine parts that could cause the wearer to trip or fall.

Construction workers should wear clothing that is reasonably snug, particularly around the neck, wrists, and ankles.

Workers should not have long hair or wear loose clothing, rings, watches and necklaces, as all of these may catch in power driven equipment.

HEARING PROTECTION

When employees are subject to sound levels exceeding those in Exhibit C, hearing protection will be provided and shall be used to reduce the sound levels. Training in the use and care of hearing protection equipment will be provided. Training shall be by competent persons.



FILTER LENS SHADE NUMBERS FOR PROTECTION AGAINST RADIANT ENERGY

Reference OSHA 1910.133 - Eye and face protection, for current information. The below charts were accurate as of October 5, 2021.

Table 1: Filter Lenses for Protection during Shielded Metal Arc Welding

Operation	Electrode Size – inch (mm)	Arc Current (Amperes)	OSHA Minimum Protective Shade Number	ANSI & AWS Shade Number Recommendations*
Shielded Metal Arc Welding (SMAW)	Less than 3/32 (2.4)	Fewer than 60	7	-
	3/32-5/32 (2.4-4.0)	60-160	8	10
	More than 5/32-1/4 (4.0-6.4)	More than 160-250	10	12
	More than 1/4 (6.4)	More than 250-550	11	14

Table 2: Filter Lenses for Gas Welding and Oxygen Cutting Operations

Operation	Plate Thickness Inches	Plate Thickness mm	OSHA Minimum Protective Shade Number	ANSI & AWS Shade Number Recommendations*
Gas Welding	Under 1/8	Under 3.2	4	5
	1/4 to 1/2	3.2 to 12.7	5	6
	Over 1/2	Over 12.7	6	8
Oxygen Cutting	Under 1	Under 25	3	4
	1 to 6	25 to 150	4	5
	Over 6	Over 150	5	6



Table 3: Filter Lenses for Protection during Other Welding and Cutting Operations

Operation	Arc Current (Amperes)	OSHA Minimum Protective Shade Number	ANSI & AWS Shade Number Recommendations*
Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW)	Fewer than 60	7	-
	60-160	10	11
	More than 160-250	10	12
	More than 250-500	10	14
Gas Tungsten Arc Welding (GTAW)	Fewer than 50	8	10
	50-150	8	12
	More than 150-500	10	14
Air Carbon Arc Cutting (CAC-A) (Light)	Fewer than 500	10	12
Air Carbon Arc Cutting (CAC-A) (Heavy)	500-1000	11	14
Plasma Arc Welding (PAW)	Fewer than 20	6	6-8
	20-100	8	10
	More than 100-400	10	12
	More than 400-800	11	14
Plasma Arc Cutting (PAC) (Light)**	Fewer than 300	8	9
Plasma Arc Cutting (PAC) (Medium)**	300-400	9	12
Plasma Arc Cutting (PAC) (Heavy)**	More than 400-800	10	14
Torch Brazing (TB)		3	3 or 4
Torch Soldering (TS)		2	2
Carbon Arc Welding (CAW)		14	14

* As a rule of thumb, start with a shade that is too dark to see the weld zone. Then, go to a lighter shade which gives a sufficient view of the weld zone without going below the minimum. During oxygen gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light (spectrum) of the operation.

** Values apply where the actual arc is clearly seen. Lighter filters may be used when the arc is hidden by the workpiece.



APPLICATIONS CHART

Operations	Hazards	Protectors
Acetylene - Burning	Sparks, Harmful rays	5, 6, or 7
Acetylene – Cutting	Molten metal	5, 6, or 7
Acetylene - Welding	Flying particles	5, 6, or 7
Chemical Handling	Splash, acid burns	3 (for severe exposure add 8)
Chipping	Flying particles	1, 2 (for severe exposure add 8)
Electric (arc)	Sparks, Intense rays	8 with tinted lenses
Welding	Molten metal	(in combination with 1)
Grinding - Light	Flying particles	1, 2 (for severe exposure add 8)
Grinding-Heavy	Flying particles	2 (for severe exposure add 8)
Laboratory	Chemical splash	3 (for severe glass breakage exposure add 8)
Molten Metals	Heat, glare, sparks, splash	5, 6 (8 in combination with 1 in tinted lenses)
Spot Welding	Flying particles, Sparks	1, 2 (tinted lenses advisable; for severe exposure, add 8)



PERMISSIBLE NOISE EXPOSURE

Duration per Day (Hours)	Sound Level (dBA)
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115



AVERAGE DECIBEL LEVELS

Equipment	dBA	Equipment	dBA
All Purpose Saw	107	Hilti gun	103
Breaker	115	Jackhammer	115
Chainsaw	112	Ramset	103
Chipping Gun	110	Roller	108
Circular Saw	100	Saber Saw	94
Compressor	100	Sawzall	94
Drill	95	Vibra-plate	107
Generator	88	Wacker (compactor)	108
Grinder	98	Water Pump	95
Hammer Drill	102		



NEW EMPLOYEE ORIENTATION

PURPOSE

Selzer-Ornst regards their employees as vital parts of the company. As such, Selzer-Ornst accepts the responsibility of providing a workplace where the worker can do his / her job without injury to him / herself or to others.

The New Employee Orientation is designed to increase the safety awareness of the individual worker and all the supervisors on the project by getting the supervisor directly involved with the training of their workers. This is done in order to stress the seriousness of the health and safety commitment by the both the supervisors and Selzer-Ornst. The orientation trains the employees in specific hazard recognition, and promotes communication between individual trades, departments, management, and employees.

POLICY

A representative of Selzer-Ornst will meet with each new employee and distribute a copy of our Health & Safety Policy Manual to each employee.

The employee and the supervisor will discuss hazards and safety requirements, as well as expectations on the job prior to the commencement of work.



DISCIPLINARY PROCEDURES

DISCIPLINARY PROCEDURES:

Supervisors are responsible for keeping employees informed on safety policies, rules and regulations, and for providing positive direction. Employees will be held accountable for acceptable, on-the-job performance, and for the policies, rules, and regulations of Selzer-Ornst.

Wisconsin is an "Employer at Will" state. Below are guidelines for discipline and / or termination of employment. Selzer-Ornst. reserves the right to terminate employment at any time regardless of the criteria below.

ATTENDANCE

1st Violation – Written Warning or Verbal Warning.

2nd Violation – Written Warning.

3rd Violation – 1 day suspension.

4th Violation and following – Minimum 3-day suspension up to and including termination.

Attendance violations more than 3 years old will not be considered in determining discipline.

SAFETY

1st Violation – Minimum of a verbal or written warning up to and including termination.

2nd Violation – Minimum 1 day suspension up to and including termination.

3rd Violation – Minimum 5-day suspension up to and including termination.

Safety violations more than 3 years old will not be considered in determining discipline.

DISOBEDIENCE / INSUBORDINATION

1st Violation – Minimum of a verbal or written warning up to and including termination.

2nd Violation – Minimum 3-day suspension up to and including termination.

3rd Violation – Minimum 5-day suspension up to and including termination.

Disobedience/Insubordination violations do not time out for consideration.

Interpretation of violations and determination of discipline will be at the sole discretion of Selzer-Ornst's management. We reserve the right to amend this policy at any time.



SUBSTANCE ABUSE POLICY

POLICY

Selzer-Ornst has a concern for the safety, health, and well-being of its employees. Selzer-Ornst also has an obligation to provide customers with quality service and products. Alcohol or drug abuse can pose a serious health and safety hazard to the employee, co-workers, and third parties and can interfere with our ability to meet our customer's needs. Therefore, a condition of employment at Selzer-Ornst Construction Company is that employees adhere to the following requirements.

PROHIBITED CONDUCT

Selzer-Ornst prohibits employees from using, possessing, attempting to possess, distributing, delivering, or being under the influence of a drug, as well as being under the influence of alcohol on Company premises, in Company vehicles or during work hours including breaks, meals and overtime. Violation of these provisions will result in immediate removal from the work site, and appropriate disciplinary action, which may include termination of employment.

Therefore, Selzer-Ornst, in accordance with our policy, prohibits an employee working on a project from using, possessing, attempting to possess, distributing, delivering or being under the influence of:

1. Marijuana, cocaine, or phencyclidine (PCP) or any derivative thereof.
2. An amphetamine or any formulation thereof.
3. A narcotic drug or any derivative thereof.
4. Any other substance to a degree which adversely affects the employee's safety and / or the safety of others.

No employee shall report for duty or remain on duty while having a breath alcohol concentration of 0.00 or greater. No employee shall consume an intoxicating beverage, regardless of its alcoholic content, while on a project.

Employees of Selzer-Ornst Construction Company may be required to submit to a drug and alcohol tests. These tests include the following:

- Pre-Employment Testing
- Reasonable Suspicion Testing
- Post-Accident Testing
- Random Testing



Employees of Selzer-Ornst are subject to the drug and alcohol testing requirements set forth by contractual language for each trade or as required by written contract with an owner. Please reference the applicable Drug and Substance Abuse Policy for the following trade unions:

- Carpenters
- Laborers

All employees / applicants requested to undergo a drug or alcohol test are required to promptly comply with the request. Selzer-Ornst expects all prospective and current employees to exercise good faith and cooperate in complying with any procedures required under the Policy.

Refusal to submit to a drug test or engaging in any conduct which operates to jeopardize the integrity of the specimen or the reliability of the test result, will be subject to disciplinary action up to and including termination, independent and regardless of any test results. This also includes failure to show up for a drug test specimen collection, postponing, or rescheduling of drug specimen collections.

SPECIAL NOTE:

Use of Prescription and/or Over-the Counter Medication: Prescription and/or over the counter (OTC) medications may influence an employee's ability to function safely. Therefore, any employee of Selzer-Ornst, who may on occasion be required to take a doctor's prescribed or OTC medication for such events as an illness or injury, are required to report to their supervisor:

- That they are ill or have experienced an injury requiring medication for relief.
- That they have and/or will be consuming a prescribed/OTC medication.
- What type of medication they are taking.
- The name of the doctor with that doctor or clinic's phone number for verification.

For the safety of the employee and others working on Selzer-Ornst projects, reporting must be done immediately **and** prior to the employee being allowed to work for Selzer-Ornst.

A determination will be made on a case-by-case basis as to whether to allow the employee to work that day and any subsequent days, based on the type of medication and the listed/anticipated side effects that could affect the employee's ability to function safely for the required job. This determination will be made by Selzer-Ornst management.

If the employee is allowed to work and they continue to take the medication on subsequent workdays, the employee should report each day they are taking the medication and if they are experiencing any side effects to their supervisor and do so until the medication is completely consumed and/or the employee no longer needs to take it.



ACCIDENT INVESTIGATION POLICY

POLICY

It is the policy of Selzer-Ornst that employees immediately report all work-related injuries and illnesses, as well as fire, property damage, or near misses regardless of severity, to their supervisor. Employee's supervisor / foreman shall ensure that the employee receives proper medical care, conduct a thorough incident investigation per the requirements set forth in this policy, and implement effective corrective action to prevent reoccurrence.

PURPOSE

The purpose of this program is to provide a procedure for reporting and investigating incidents involving injury, illness, fire, property damage, spills, first-aid, or near misses.

The purpose of this program is to ensure that:

- All incidents, regardless of the severity of the injury or illness, are reported.
- Appropriate medical treatment is provided.
- An appropriate incident investigation is conducted, and corrective action implemented.
- The proper documentation is completed and submitted.
- Appropriate personnel and agencies are notified.
- Recordable cases are entered on the applicable injury log.
- To comply with all regulatory requirements pertaining to injury / illness investigation and reporting.

RESPONSIBILITIES

When an incident occurs, action must be taken to ensure that any injured or ill employees receive appropriate medical care. An incident investigation must also be conducted to ensure that the root cause of the incident is identified, as well as implementing corrective action in a timely matter in order to prevent reoccurrence.

The following duties and responsibilities are assigned when an incident occurs. In the absence of the person to whom these duties and responsibilities are assigned, the person who is responsible for that person's other duties shall take responsibility for these duties and responsibilities.

EMPLOYEE

- Report all work related injuries immediately to the superintendent / foreman prior to leaving the workplace.
- Actively participate and cooperate in incident investigations.
- Attend follow up appointments scheduled for work-related injury or illness cases.
- Abide by **ANY** work restrictions mandated by the physician.
- Maintain communication with the superintendent regarding medical condition and / or status.



FOREMAN / SUPERINTENDENT

- Ensure the employee receives appropriate first-aid or medical care.
- Implement short term corrective action prior to allowing work to restart.
- Conduct an incident investigation and complete the appropriate documentation. The investigation shall result in the identification of a root cause and a corrective action.
- Comply with any work restrictions employees have.
- Follow up on the implementation of corrective action for incidents involving employees who work in their department.

MANAGEMENT

- Report any work-related injury or illness to the worker's compensation insurance carrier and ensure claims are managed appropriately.
- Maintain all injury logs (e.g., first-aid and OSHA logs).
- Participate in the incident investigation if there is a lost time case.
- Follow up on the implementation of corrective action.

PROCEDURE FOLLOWING AN INCIDENT

1. Appropriate medical care will be provided to the employee if required.
2. The injured employee shall complete an Employee's Incident Report form. This form must be filled out prior to seeing off-site treatment - if medical care does not take precedence.
3. The responsible supervisor/foreman will investigate the incident, complete the appropriate documentation, and submit the documentation from the incident to management.
4. All corrective actions must be documented on the incident investigation form. Corrective actions are tracked and reviewed by management to ensure closure.

FIRST-AID TREATMENT

- Employees must report work related injuries to their supervisor/foreman immediately.
- The supervisor/foreman shall contact a certified / trained first aid provider and remain with the employee until the provider is present.

MEDICAL TREATMENT (Beyond First Aid)

- Arrangements shall be made for transportation of the injured employee to get to the clinic or his/her doctor.
- Off-shift employees that need immediate non-critical medical attention should be transported to a clinic/urgent care facility for treatment (stitches, etc.).
- Employees shall be alcohol and drug tested in accordance with the Alcohol and Drug Testing policy.
- The injured employee, upon return, shall report directly to their supervisor/foreman with his/her doctor's report.
- The supervisor / foreman shall, after receiving the doctor's report, forward it to Human Resources.
- Human Resources shall forward doctor updates to supervisory personnel as deemed necessary.



EMPLOYEES IN CRITICAL CONDITION

- Any time an injury is critical in nature, call "9-1-1" to transport the employee to the nearest hospital.
- If it is necessary to have someone in critical condition transported, notify the dispatcher where the rescue squad should come (which side of the building and door / job site gate number) and assign employees to go out to meet the rescue squad to direct it to the correct entrance.

INCIDENT INVESTIGATION PROCESS

Incident investigations shall be conducted any time there is a work-related injury, illness, or a near miss incident. It is the responsibility of the employee's supervisor/foreman to conduct an incident investigation for all work-related injuries or illnesses (including first aids), as well as any near miss incidents reported by their employees.

The purpose of the incident investigation is to document the facts surrounding the incident to identify the root cause, and to identify an effective corrective action to prevent reoccurrence. Implementation of the corrective action will be tracked on the incident investigation form.

Supervisor/Foreman shall document investigations with pictures if needed.

FIRST-AID CASE AND REPORT ONLY INVESTIGATIONS

- First-aid and report only cases shall be documented on an Employee's Incident Report form. (See Exhibit) These forms must be completed by the employee, reviewed and signed by the employee's supervisor/foreman and submitted to Human Resources within 24 hours of the employee reporting the incident to their supervisor/foreman.
- If a first-aid or report only case is deemed to be "significant" the supervisor/ foreman shall complete a Supervisor's Incident Report form. The supervisor/ foreman shall involve additional personnel as appropriate in the investigation.

OSHA RECORDABLE CASES INVESTIGATIONS

OSHA recordable injuries/illnesses shall be documented on the supervisor's Incident Report form. These forms must be completed by the supervisor/foreman and submitted to Selzer-Ornst Human Resources within 24 hours of the employee reporting the incident to their supervisor/foreman.



INCIDENT INVESTIGATION TEAM

All work-related OSHA recordable case investigations completed by the supervisor/foreman will be reviewed by the executive incident investigation team. (OSHA recordable, Loss Time Cases, Restricted Cases, DART cases)

The purpose of the investigation team is not to assign blame but to determine corrective action so the incident does not reoccur.

The Investigation Team will meet and shall consist of the following individuals:

1. Selzer-Ornst management representative – Team Chair
2. General superintendent
3. The injured employee's supervisor/foreman
4. Injured employee (if available)
5. Employee representative (if requested)

The Investigation Team shall meet to review the following:

- Current medical condition of the employee and medical treatment plan of the employee (if required)
- Facts about the incident – “What was the employee doing before, during, and after the accident?”
- Supporting documentation for quality / thoroughness (Employee Incident Report)
- Corrective actions/root causes
- Steps to prevent reoccurrence.

The incident Investigation Team may have to visit the location of the incident (if necessary) to obtain a better understanding of what happened, condition and location of equipment, etc.

CORRECTIVE ACTIONS

Appropriate short term corrective action must be put in place prior to starting the operation again.

Long term corrective action(s) shall be recorded and tracked.

NOTIFICATIONS

Depending on the nature of the incident certain internal or external notifications may be required by company policy or by law. Notifications are the responsibility of the executive vice president.

Selzer-Ornst Management shall report all applicable workers' compensation cases to the state of Wisconsin and to the insurance carrier using the Employers First Report of Injury or Disease Form. (See Exhibit)

Agency Notifications – OSHA must be notified within eight hours of the following occurring:

- Death of an employee from a work-related incident
- All work-related inpatient hospitalizations, all amputations and all losses of an eye within 24 hours.



TRAINING

All employees shall be provided with training to ensure they understand the following:

- They must report all work-related injuries and illnesses as soon as they occur or become apparent.
- The importance of reporting not only injuries and illness, but “near miss” incidents as well.
- The purpose of the incident investigation process is to find facts not fault: so the incident is not repeated.

Supervisors/Foreman and other members of management will be trained so they know what to do when an incident is reported to them. They must understand that their first concern must be appropriate medical care for any injured personnel, followed by an investigation of the incident. Members of management who have additional responsibilities (e.g., notifications) must know what those responsibilities are and how to carry them out.

Personnel who participate on incident investigation teams shall be provided with training, so they understand the purpose and process of incident investigation, as well as how to apply root cause analysis tools.



DEFINITIONS OF TERMS

Near Miss – An event which, under different circumstances, could result in an injury, illness, property damage, fire, or spill. If an injury was avoided, but an unsafe procedure, process, or situation took place and was observed.

First Aid – If any first aid is administered to an employee because of an incident or injury that happens while at work.

Report Only - If an employee reports a non-serious incident or injury that does not require the administration of first aid.

Recordable – Any work-related injury or illness that requires professional medical attention beyond first aid. Any injury or illness considered recordable by OSHA's definition.

Restricted – When an employee, because of an injury while at work, cannot perform their usual job tasks and duties, but can perform other non-related tasks that are not a part of their usual job.

Lost Time – When an employee, because of an injury while at work, is considered incapacitated by the attending physician and cannot perform any job tasks or related duties.

DART – An acronym for Days Away, Restricted, or Transferred – associated with cases that result in lost time, restricted work, or job transfer. Used in a formula to generate DART rates for industry.

Significant First-Aid or Report Only Case – A first-aid or report only case is considered “significant” if:

- It involves an upper extremity musculoskeletal disorder (MSD) or back pain.
- A slight change in circumstances could have resulted in a much more serious injury.
- It falls under a special emphasis program, (for example, shoulder injury prevention).
- The foreman/superintendent believes the case to be significant.



HAZARD COMMUNICATION

PURPOSE

To inform all employees by means of labels, Safety Data Sheets (SDS), and training of the physical and health hazards to which they may be exposed.

POLICY

Selzer-Ornst, as an employer engaged in a business where hazardous materials are used, or where its workers have potential contact with hazardous materials in their workplace, will ensure that the hazards of all materials found in the workplace will be evaluated, and that information concerning those hazards will be shared with all affected employees. Accordingly, this policy describes how these criteria will be met.

The field superintendent will be responsible for:

- Providing the hazard assessment, based upon the material's Safety Data Sheet (SDS).
- Obtaining and providing additional information on the hazardous materials.
- Overseeing the company's labeling program.
- Identifying and providing appropriate emergency procedures if necessary.
- Supervising the training program.

EXEMPTIONS

There are two types of exemptions from this program, and they are as follows--

The following materials or operations are exempt from the provisions of this Standard:

- Any hazardous waste which is subject to the regulations of the Environmental Protection Agency (EPA).
- Toxic substances used in the workplace which are in the same form, volume, concentration, and for the same use as commonly sold by retail outlets as consumer goods.
- Any consumer product used in the workplace in the same manner as normal customer use, which will not result in a duration and frequency of exposure greater than consumer exposure.
- Tobacco or tobacco products.
- Foods, drugs, or cosmetics for personal consumption by employees in the workplace.

When labeled in accordance with federal requirements, the following substances shall be exempt only from the labeling provisions of the Standard:

- Pesticides subject to EPA's Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) labeling requirements.
- Food, drug, or cosmetic material subject to labeling requirements of the Food and Drug Administration (FDA).



- Distilled spirits, wine, or malt beverages subject to labeling requirements of the Treasury's Bureau of Alcohol, Tobacco, and Firearms (BATF).
- Consumer products subject to labeling requirements of the Consumer Products Safety Commission.

HAZARD ASSESSMENT

Selzer-Ornst has chosen to rely on the evaluation and determination of the material by the material manufacturer and importer and the use of the Safety Data Sheets (SDS) they have provided, to satisfy the requirements of 29 CFR 1910.1200 (d) Hazard Determination.

Selzer-Ornst relies, in good faith, on the SDS received with all hazardous material shipments, or soon thereafter in the case of missing or updated DSD, from the material manufacturer, importer or distributor. If new and significant information concerning the potential health hazard of a material in the workplace is uncovered, then the field superintendent will ensure that either an updated SDS is obtained from the supplying source, or in the event such SDS is not available, that the new information is added to the appropriate section of the existing SDS within two (2) months of being advised of the new information.

Since Selzer-Ornst does not have access to the written procedures maintained by the material manufacturer or importer, should a problem arise with the information received that cannot be resolved with the supplier, the matter will be referred to the nearest OSHA office for investigation.

HAZARDOUS MATERIALS INVENTORY

The field and shop superintendent will conduct an inventory of all hazardous materials within the workplace. From the appropriate SDS on each of these materials, he/she will make a hazard assessment and take the necessary steps to ensure that the hazard information is included on all Hazardous Materials Identification System (HMIS) labels. The shop and field superintendent will also determine whether or not there are any missing SDS sheets and if any have been requested from the appropriate supplier. The complete inventory of all hazardous materials in the workplace will be kept in the purchasing office.

SAFETY DATA SHEETS (SDS)

The SDS is the primary document in the hazard communication procedure. The Standard requires manufacturers and importers to provide an SDS with the materials they ship and requires employers to have an SDS on each hazardous material they use. The SDS contains known hazard and protection information on a hazardous material. It is the one place everyone should look before starting any job involving hazardous materials and any time there is a question about a particular material's risks or means of protection.

All Selzer-Ornst employees have the right to access and obtain copies of safety data sheets. Safety data sheets are immediately available in the following locations:

- Selzer-Ornst Construction Company office
- Job boxes

ACQUIRING SAFETY DATA SHEETS

The office and field superintendent are responsible for obtaining an SDS on each material substance or compound entering the workplace. The normal procedure for acquiring an SDS will be to place a notice on



all purchase orders, requiring the supplier to comply with the SDS requirements of the standard by providing the SDS with the ordered product at the time of delivery.

Commodities ordered/received by the project shall not be distributed into the workplace until the shop superintendent has confirmed receipt on the accompanying SDS. The supplier has 30 days to respond. A follow-up letter should be sent if the SDS is not received within the 30-day period. This second request should be accompanied by a telephone call.

If the SDS is not received within 10 working days following the second request, a certified letter requesting the SDS should be sent to the supplier. Continued absence of the SDS within the 10 working days following the certified letter, should result in the filing of a written complaint with the nearest OSHA regional office or appropriate state agency. One other possibility is to seek an alternate supplier who can guarantee an immediate SDS.

HAZARDOUS MATERIALS IDENTIFICATION / LABELING

CONTAINER LABELING (HAZARDOUS CHEMICALS ONLY)

Each container of a hazardous chemical must have a warning label. The labeling system adopted by Selzer-Ornst is not intended to be the sole or the most complete source of information regarding the nature or identity of the hazardous chemicals within the workplace. The identity of the chemical, as it is shown on the label, could be any term the company wishes to use, as long as it also appears on the SDS for that chemical along with its precise chemical name.

In doing this, it allows the company to use a common term familiar to their employees, while still providing them with more extensive information including specific chemical identities on the SDS. This is not true of shipping containers of hazardous chemicals.

The shop and field superintendent are responsible for ensuring that containers of hazardous chemicals that are shipped to the workplace are marked with the identity of the chemical, the appropriate health warning, the target organ effects of the chemical, and the name and address of the chemical manufacturer, importer, or other responsible party.

Selzer-Ornst is not required to label small portable containers into which hazardous chemicals are transferred from labeled containers, as long as these portable containers are intended only for the immediate use of the employees who perform the transfer.

CONTRACTOR NOTIFICATION

All contractual agreements with on-site contractors will contain a notification advising the contractor of the Selzer-Ornst Communication Procedure, requiring the contractor to make himself, and those of his employees that will be working at the site, to become familiar with the provisions of this program.

In the event the contractor will be performing his work in an area where hazardous materials are present, the contractor must be given: a verbal orientation on the program, a copy of the Selzer-Ornst Hazard Communication Program, and the hazardous material inventory for that area.



ORIENTATION AND TRAINING

Selzer-Ornst has established an initial orientation and on-the-job training program for each employee who may come into contact with, or be exposed to, a hazardous material in the workplace.

Each employee, who is affected by the OSHA Hazard Communication Standard, must be informed of the provisions of the Standard. This will include an explanation of the requirements of the Standard, the Selzer-Ornst written Hazard Communication Program, how to use the Safety Data Sheet, the Hazardous Material Inventory, and the color-coded label system. Training will be provided at the time of initial assignment and whenever a new hazardous material is introduced into the work area. Employees will be informed of operations in the work area where hazardous materials are present, and where they can find the company's written Hazard Communication Program, the Hazardous Material Inventory, the hazard determination procedure and the SDS.

INITIAL ORIENTATION AND TRAINING

New or transferred employees must be assumed to have little or no prior knowledge of the extent of hazardous materials. Prior to initiation of work, the foreman must give the new employee a thorough description of the work area, use and maintenance of personnel protective devices, and a complete description of the initial work assignment.

The format of the hazard communication portion of the initial orientation and training includes: supervisor's classroom instruction on the employees' right-to-know, how to use an SDS, the company's Hazard Communication Program, the OSHA Standard, and the Hazardous Material Inventory.

ON-THE-JOB TRAINING

For those employees who will be working directly with a hazardous material, the functional supervisor in the work of place will be responsible for specific on-the-job training regard to these materials. The foreman will instruct these employees on the methods and observations that may be used to detect the presence or release of the hazardous chemical, including air sampling, personal monitoring, visual appearance, odor, etc., the physical and health hazard of the chemical, and the specific measures the employee can take to protect himself from these hazards.

During this on-the-job training and working directly with the hazardous material, it should be planned to have the new employee work closely with a more experienced co-worker until it is determined the new employee can work independently.

NON-ROUTINE TASKS

All management personnel are responsible for contacting the field superintendent before any non-routine task is undertaken in the workplace where personnel may have the potential for exposure to hazardous material. This also applies to non-routine maintenance tasks. This is necessary to allow for a hazard assessment to be made and to communicate these hazards to the affected employees before the non-routine tasks are performed and personnel are subject to exposure.



HEALTH HAZARDS OF LEAD EXPOSURE

POLICY

It is the Policy of Selzer-Ornst that no employee will perform work on, or around, materials containing lead.

Any project which may have the potential to expose Selzer-Ornst employees to Lead must be reviewed and approved by the president.

Any "President approved" work where Selzer-Ornst employees may be exposed to Lead shall comply with this policy.

A detailed Site-Specific Lead Safety Plan will be developed for the project and shall include the following regulatory precautions:

- Ensuring employees work below OSHA permissible exposure limit.
- Hazard determination, including exposure assessment.
- Medical surveillance and provisions for medical removal.
- Job-specific compliance requirements / expectations.
- Engineering and work practice controls.
- Respiratory protection.
- Protective clothing and equipment.
- Housekeeping.
- Hygiene facilities and practices.
- Signs.
- Employee information and training.
- Recordkeeping.

PURPOSE

Pure Lead (Pb) is a heavy metal at room temperature and pressure. As a basic chemical element, it can combine with various other substances to form numerous lead compounds. Lead has been poisoning workers for thousands of years. Lead can damage the central nervous system, cardiovascular system, reproductive system, hematological system, and kidneys. When absorbed into the body in high enough doses, Lead can be toxic. In addition, workers' Lead exposure can harm their children's development.

Short-term (acute) overexposure—as short as days—can cause acute encephalopathy, a condition affecting the brain that develops quickly into seizures, coma, and death from cardio- respiratory arrest. Short-term occupational exposures of this type are highly unusual but not impossible. Extended, long-term (chronic) overexposure can result in severe damage to the Central Nervous System, particularly the brain. It can also damage the blood-forming, urinary, and reproductive systems.

There is no sharp dividing line between rapidly developing acute effects of Lead and chronic effects that take longer to develop.



REPRODUCTIVE RISKS

Lead is toxic to both male and female reproductive systems. Lead can alter the structure of sperm cells and there is evidence of miscarriage and stillbirth in women exposed to lead or whose partners have been exposed. Children born to parents who were exposed to excess Lead levels are more likely to have birth defects, mental retardation, behavioral disorders, or to die during the first year of childhood.

WORKER EXPOSURE

Lead is most commonly absorbed into the body by inhalation. When workers breathe in Lead as a dust, fume, or mist, their lungs and upper respiratory tract absorb it into the body. They can also absorb Lead through the digestive system if it enters the mouth and is ingested.

A significant portion of the Lead inhaled or ingested gets into the bloodstream. Once in the bloodstream, Lead circulates through the body and is stored in various organs and body tissues. Some of this Lead is filtered out of the body quickly and excreted, but some remains in the blood and tissues. As exposure continues, the amount stored will increase if the body absorbs more Lead than it excretes. The Lead stored in the tissue can slowly cause irreversible damage, first to individual cells, then to organs and whole-body systems.

In construction, Lead is used frequently for roofs, cornices, tank linings, and electrical conduits. In plumbing, soft solder, used chiefly for soldering tinsplate and copper pipe joints, is an alloy of Lead and tin. Soft solder has been banned for many uses in the United States. In addition, the Consumer Product Safety Commission bans the use of Lead-based paint in residences.

Because Lead-based paint inhibits the rusting and corrosion of iron and steel, however, Lead continues to be used on bridges, railways, ships, lighthouses, and other steel structures, although substitute coatings are available.

Construction projects vary in their scope and potential for exposing workers to Lead and other hazards. Projects such as removing paint from a few interior residential doors may involve limited exposure. Other projects, however, may involve removing or stripping substantial quantities of Lead-based paints on large bridges and other structures.

Workers potentially at risk for Lead exposure include those involved in iron work; demolition work; painting; lead-based paint abatement; plumbing; heating and air conditioning maintenance and repair; electrical work; and carpentry, renovation, and remodeling work. Plumbers, welders, and painters are among those workers most exposed to Lead. Significant Lead exposures also can arise from removing paint from surfaces previously coated with Lead-based paint such as bridges, residences being renovated, and structures being demolished or salvaged. With the increase in highway work, bridge repair, residential lead abatement, and residential remodeling, the potential for exposure to Lead-based paint has become more common.

Workers at the highest risk of Lead exposure are those involved in:

- Abrasive blasting; and
- Welding, cutting, and burning on steel structures.



Other operations with the potential to expose workers to Lead include:

- Lead burning;
- Using Lead-containing mortar;
- Power tool cleaning without dust collection systems;
- Rivet busting;
- Cleanup activities where dry expendable abrasives are used;
- Movement and removal of abrasive blasting enclosures;
- Manual dry scraping and sanding;
- Manual demolition of structures;
- Heat-gun applications;
- Power tool cleaning with dust collection systems; and
- Spray painting with Lead-based paint.



SAFETY INSPECTIONS

PURPOSE

To provide a guide for conducting regular site safety inspections, ensuring the safety of all workers and visitors on the jobsite, and making sure corporate and regulatory standards are being adhered to.

TYPES OF INSPECTIONS

There are several types of jobsite safety inspections Selzer-Ornst will use. A description of each, along with the areas of responsibility for personnel, are as follows:

- 1) **Periodic Inspections** - These types of inspections shall be made on a weekly basis by job site supervisors and on a quarterly basis by the project manager.
- 2) **Intermittent Inspections** - These inspections shall be unannounced and be made by a Safety Consultant.
- 3) **Continuous Inspections** - Each jobsite supervisor shall make daily inspections of their work areas a part of their everyday duties. These inspections should be designed to include communication with specific employees in the workplace rather than just a site check. This type of inspection will assist the supervisor in looking for unsafe acts or conditions on a routine basis.

POLICY

Management (including external resources assigned by management) shall conduct a periodic Site Safety Inspection using the Site Safety Evaluation (Exhibit "A") as a guide.

After the safety visit is completed, management will document the visit findings in writing or utilize the Site Safety Evaluation form. A copy will be provided to the jobsite superintendent and/or the foreman. The Site Safety Evaluation may also be filled out at the time of the visit, or the "inspector" may wait until he/she is back at the office to fill it out. The Site Safety Evaluation will be distributed to the appropriate individuals for review. (E.g., management, project managers, human resources, etc.)

Those members of project supervision who are responsible for follow-up corrective action relative to the findings on the Site Safety visit shall ensure that all corrective action has been performed in a timely manner.



Exhibit "A" - SITE SAFETY EVALUATION

DATE: _____ TIME: _____

PROJECT: _____

SUPERVISOR: _____

LOCATION: _____

ADMINISTRATION	<u>Yes</u>	<u>No</u>	<u>N/A</u>
First Aid Kit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SDS/Safety Manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aware of 1st Aid/CPR onsite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety Mtgs. Documented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OSHA & Other Postings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TOOLS - Hand & Power	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Guarding in Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and Maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PPE	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Eye & Face Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety Work Boots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ear Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hand Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STAIRWAYS & LADDERS	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Guardrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handrails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ladder condition/setup OK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FALL PROTECTION	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Harnesses/Lanyard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning Lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Guardrails installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wall Openings Protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floor Openings Protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ELECTRICAL	<u>Yes</u>	<u>NO</u>	<u>N/A</u>
Cord Condition/Grounding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Panel Covers In Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lockout/Tagout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temp Lighting w/cages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GFCI Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FIRE PREVENTION	<u>Yes</u>	<u>No</u>	<u>N/A</u>
General Housekeeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Extinguishers Provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No Smoking Signs Posted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Approved Safety Gas Cans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SCAFFOLDING	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Scaffold Setup/Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scaffold Planking/Toe boards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scaffold Stability/Ties/Base	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobile Scaffolds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EQUIPMENT	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Scissors Lifts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boom Lifts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forklifts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cranes & Heavy Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MISCELLANEOUS	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Competent Persons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Welding and cutting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concrete and Masonry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respiratory Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Supervisor's Signature:

Evaluator's Signature:

COMMENTS: (on back if necessary)



SITE SAFETY EVALUATION

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Issues / Action Needed (attach photos if taken to next page)

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CONFINED SPACE ENTRY

POLICY

It is the policy of Selzer-Ornst Construction Company that **no employee is permitted to physically enter into a permit required confined space** or to function as an attendant during a confined space entry.

CONFINED SPACE DEFINITION

A confined space meets all the following criteria:

1. Is large enough and so configured that an employee can bodily enter and perform assigned work.
2. Has limited means of entry and exit.
3. Is not designed for continuous employee occupancy.

Examples: Boilers, Degreasers, Furnaces, Pipelines, Pits, Pumping Stations, Reaction or Process Vessels, Mills, Septic Tanks, Sewage Digesters, Silos, Storage Tanks, Barges, Sewers, Utility Vaults, Manholes, Trenches, Shafts, Caissons, Attics, Crawl Spaces.

A permit-required confined space will also have one or more of the following characteristics:

1. Does not have adequate, natural, or mechanical ventilation, and contains, or has the potential to contain, a hazardous atmosphere by the presence of flammable vapors/gases in excess of the OSHA PEL (or less than 19.5% or over 23.5% oxygen).
2. Contains material with the potential for engulfment of an entrant.
3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or a floor, which slopes downward and tapers to a smaller cross-section.
4. Contains any other recognized safety or health hazards to the entrant.

Note: This may be the physical or chemical hazard that the entrant brings into the confined space. Examples would be cutting, welding or brazing operations, power tools, methyl ethyl ketone solvent (MEK) used for PVC cleaning, degreasers, etc.



ELECTRICAL SAFETY

PURPOSE

To eliminate unsafe conditions involving electrical equipment and tools, including: faulty insulation, improper grounding, loose electrical connections, defective parts, ground faults in equipment and unguarded live electrical parts.

POLICY

General Requirements:

- It is the policy of Selzer-Ornst that **no** employee is permitted to work on or come in contact with energized / live circuits.
- Each project must provide a safe place to work for every employee, which includes protecting the employee from electrical hazards such as fault currents to ground.
- When an electrical ground fault occurs, the current flows through the path with minimum impedance to ground. It is imperative that an employee does not inadvertently become the conductor of the current.
- There are two approved methods of protecting the worker from a ground fault. These methods are in addition to other requirements for equipment grounding conductors. Either method may be used. The approved methods are:
 - Use of ground fault circuit interrupters (GFCI).
 - An assured equipment-grounding conductor program.

GROUND FAULT CIRCUIT INTERRUPTER (GFCI)

The two major aspects in the effective use of GFCI's are:

- Attention shall be given to the proper installation and maintenance of GFCI's within the requirements of the National Electric Code (NEC). The system shall be tested prior to being activated into service and the test results documented and kept on file.
- If fault trip-out occurs after the circuit has been tested and activated into service, a thorough investigation must be made to determine the cause. The necessary repairs or corrections shall be made before re-using. Application of a Silicone solution may be helpful if the fault trip-out is due to excessive moisture.

In purchasing GFCI's, the specifications shall state that GFCI's shall conform to Underwriters Laboratories Standard 943, "Ground Fault Circuit Interrupters."

Each circuit protected by a circuit breaker GFCI requires its own neutral conductor.

Receptacle type GFCI's may be used on common neutral systems and where receptacles are more than 250 feet from the breaker.



ASSURED EQUIPMENT GROUNDING POLICY

The major aspects in the establishment of an effective program are:

- To establish and implement a program to reduce the potential of injuries caused by electric shock from cord sets, receptacles, and equipment connected by cord and plug.
- To meet the requirements of local, state, and federal rules and regulations.

It is recognized that in order to prevent injury from a ground fault, the integrity of the grounding system must be maintained at all times. To achieve this, a program of inspection and testing shall be implemented.

The project supervisor shall be responsible for the inspection and testing of each cord set, electric tool, and piece of electrical equipment and receptacle:

- Before first use.
- Before equipment is returned to service following repairs.
- Before equipment is used after any incident which can be reasonably suspected to have caused damage.
- Every three months.

The quarterly inspections shall be the responsibility of the project supervisor. Each cord set, electric tool, receptacle, and piece of electrical equipment shall be tested to ensure a continuous ground circuit, and that equipment grounding conductor is connected to its proper terminal. The testing equipment shall be capable of testing for ground conductor continuity and resistance line fault, and proper connection of conductors to terminals.

Receptacles that are a permanent part of the wiring of permanent buildings are excluded from the quarterly testing and inspection requirements of this procedure.

Before use, each cord set, electric tool, or piece of electrical equipment shall be visually inspected daily for signs of damage. They shall be inspected for signs of frayed or damaged insulation, crushed cable, loose or missing covers or screws, missing ground prongs on plugs, and other similar substandard conditions. Equipment found to be damaged or defective shall not be used until repaired, and equipment suspected of being damaged or defective shall be inspected and tested prior to using.

To verify inspection and testing, a piece of color-coded tape will be affixed to each item inspected by the inspector. Four colors of tape shall be used. The expiration date of each inspection period may be pre-printed on the tape to avoid conflicts with other similar color-coded tapes on the project. The color code system is as follows:

Color Coding Scheme (Quarterly)

January 1 through March 31	White
April 1 through June 30.	Green
July 1 through September 30.	Red
October 1 through December 31.	Orange

The inspection tape shall not be used for any other purpose. The project supervisor shall strictly control use of tape. Color scheme may vary according to region. Only the electrical inspectors are authorized to remove inspection tape. Unauthorized removal or defacing of inspection tape shall be cause for disciplinary action.



Any electrical tool, cord set, or piece of electrical equipment which bears an expired inspection sticker, or no inspection sticker shall be considered defective and is not to be used until it is inspected.

It shall be the responsibility of each subcontractor to ensure that his electric tools and electrical equipment are tested and documented.

DAMAGED EXTENSION AND POWER TOOL CORDS

Extension and power tool cords shall be visually inspected daily. Any damaged cords must be removed from service immediately. (Damaged sheathing, missing ground pins, exposed internal conductors, etc.)

If the cut or torn area is more than one-half inch in length and/or the conductor insulation is cut, cracked, mashed or has any bare copper showing, the cord is to be cut at the damaged area, tagged “out of service” (noting the problem), and sent back to the shop for repair.

If the insulation is pulled back away from either end connector (allowing the conductors to show insulation may be good), the cord must be tagged “out of service” (noting the problem) and sent back to the shop for repair. Or, if you are qualified, you may field repair this situation so that the outer insulation is under the strain relief section of the connector.

OVERHEAD POWER LINES

Selzer-Ornst employees are prohibited from working within close proximity to overhead power lines. The following minimum clearance distances shall be maintained from the following nominal, kV, AC power lines.

TABLE A—MINIMUM CLEARANCE DISTANCES

Voltage (nominal, kV, alternating current)	Minimum clearance distance (feet)
up to 50	10
over 50 to 200	15
over 200 to 350	20
over 350 to 500	25
over 500 to 750	35
over 750 to 1,000	45
over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

Note: The value that follows "to" is up to and includes that value. For example, over 50 to 200 means up to and including 200kV.



EXCAVATION AND TRENCHING

POLICY

It is the policy of Selzer-Ornst that **no** employee is permitted to physically enter an excavation or trench on any jobsite unless the excavation complies with OSHA guidelines and is provided with a protective system (e.g., shoring, benching, sloping, trench boxes, etc.).

DEFINITIONS

"Excavation" means any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.

"Cave-in" means the separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.

"Protective system" means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.



FALL PROTECTION PROGRAM

OBJECTIVE

The objective of the Selzer-Ornst Fall Protection Program is to identify and evaluate fall hazards to which employees will be exposed, and to provide specific training as it relates to the protective measures of the standard.

POLICY

It is the policy of Selzer-Ornst to protect its employees from occupational injuries by implementing and enforcing safe work practices, and appointing a competent person(s) to manage the Fall Protection Program. The Selzer-Ornst Fall Protection Program shall comply with the OSHA requirements. A copy of the OSHA Fall Protection Standard shall be made available to all employees, and may be obtained from Selzer-Ornst.

ASSIGNMENT OF RESPONSIBILITY

MANAGEMENT

It is the responsibility of Selzer-Ornst to provide fall protection to affected employees, and to ensure that all employees understand and adhere to the procedures of this plan and follow the instructions of Selzer-Ornst management.

It is the responsibility of Selzer-Ornst, as the Fall Protection Program Manager, to implement this program by:

- Performing routine safety checks of work operations.
- Enforcing Selzer-Ornst safety policy and procedures.
- Correcting any unsafe practices or conditions immediately.
- Training employees and supervisors in recognizing fall hazards and the use of fall protection systems.
- Maintaining records of employee training, equipment issue, and fall protection systems used at Selzer-Ornst jobsites.
- Investigating and documenting all incidents that result in employee injury.

EMPLOYEES

It is the responsibility of all employees to:

- Understand and adhere to the procedures outlined in this Fall Protection Program
- Follow the instructions of Selzer-Ornst management.
- Bring to management's attention any unsafe or hazardous conditions or practices that may cause injury to either themselves or any other employees.
- Report any incident that causes injury to an employee, regardless of the nature of the injury.



TRAINING

All employees who may be exposed to fall hazards are required to receive training on how to recognize such hazards and how to minimize their exposure to them. Employees shall receive training as soon after employment as possible, and before they are required to work in areas where fall hazards exist.

A record of employees who have received training and training dates shall be maintained by a field superintendent or job foreman.

Training of employees by the field superintendent or job foreman shall include:

- Nature of fall hazards employees may be exposed to.
- Correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems.
- Use and operation of controlled access zone, guardrail, personal fall arrest, safety net, warning line, and safety monitoring systems.
- Correct procedures for equipment and materials handling, storage, and erection of overhead protection.
- Requirements of the OSHA Fall Protection Standard, 29 CFR 1926, Subpart M.

Additional training shall be provided on an annual basis, or as needed when changes are made to this Fall Protection Program, an alternative Fall Protection Plan, or the OSHA Fall Protection Standard.

CONTROLLED ACCESS ZONES

Any employee who is working within 6' of a leading edge that is (4' - Shop), (6' - Jobsite), or more above lower levels, shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest systems.

All other workers are prohibited from entering Controlled Access Zones.

Controlled access zones shall be defined by control lines consisting of ropes, wires, tapes, or equivalent material, with supporting stanchions, and shall be:

1. Flagged with a high-visibility material at six (6) foot intervals.
2. Rigged and supported so that the line is between 39 and 45 inches (including sag) from the walking/working surface.
3. Strong enough to sustain stress of at least 200 pounds.
4. Extended along the entire length of an unprotected or leading edge.
5. Parallel to the unprotected or leading edge.
6. Connected on each side to a guardrail system or wall.
7. Erected between six (6) feet and 25 feet from an unprotected edge.



FALL PROTECTION SYSTEMS

COVERS

All covers shall be secured to prevent accidental displacement. Covers shall be color-coded or bear the markings “**HOLE**” or “**COVER**”.

Covers located in roadways shall be able to support twice the axle load of the largest vehicle that might cross them. Covers shall be able to support twice the weight of employees, equipment, and materials that might cross them.

GUARDRAIL SYSTEMS

Guardrail systems shall be erected at unprotected edges, ramps, runways, or holes where it is determined by Selzer-Ornst that erecting such systems will not cause an increased hazard to employees. The following specifications will be followed in the erection of guardrail systems.

Top rails shall be:

1. At least 1/4 inch in diameter (steel or plastic banding is unacceptable).
2. Flagged every six (6) feet or less with a high visibility material if wire rope is used.
3. Inspected as frequently as necessary to ensure strength and stability.
4. 42 inches (plus or minus three (3) inches) above the walking/working level.
5. Adjusted to accommodate the height of the stilts if they are in use.

Midrails, screens, mesh, intermediate vertical members, and solid panels shall be erected in accordance with the OSHA Fall Protection Standard.

Gates or removable guardrail sections shall be placed across openings of hoisting areas or holes when they are not in use to prevent access.

PERSONAL FALL ARREST SYSTEMS

Personal fall arrest systems shall be issued to and used by employees as determined by Selzer-Ornst and may consist of anchorage, connectors, body harness, deceleration device, lifeline, or suitable combinations. Personal fall arrest systems shall:

1. Limit the maximum arresting force to 1800 pounds.
2. Be rigged so an employee cannot free fall more than six (6) feet or contact any lower level.
3. Bring an employee to a complete stop and limit the maximum deceleration distance traveled to three and a half (3 ½) feet.
4. Be strong enough to withstand twice the potential impact energy of an employee free falling six (6) feet (or the free fall distance permitted by the system, whichever is less).
5. Be inspected prior to each use for damage and deterioration.
6. Be removed from service if any damaged components are detected.

All components of a fall arrest system shall meet the specifications of the OSHA Fall Protection Standard and shall be used in accordance with manufacturer’s instructions.



1. The use of non-locking snap hooks is prohibited.
2. Dee-rings and locking snap hooks shall:
 - a. Have a minimum tensile strength of 5000 pounds.
 - b. Be proof tested to a minimum tensile load of 3600 pounds without cracking, breaking, or suffering permanent deformation.

Lifelines shall be:

1. Designed, installed, and used under the supervision of Selzer-Ornst.
2. Protected against cuts and abrasions.
3. Equipped with horizontal lifeline connection devices that are capable of locking in both directions on the lifeline when used on suspended scaffolds or similar work platform that have horizontal lifelines that may become vertical lifelines.

Self-retracting lifelines and lanyards must have ropes and straps (webbing) made of synthetic fibers, and shall:

1. Sustain a minimum tensile load of 3600 pounds if they automatically limit free fall distance to two (2) feet.
2. Sustain a minimum tensile load of 5000 pounds (includes rip, stitch, tearing, and deforming lanyards).

Anchorage must support at least 5000 pounds per person attached and shall be:

1. Designed, installed, and used under the supervision of the field superintendent or job foreman.
2. Capable of supporting twice the weight expected to be imposed on it.
3. Independent of any anchorage used to support or suspend platforms.

POSITIONING DEVICE SYSTEMS

Body harness systems shall be set up so that an employee can free fall no farther than two (2) feet and shall be secured to an anchorage capable of supporting twice the potential impact load or 3000 pounds, whichever is greater. Requirements for snap hooks, dee-rings, and other connectors, are the same as detailed in this Program under *Personal Fall Arrest Systems*.

TASKS AND WORK AREAS REQUIRING FALL PROTECTION

Unless otherwise specified, the field superintendent and/or job foreman shall evaluate the worksite(s) and determine the specific type(s) of fall protection to be used in the following situations.

HOIST AREAS

Guardrail systems, or personal fall arrest systems, will be used in hoist areas when an employee may fall six (6) feet or more. If guardrail systems must be removed for hoisting, employees are required to use a personal fall arrest system.

HOLES

Covers or guardrail systems shall be erected around holes (including skylights) that are six (6) feet or more above lower levels. If covers or guardrail systems must be removed, employees are required to use a personal fall arrest system.



LEADING EDGES

Guardrail systems, safety net systems, or personal fall arrest systems shall be used when employees are constructing a leading edge that is six (6) feet or more above lower levels. An alternative Fall Protection Plan shall be used if the field superintendent and/or job foreman determine that the implementation of conventional fall protection systems is infeasible or creates a greater hazard to employees. All alternative Fall Protection Plans for work on leading edges shall:

1. Be written specific to the jobsite needs.
2. Include explanation of how conventional fall protection is infeasible or creates a greater hazard to employees.
3. Explain what alternative fall protection will be used for each task.
4. Be maintained in writing at the jobsite by the field superintendent and/or job foreman.
5. Meet the requirements of 29 CFR 1926.502(k).

WALL OPENINGS

Guardrail systems, safety net systems, or a personal fall arrest system, will be provided to employees working on, at, above, or near wall openings when the outside bottom edge of the wall opening is six (6) feet or more above lower levels, and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface. The type of fall protection to be used will be determined by the field superintendent and/or job foreman.

RAMPS, RUNWAYS, AND OTHER WALKWAYS

Employees using ramps, runways, and other walkways six (6) feet or more above the lower level shall be protected by guardrail systems.

PROTECTION FROM FALLING OBJECTS

When guardrail systems are in use, the openings shall be small enough to prevent passage of potential falling objects. The following procedures must be followed by all employees to prevent hazards associated with falling objects.

- No materials (except masonry and mortar) shall be stored within four (4) feet of working edges.
- Excess debris shall be removed regularly to keep work areas clear.
- During roofing work, materials and equipment shall be stored no less than six (6) feet from the roof edge unless guardrails are erected at the edge.
- Stacked materials must be stable and self-supporting.
- Canopies shall be strong enough to prevent penetration by falling objects.
- Toe boards erected along the edges of overhead walking/working surfaces shall be:
 - Capable of withstanding a force of at least 50 pounds.
 - Solid with a minimum of three and a half (3 1/2) inches tall.
 - No more than one quarter (1/4) inch clearance above the working surface.
- Equipment shall not be piled higher than the toe board unless sufficient paneling or screening has been erected above the toe board.



WELDING AND CUTTING

PURPOSE

To provide guidelines for the safe operation of welding and cutting equipment and to itemize some of the fundamental hazards inherent with the use of this equipment. Welding and cutting may only be performed by properly trained personnel.

DEFINITIONS

Industrial Gases

Oxygen – Oxygen itself is not flammable, but the presence of pure oxygen accelerates the combustion reaction. Oil and grease in the presence of oxygen become highly explosive. Oxygen must not be allowed to contact petroleum-based substances.

Fuel Gases

Acetylene – Acetylene is an unstable gas when compressed above 15 psig. Acetylene cylinders are filled with a porous material and saturated with liquid acetone. Acetylene, when pumped into the cylinder, dissolves in the acetone and is held in a stable condition. If the acetylene cylinder is stored or used in the horizontal position, the acetone may leak out, leaving an explosive mixture of acetylene. It is for this reason, that all acetylene cylinders must be stored and used in the upright or vertical position.

MAPP Gas – MAPP is a stabilized mixture of methyl acetylene and has considerably fewer tendencies to backfire than acetylene. Maximum allowable use pressure is 94 psig verses 15 psig for acetylene.

SETTING UP EQUIPMENT

All operators of welding and/or cutting equipment must be trained to operate the equipment they will use. Safety procedures must be reviewed and understood prior to use of this equipment.

Second stage of regulator must be closed before opening the cylinder valve.

Open valves 1/4 turn only on fuel gas cylinders (propane, acetylene, and natural gas). Open oxygen cylinder valve wide open. Keep valve wrench in place during use.

When using acetylene, do not exceed 15 psig on the torch side of the gauge. Reverse flow check valves must be used at the regulator end on both fuel and oxygen hoses. It is strongly recommended that they also be used at the torch end of the lines. These valves are inexpensive and provide a great degree of insurance against the possibility of mixings gases in the hose and regulator, which could result in an explosion.

Remember that you never stand directly in front of or in the back of a regulator when opening the cylinder valve, and always check for leaks on all threaded connections. If valve handles are missing and it is necessary to use a wrench to open the valves, the wrench must remain in place on the valve while the unit is in use.



LIGHTING THE TORCH

Open the oxygen valve on the torch handle and adjust the oxygen regulator to the desired pressure. Allow the gas to flow a minimum of 10 seconds for every 50 feet of hose. Now close the oxygen valve on the torch.

With the regulator valve backed out, open the fuel valve on the cylinder. Remember, for acetylene the valve is only opened a maximum of one full turn. Open the fuel gas valve on the torch and adjust the fuel gas regulator to the desired setting. Purge the lines the same way as described above for oxygen. Now, close the fuel valve on the torch.

Hold the torch in one hand and spark lighter in the other. Open the torch fuel valve approximately one-half turn and ignite the gas. Keep opening the fuel valve until the flame stops smoking and leaves the end of the tip about 1/8". Then slightly reduce the fuel supply to bring the flame back to the tip.

Open the oxygen fuel valve on the torch until a bright neutral flame is reached. If you experience a backfire or flashback, immediately turn off the oxygen valve and then the fuel valve. Begin again by holding the torch in one hand and the spark lighter in the other and proceed from there.

SHUTTING OFF THE TORCH

First, shut off the torch oxygen valve and then shut off the torch fuel valve. If this procedure is reversed, a "pop" may occur which will cause carbon to form in the torch. Now close both cylinder valves. Open the torch oxygen valve to release the pressure in the system. Now close the torch oxygen valve and release the adjusting screws on the oxygen regulator. Now do the same for the fuel valves.

SAFETY CONSIDERATIONS

The following safety procedures need to be thoroughly re-emphasized.

- Never use oil or grease on any fittings or apparatus in contact with oxygen.
- Blow out the cylinder valves before attaching the regulators to the cylinders.
- Release the adjusting screw prior to opening the cylinder valves.
- Never stand directly in front of or in the back of a regulator when opening the cylinder valve; stand so that the cylinder valve is between you and the regulator.
- Always open the cylinder valve slowly. If a wrench is used, keep it on the valve.
- An acetylene cylinder should never be opened more than one full turn.
- Always purge the oxygen and fuel passages individually before lighting the torch.
- Follow the procedures as outlined. Do not take short cuts or use defective equipment.
- Never begin any welding or cutting without the proper permits.
- Always check to see that you have appropriate fire protection equipment immediately available before doing any welding or cutting.
- Welders must not wear flammable or disposable-type clothing.
- No lighters shall be used to ignite torch.



ARC WELDING AND CUTTING

PROTECTIVE CLOTHING

Welders must wear head and eye protection that is required in the area in which they are working. They must wear appropriate welding helmets, long sleeve shirts, leathers, and welder's gloves. If grinding, chipping, or buffing is done, a face shield must be worn. If respirators are required, these also must be used. As a minimum, fitters who are working with welders should wear long sleeve shirts, leathers, welder's gloves, and appropriately tinted eye goggles or glasses with side shields.

Heli-arc, MIG (Metallurgical Inert Gas), and TIG (Tungsten Inert Gas) welding operations emit intense ultraviolet radiation which can result in third degree burns to exposed skin areas as well as painful flash burns to the eyes. Welding hoods must be checked periodically to ensure they are tight. Arc gouging generally produces a great deal of slag and hot metal sparks. Additional personal protective equipment such as boots, Nomex suits, and mini goggles may be appropriate.

EQUIPMENT AND INSPECTION

Equipment must be industrial rated, in good condition, and conform to OSHA requirements governing application, installation, and operation of arc welding and cutting equipment. Some, but not all the OSHA requirements, are repeated in this standard for emphasis. Trained and qualified people should make a complete preventative maintenance inspection at least annually. The last inspection date should be stenciled on the equipment. Open circuit voltage measurements should be made annually as well as stenciled and dated on the equipment.

Before each use, the following items must be inspected:

- All leads for broken or cut insulation.
- Electrode holders or broken insulator or worn holders.
- Oil and fuels on gas- or diesel-powered units.
- Both power and return leads to ensure they are the same lengths so that the return lead can be attached as close as possible to the work.

SHOP ELECTRIC HAZARDS

Almost all electric currents present some degree of potential shock hazard. Under optimum conditions, even welding voltages as low as 30 volts can be serious. Operating voltages listed on the ID nameplates are usually much lower than open circuit voltages. Open circuit voltages should not exceed 100 volts D.C. or 80 volts A.C.

A.C. or D.C. current can be used for welding and although both present serious shock hazard, A.C. is potentially more hazardous. Be certain not to use any equipment that is either wet now or has been drenched recently. Welding units that are powered by A.C. must be adequately grounded and in order to change polarity, the unit must be shut down.

Electrodes should never be changed with bare hands or wet gloves, or when standing on a wet floor or grounded surface. Whenever possible, welding receptacles should be interlocked so that the power must be shut off before the plug can be withdrawn. Cables that become worn enough to present a hazard must be replaced immediately. Keep welding cables away from power supply cables and high voltage wires and do not dip hot electrode holders in water to quick cool them. GFCI's cannot be used on welding machines with D.C. current.



INERT AND TOXIC GAS EXPOSURE

Many welding procedures require an inert gas such as argon and/or helium. These gases present an asphyxiation hazard and welders. Fitters need to keep these points in mind:

- Large diameter pipe will contain larger volumes of inert gas and greater potential problems.
- Temporary enclosures over field installations should be checked for oxygen level before use and monitored continuously when in use.
- Argon will register “hot” when checked using an explosion meter but will measure correctly when using an oxygen meter.

Welders should be familiar with special hazards related to rod coatings containing such items as cadmium, beryllium, and fluorides. Proper ventilation with these rods is very important. Lead, mercury, and cadmium require special written procedures. Ventilation in work areas must be checked and should conform to good safety practices. In enclosed areas, such as tanks, vessels, and columns, the Safety Manager should be contacted for appropriate ventilation rates.

STORAGE OF COMPRESSED GAS CYLINDERS

Cylinders shall be kept away from radiators and other sources of heat.

Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20 feet (6.1 m), or by a noncombustible barrier at least 5 feet (1.5 m) high having a fire-resistance rating of at least one-half hour.

Inside of buildings, cylinders shall be stored in a dry, well-ventilated, well-protected location. Assigned storage spaces shall be located where cylinders will not be knocked over or damaged by passing or falling objects, or subject tampering by unauthorized persons. Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards.

Empty cylinders shall have their valves closed.

Storage of empty cylinders shall be separated from charged cylinders. Storage racks shall be identified as compressed gas cylinder content and condition (“Full” or “Empty”).

Valve protection caps, where cylinder is designed to accept a cap, shall always be hand tight in place (except when cylinders are in use or connected for use).

Protection from solar radiant heat shall be provided where cylinders are directly exposed to sunlight.

Compressed gas cylinders shall be secured in an upright position at all times, including when being hoisted or transported.

- Retention chains or straps will be provided on storage racks and carts so that compressed gas cylinders will be secured against falling.
- Small, handheld compressed gas cylinders used for propane torches, gas detector test cylinders, etc. may be stored without use of retention chains or straps. However, attention should be given to storing these cylinders away from open flames or sources of heat and in a manner that will protect the cylinder from being knocked over or damaged by work activities.



COMPRESSED GAS CYLINDER STORAGE AREA.

- A 20-pound ABC rated fire extinguisher (minimum) shall be placed no closer than 25 feet but not further than 75 feet to fuel gas storage areas.
- Warning signs shall be conspicuously placed and shall read; ***“Danger – No Smoking, Matches, Open Lights, or Flames”*** or other equivalent wording.
- Inside buildings, cylinders (except those in actual use or attached for use) shall be limited to a total gas capacity of 2,000 cubic feet or 300 pounds of liquefied petroleum gas.

RECORDS

A Hot Work Permit must be issued for specific areas prior to the start of any welding, burning, grinding, or other hot work. The permit will be issued to the fire watch and will cover a one-shift period only. See Hot Work Policy. Selzer-Ornst superintendent or foreman will issue the Hot Work Permit. A copy of the Hot Work Permit will be kept at the jobsite office for the duration of the job and becomes part of the job records.



HOT WORK POLICY AND PROCEDURE

Selzer-Ornst is committed to a workplace free of injuries. Given the diverse nature of the operations, each operation will have a Hot Work policy in place that ensures that employees or visitors to the operation are protected from injuries as well as protecting the site property and product. It is required that all employees and visitors to our operations familiarize themselves with our policies and adhere to those policies.

POLICY

This policy was developed to ensure that the Hot Work will be managed, and proper actions are taken to prevent loss due to fire caused by Hot Work (cutting, soldering & welding, explosion or any other activity that involves an open flame). All affected Selzer-Ornst employees and contractors will receive the expectations of them to ensure compliance with this policy.

SCOPE

The provisions set out in this policy apply to any work done on site using a welder, torch, or any other facsimile and is to be strictly adhered to by all parties. The use of a Hot Work Permit when that hot work takes place away from the designated 'hot work' areas is mandatory.

Hot Work Permits must be issued before any hot work is performed within areas where combustible or flammable materials are present. These following areas include:

- Occupied buildings.
- Rooftops.
- Perimeters / exteriors of buildings.

RESPONSIBILITIES

MANAGEMENT

- To ensure that all employees involved in the Hot Work Process are trained (including Permit Authorizing Individual, Hot Work Operator, and Fire Watch).
- Conduct periodic audits to ensure compliance with this policy.
- Communicate any changes to this policy with respect to regulation and interpretation.
- Ensure that the policy is reviewed annually and is current with all applicable regulations.

PAI (PERMIT AUTHORIZING INDIVIDUAL)

- The field superintendent and/or jobsite foreman is designated as the Permit Authorizing Individual.
- Assess the work area and sign the Hot Work Permit PRIOR to work commencing.
- Post one part of permit at job site and place top copy of permit at the site designated area. (i.e., permit board).
- Have a designated Fire Watch during Hot Work. This could be anyone who has been trained as Fire Watch.
- Ensure sprinkler systems are in working order monitoring once per hour for minimum of 6 hours or longer as determined.
- After completion of Hot Work ensure continuous monitoring for minimum of 60 minutes or longer as determined by the PAI, as well continue by the PAI. This function may be performed by a designated Fire Watch, Plant Security Guard, Machine Operator, or maintenance person.



See attachment for a sample Hot Work Permit.

PERSON PERFORMING HOT WORK

The person doing the Hot Work must verify that a hot work permit is in place before starting Hot Work. The permit is issued for one location only and is valid for no longer than 24 hours. It may become invalid if conditions change (i.e., adverse environmental condition).

The person doing the Hot Work is responsible for complying with all rules and regulations concerning safe work practices and all requirements stated on the permit.

THE FIRE WATCH

- Assist Hot Work Operator in preparation and cleanup of Hot Work area.
- Wet down surrounding areas including lower floors and beams if applicable.
- Assess 35' radius for potential fire hazards.
- Be alert to any changes and identify changes or concerns to Hot Work Operator.



ATTACHMENT A – Hot Work Permit

Hot Work Permit		
Location: _____	Hot Work Area: _____	
Date of Hot Work Permit _____	Time of Permit _____	<input type="checkbox"/> am <input type="checkbox"/> pm to _____ <input type="checkbox"/> am <input type="checkbox"/> pm
Work Being Performed: _____		
Comments: _____		
LEL & O2 Monitoring Performed: <input type="checkbox"/> No <input type="checkbox"/> Yes-Results--LEL _____ (10% max.), & (O2) _____ (23.5 max) Monitoring shall include any area where gases may settle. Such as ceilings, floors, walls, partitions, drains, open pipes ends or cracks in such.		
Following Actions Are Required Before Performing "Hot Work"	Yes	N/A
1.) Safety Meeting and JSA Developed		
2.) Deactivate "Fire-Eye" monitors with the Control Room approval		
3.) All effected energy sources are Locked/Tagged-out		
4.) Area cleared of combustibles or combustibles properly protected		
5.) Fire Extinguishers are in the area of Hot Work		
6.) Fire Watch assigned – Name: _____		
Signature of Employee-Owner Performing Hot Work (PHW)	Date	Time
X		<input type="checkbox"/> am <input type="checkbox"/> pm
Signature of Employee-Owner Performing Hot Work (PHW)		
X		<input type="checkbox"/> am <input type="checkbox"/> pm
Signature of Supervisor		
X		<input type="checkbox"/> am <input type="checkbox"/> pm
Approval of Client to begin Hot Work (When Required)		
X		<input type="checkbox"/> am <input type="checkbox"/> pm
Actions Performed After Completing Hot Work	Yes	N/A
7.) Hot work area cleaned, and all hazards controlled.		
8.) Re-Activate "Fire Eye" monitors with Control room Approval		
Initials Authorizing Closing the Hot Work Permit (When Required)		
PHW _____ Date _____ Time _____ <input type="checkbox"/> am <input type="checkbox"/> pm	Supervisor _____ Date _____ Time _____ <input type="checkbox"/> am <input type="checkbox"/> pm	
FW _____ Date _____ Time _____ <input type="checkbox"/> am <input type="checkbox"/> pm	Client Rep _____ Date _____ Time _____ <input type="checkbox"/> am <input type="checkbox"/> pm	



FIRE PROTECTION

PURPOSE

To provide guidelines for fire protection and prevention in shops and on jobsites.

POLICIES

- Do not smoke except in an area designated by the foreman as a "Designated Smoking Area."
- Extinguish cigarettes, pipes, cigars, matches, etc. and dispose of in proper receptacles.
- Open containers of flammables must be kept closed when not in use.
- All flammable liquid storage areas shall be defined and posted as "No Smoking Areas."
- All bulk containers, drums, caddies, etc., that contain flammable liquids, shall be provided with a grounding system to prevent accumulation of static electrical charge.
- Approved safety cans shall be used for storing and dispensing small quantities of flammable liquids.
- Flammable liquid containers (safety cans) shall be maintained in good mechanical order.
- All flammable liquid containers shall be plainly marked or identified.
- The application of air pressure or compressed gas to any flammable liquid container for any purpose is strictly prohibited.
- Flammable liquids shall not be used or stored within 20 feet of sources of heat or ignition.
- Rags or other combustible materials used to absorb or wipe up flammable liquids shall be disposed of in approved receptacles. If rags are to be washed and reused, keep in covered metal container.
- All employees required to work with flammable liquid shall be thoroughly instructed in the proper use, handling, and storage of them.
- Gloves and aprons of non-absorbent materials shall be worn in any operation where clothing is likely to become wetted with flammables.



PURPOSE

To provide the basic guidelines necessary for a good housekeeping program which will be a part of the daily routine at each jobsite, with clean-up being a continuous operation.

POLICY

Good housekeeping is an important element of accident prevention and must be a primary concern to all superintendents and foremen. Good housekeeping will be planned at the beginning of a job and will be carefully supervised and followed through to the final clean-up. A clean and orderly workplace will not only contribute greatly to the prevention of accidents and injuries but will also lend itself to the proper utilization of available facility space.

HOUSEKEEPING

Responsibility for good housekeeping shall be assigned to each supervisor. If the size of the job and working force merit, a crew should be specifically detailed to continuously clean up. In any event, regardless of the size of the work force, housekeeping shall not be left un-done and left to someone else's discretion. Duties shall be assigned to one or more responsible persons.

Storage Areas: All materials stored in tiers will be secured to prevent sliding, falling, or collapse. Aisles and walkways shall be kept clear of loose materials and tools. Combustible material shall not be stored under stairways. Stored materials will not obstruct exits.

Work Areas: Clean up loose materials, waste, etc., immediately. This is especially important on scaffolds and in the vicinity of ladders, ramps, stairs, and electrical or mechanical equipment. Tools and loose materials shall be removed immediately if a hazard is created.

Areas Used by Personnel: Empty bottles, containers, papers, and discarded equipment shall not be allowed to accumulate where lunch breaks are taken on the jobsite. Trash disposal cans shall be provided with covers and their use enforced.

Oil and Grease: Spills of oil, grease, or other liquids shall be removed immediately, sprinkled with sand, or "Oil-Dry".

Flammable / Combustible Liquids: Proper storage methods and designated areas for flammable and combustible liquids shall be maintained. Necessary grounding and bonding required for specific materials should also be followed.

Disposal of Waste: An effective means of preventing litter is the provision of suitable receptacles for waste, scrap, etc. Combustible waste, such as oily rags, paper, etc., shall be stored in a safe place, such as a covered metal container, and disposed of regularly as a hazardous waste. All containers shall be labeled as to permissible contents.

Note: Common trash, which does not contain any hazardous waste, shall not be stored or disposed of in bags or containers marked for hazardous waste.



Lumber Storage: Protruding nails shall either be removed or bent over in such a way that they no longer present a risk. This shall be done as the hazard develops and not at a later time. Cleaned lumber shall be stacked in orderly piles. Workers performing this task shall wear heavy gloves and hard-soled work shoes.

Lighting: Adequate lighting shall be provided in or around all work areas, passageways, stairs, ladders, and other areas used by personnel.

Minimum Illumination Intensities in Foot-Candles

Foot-Candles	Area of Operation
5	General construction area lighting.
3	General construction areas, concrete placement, excavation and waste areas, access ways, active storage areas, loading platforms, refueling, and field maintenance areas.
5	Indoors: warehouse, corridors, hallways, and exit ways.
5	Tunnels, shafts, and general underground work areas: (Exception: minimum of 10 foot-candles is required at tunnel and shaft heading during drilling, mucking, and scaling. Bureau of Mines approved cap lights shall be acceptable for use in the tunnel heading).
10	General construction plant and shops (e.g., batch plants, screening plants, mechanical and electrical equipment rooms, carpenter shops, rigging lofts and active storerooms, mess halls and indoor toilets and workrooms).
30	First aid stations, infirmaries, and offices.

Unobstructed Access: There must be unobstructed access, at all times, to such areas as electrical panels, safety disconnect switches, fire extinguishers, emergency exits, etc.



LADDERS

PURPOSE

To provide guidelines for the selection and design of ladders for the use intended in the construction of job-built ladders, and in the maintenance, inspection, and proper use of ladders.

POLICY / GENERAL REQUIREMENTS

Ladders present one of the major hazards in construction work, and their improper use is the cause of serious injury. An analysis of accidents involving ladders revealed that the five principal causes of such accidents are:

- Ascending or descending improperly.
- Failure to secure ladder at top and/or bottom.
- Structural failure of the ladder itself.
- Carrying objects in hands while ascending or descending ladder.
- Employees leaning out from the ladder (overreaching).

LADDER SELECTION

Great care should be taken in the selection of the proper size and design of the ladder for the use intended.

STRAIGHT LADDERS (EXTENSION)

Ladders must be selected to be of sufficient length to extend not less than thirty-six inches (36") above any platform or landing which they serve and must be secured on top and/or bottom.

All portable straight ladders must be equipped with approved safety shoes.

All metal ladders are electrical conductors. Their use around electrical circuits of any type, or places where they may come in contact with such circuits, is not recommended. Metal ladders should be marked with signs reading "**CAUTION: DO NOT USE AROUND ELECTRICAL EQUIPMENT.**"

STEP LADDERS

Step ladders sometimes referred to as "A" frame ladders, must have positive locking spreaders which will be fully spread and locked when the ladder is in use.

Step ladders will not be used as straight ladders. They should be of sufficient height to preclude the necessity of employees using the top two steps of the ladder. Workers will not be allowed to work from the top two steps of a step ladder.

Step ladders shall be firm and well-constructed. Special care shall be taken when setting any ladder on grating. Often the feet of a step ladder can slip through the grating causing the ladder to fall. Step ladders shall be tied off or a worker shall hold the ladder when the user is 6 feet or more above the floor.

LADDER USAGE

The feet of the ladder shall be placed approximately one-quarter of its supported length away from the vertical plane of its top support, or a 75 degree angle. Only light, temporary work should be performed



from ladders. Workers should be cautioned frequently about the danger of trying to reach too far from a single setting.

Since, in most ladder applications, the weight of the worker is unevenly distributed over an area of approximately 3 inches long by 3 inches wide, any effort which tends to shift the balance of the worker should be discouraged. This includes using the upper torso for activities as pulling, pushing, prying, etc.

Ladders shall not be placed in front of doors that open toward the ladder unless the door is locked or otherwise guarded.

Ladder feet shall be placed on a firm base and the area in the vicinity of the bottom of the ladder shall be kept clear.

When using straight ladders, both the top and bottom of the ladder shall be secured to prevent displacement. Use ladder shoes, stakes, or other means of securing the ladder.

Ladders leading to landings, walkways, platforms, etc., must extend thirty-six inches above this point and must be securely fastened to prevent moving. Long ladders must be braced at intermediate points as necessary to prevent springing.

When ascending or descending ladders (climbing), workers are to face the ladder and use both hands to hold onto the side rails or rungs. If material must be moved from one level to another, a rope, block and tackle, or other means must be used. Materials are not to be hand carried on ladders.

Ladders must never be used in horizontal position as runways or scaffolds.

JOB-BUILT LADDERS

Selzer-Ornst Construction Company employees are prohibited from building and/or using job-built ladders in the shop or on the jobsite.

LADDER INSPECTION

Wood ladders must be inspected prior to each use and monthly for deterioration and damage. Close visual inspection is recommended in preference to load testing. Jumping on a ladder which is supported horizontally subjects the ladder to more severe loads than it is intended to carry and may result in damage that can lead to sudden failure while in use.

Metal ladders require frequent inspection. All parts should be checked for wear, corrosion, and structural failure.

No employee will be allowed to use for any reason any ladder that has broken, loose, or cracked rungs, side rails, or braces. Any ladder found in this condition will be removed from service immediately. All inspections shall be documented. If a ladder is defective, it must be tagged with language similar to "Do Not Use; Broken".

LADDER MAINTENANCE

Wood ladders should be periodically treated with a clear preservative such as varnish, shellac, or linseed oil. Ladders must not be painted as painting covers up structural defects. All metal fittings on wood ladders should be carefully checked for rusting or corrosion.

Metal ladders should have the rungs cleaned to prevent accumulation of materials that might destroy their non-slipping properties and all metal fittings should be carefully checked for rust and corrosion.



When not in use, all types of ladders shall be stored under suitable cover protected from the weather. Ladders stored horizontally should be supported at both ends and at intermediate points to prevent sagging of the middle section, which tends to loosen the rungs and warp the rails. A rope should be spliced onto one of the top rungs of a ladder to provide a ready method to secure the ladder or the ladder to the support.



LOCKOUT / TAGOUT

PURPOSE

To establish the minimum required procedures for lockout and tagout of energy sources. This policy shall be used to provide the maximum safe working conditions for employees performing maintenance or service activities where the unexpected energization, start up, or release of stored energy could occur and cause injury. All potentially hazardous energy shall be isolated, locked, and tagged out.

POLICY

All employees shall be instructed in the safety significance of lockout and tagout procedures. Any subcontractors performing work on Selzer-Ornst property shall have a qualified person trained in Lockout Tagout. Documentation of such training may be requested by the Selzer-Ornst project superintendent.

POLICY FOR LOCKOUT / TAGOUT

A survey shall be made by Selzer-Ornst supervision to locate and identify all energy sources to be certain which switch, valve, or other energy isolating devices apply to the equipment to be locked or tagged out. More than one energy source (electrical, mechanical, and/or others) may be involved. Questionable energy source problems shall be resolved before job authorization is obtained and any lockout / tagout commences.

Selzer-Ornst shall supply lockout locks and tags. All subcontractors shall use their own locks and tags for this procedure.

All locks shall be individually keyed with a unique number engraved on the face of the lock and keys.

All locks shall have two and only two keys. One key will be issued to the Superintendent / Foreman with the lock. The second key will be placed in a secured area under the supervision of Selzer-Ornst supervisor. Locks that are damaged and/or found with more than two keys, or only one, will be removed from service and will be destroyed.

A master log of all locks issued will be kept at the Selzer-Ornst facility. The log will show which locks (by number) are issued to whom (by name and company, Exhibit "A").

SEQUENCE OF LOCKOUT PROCEDURE

1. Notify all affected employees that a lockout / tagout is required and the reason, therefore.
2. If the equipment is operating, shut it down by normal procedures.
3. Operate the switch, valve or other energy-isolating device so that all energy sources are isolated from the equipment. Stored energy shall be dissipated or restrained by methods such as grounding, repositioning, blocking, or bleeding down.
4. Lockout and tagout the isolating devices with an assigned individual lock. The Superintendent / Foreman shall also sign and date the tag.
5. Ensuring that no personnel are exposed, operate the operating controls to make certain the equipment will not operate.
6. Return operating controls to neutral or "off" position after the test.
7. The equipment is now locked and tagged out.



8. On completion of work or shift, ensure all tools and equipment are clear. Leave controls in off or neutral position. Remove all locks and tags and return them to the shop office.

PROCEDURE INVOLVING MORE THAN ONE PERSON

If more than one person is required to work on the lockout/TagOut equipment, each shall place his/her assigned lock and tag on the energy-isolating device.

RULES FOR USING LOCKOUT/TAGOUT PROCEDURE

All equipment shall be locked and tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy-isolating device bearing a lock and/or tag. To do so shall result in severe disciplinary action, up to and including termination.

TRAINING

Training will be provided to ensure that the purpose and functions of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy control procedures are acquired by employees.

Each authorized employee will receive training in the recognition of applicable hazardous energy sources, details about the type and magnitude of the energy available in the workplace, and the methods and means necessary to isolate and control those energy sources.

PERIODIC INSPECTION

A periodic inspection of each energy control procedure must be performed annually to ensure that these procedures continue to be implemented properly and that the employees are familiar with their responsibilities under these procedures. Any deviations or procedural inadequacies that are observed during these inspections must be immediately corrected.

Inspections will be conducted annually (each twelve-month period) and must be verified. The inspection will be done by an authorized employee on machinery or equipment that is being worked on under the lockout tag out procedure.

Each inspection, including any observed discrepancies or violations of the lockout/tagout program, shall be documented and certified by the inspector on the Lockout Tagout Program Periodic Inspection Certification form. Exhibit "B"

A complete review of the lockout/tagout program will be conducted on a no less than annual basis. Part of this review will be verification that all discrepancies or violations observed during the annual inspections were immediately addressed by additional employee training, changes to procedures, equipment modifications, or other appropriate means.



RESPONSIBILITIES

Role	Description
General Superintendent	<ul style="list-style-type: none"> • Maintaining this procedure as necessary. • Provide technical support as necessary.
Field Superintendent	<ul style="list-style-type: none"> • Ensuring this procedure is implemented. • Providing technical support to field staff/subcontractors.
Electrician Foreman	<ul style="list-style-type: none"> • Implement applicable provisions of this procedure. • Ensure appropriate and adequate LOTO devices are available. • Ensure training is completed as required. • Address issues raised by personnel.
Electrical/Authorized Field Staff	<ul style="list-style-type: none"> • Complete required training. • Performing hazardous energy control in compliance with the operation-specific program, procedures, and detailed training provided. • Be aware of issues that might arise, putting a stop to work, and address concerns prior to performing that work.
Affected Individuals	<ul style="list-style-type: none"> • Complete required training. • Not attempt to start up or remove a lock from machines, equipment, processes, or circuits.

RULES FOR EMERGENCY REMOVAL / REMOVING ABANDONED LOCK OUT/TAG OUT

A bolt cutter [or equivalent means resulting in the destruction of the lock] must be used to remove the lock. The employer of the authorized employee may remove an abandoned lockout device as long as a documented procedure is followed.

This procedure, at a minimum, must include:

1. Verification by the employer that the [authorized] employee [who applied the device] is not on site;
2. [All] reasonable efforts to contact the authorized employee to inform him or her that the lock has been removed; and
3. The employee is informed of the removal of the lock upon his or her return to work.



MEDICAL SERVICES AND FIRST AID

FIRST AID / CPR

Selzer-Ornst shall ensure the availability of medical personnel for advice and consultation on matters of occupational health.

Provisions shall be made prior to commencement of the project for prompt medical attention in case of serious injury.

In the absence of an infirmary, clinic, hospital, or physician that is reasonably accessible in terms of time and distance to the worksite that is available for the treatment of injured employees, a person who has a valid certificate in first-aid training from the U.S. Bureau of Mines, the American Red Cross, Medic First Aid, or equivalent training that can be verified by documentary evidence, shall be available at the worksite to render first aid.

First aid supplies shall be easily accessible when required.

The contents of the first aid kit shall be placed in a weatherproof container with individual sealed packages for each type of item and shall be checked by the employer before being sent out on each job (at least weekly) to ensure that the expended items are replaced.

Proper equipment for prompt transportation of the injured person to a physician or hospital, or a communication system for contacting necessary ambulance service, shall be provided.

In areas where 911 is not available, the telephone numbers of the physicians, hospitals, or ambulances shall be conspicuously posted.

Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

BLOODBORNE PATHOGENS

Employees who may be exposed to bodily fluids must be trained on bloodborne pathogens when they start their job and every year thereafter. Training must be documented and maintained for a minimum of 3 years.

The Exposure Control Plan is readily available to employees and states the types of bodily fluids employees can reasonably expect to be exposed to at work. This includes, but is not limited to, blood and other potentially infectious materials (OPIMs), such as saliva and mucous. In the event of exposure, the Hepatitis B vaccine will be made available to all employees that have occupational exposure at no cost to the employee(s) through and administered healthcare professional.

All bodily fluids should be considered infectious. Universal precautions involve the use of PPE and sanitary procedures (such as handwashing and cleaning work surfaces) to limit potential for exposure. Handwashing facilities and/or antiseptic hand cleanser will be available or provided. All equipment and surfaces must be cleaned if they come into contact with blood or other infectious material.



PURPOSE

To provide guidance for the protection of personnel operating mobile cranes or working in the area of operation.

POLICY

It is the policy of Selzer-Ornst to only hire competent and approved crane operators. The hired mobile crane operator contracted by Selzer-Ornst must be trained and authorized to operate the specific make and model crane assigned. All operators must be Certified.

Any Selzer-Ornst employee providing signals for crane operations must be trained and certified.

Selzer-Ornst and the Crane Operator will develop a Lifting Plan for each project as is necessary. The plan will document the configuration of the crane, placement, rigging, lifting scheme, etc. A copy of the completed plan will be maintained on site for the duration of the project.

No employee of Selzer-Ornst is authorized to operate a crane at any time under any circumstance.



PURPOSE

To establish minimum requirements for the use and inspection of wire rope, slings, hooks, and sheaves, and provides guidelines to ensure safe practices in the use of these lifting devices. Rigging to be performed by properly trained personnel only.

DEFINITIONS

Competent Person - 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 the authorization to take prompt corrective measures to eliminate them.

Designated Person – A person selected by the employer as being qualified to perform specific duties. Refer to Competent or Qualified Person definitions.

Frequent inspections – Daily to monthly intervals.

Inspection Records – Certification records which include the date of inspection, signature of the person who performed the inspection and the serial number, or other identifier, of the equipment being inspected. This certification record shall be kept readily available.

Lay - The amount of twist, the angle of the strands, and the angle of metal threads in the strands.

Periodic inspections – One to twelve-month intervals.

Qualified Person – One who, by possession of a recognized degree, certification, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated their ability to solve or resolve problems relating to the subject matter, the work, or the project.

Running Ropes – Wire rope used in lifting. Lifting lines from the hook or load block down the boom and wound on to the auxiliary or main hoisting drums.

Standing Ropes – A supporting wire rope which maintains a constant distance between the points of attachment to the two components connected by the rope as in the pendent lines or bridal assembly.

Strand – Metal fibers twisted, plaited, or laid parallel to form a unit for further twisting or plaiting into wire rope.

Sheaves – A pulley which rotates as the running rope moves around it when raising or lowering the load block.

Slings – A lifting attachment used to connect the load to the load block or hook. Material of construction can be of wire rope, alloy steel chain, natural or synthetic fiber rope (conventional three strand construction), metal mesh, or synthetic web (nylon, polyester, and polypropylene) and rated for specific weights depending on the way it is connected to the load.

Wire Rope – A cable specifically designed in various sizes and weight capacities for use in lifting.



RESPONSIBILITIES

GENERAL AND FIELD SUPERINTENDENTS

- Ensure that these requirements are met.
- Participate in the required audit process.
- Ensure a competent person is designated for inspection.

GENERAL FOREMAN

- Know, understand, and comply with these requirements.
- Trained in the procedures and use of equipment they are to use to complete the job.
- Ensure inspection is completed for all lifting equipment prior to use and during use to make sure it is in safe operating condition.
- Audits for compliance on a periodic basis are conducted.
- Corrections to all deviations or inadequacies are completed in a timely manner.
- Enforce safe work procedures.

EMPLOYEES

- Know, understand, and comply with these requirements.
- Inspect equipment, review procedures, and review and complete checklist(s) prior to use.
- Report any unsafe conditions to supervisor.
- Know that failure to comply with these requirements will result in disciplinary action, up to and including discharge.

PROCEDURES

Wire rope, hooks, slings, and sheaves shall be inspected initially when purchased or received, before use, and monthly for:

- Evidence of overloading.
- Excessive wear.
- Damage (broken wires, kinking, crushing, cutting, and corrosion from heat, weather, or chemical attack).

Defective equipment shall be immediately cut and discarded or returned to supplier/rental company. Slings that are damaged or defective shall not be used. Slings shall not be shortened with knots, bolts, or other make-shift devices. Slings shall be padded or protected from sharp edges. The area below suspended loads shall be kept clear of personnel. Slings shall not be pulled from under a load resting on the sling.

Web slings and natural or synthetic rope slings shall not be used where temperatures exceed 180 degrees F. Slings shall not be loaded in excess of their rated load capacities.

Hands or fingers shall not be placed between the sling and its load while the sling is being tightened around the load.

WIRE ROPE

Wire rope shall be immediately taken out of service and discarded whenever any of the following conditions exist:



- In running ropes (lifting lines), six (6) randomly distributed broken wires in one lay, or three (3) broken wires in one strand in one lay.
- One outer wire broken at the point of contact with the core of the rope which has worked its way out of the rope structure and protrudes or loops out from the rope.
- Wear of one-third (1/3) the original diameter of outside individual wires. Kinking, crushing, bird caging, or any other damage resulting in distortion of the wire rope.
- Evidence of any heat damage from any cause.
- Reduction from nominal diameter of the following:
 - a. More than one-sixty-fourth (1/64) inch for diameters up to and including five-sixteenths (5/16) inch.
 - b. One-thirty-second (1/32) inch for diameters three-eighths (3/8) inch to and including one-half (1/2) inch.
 - c. Three-sixty-fourths (3/64) inch for diameters nine-sixteenths (9/16) inch to and including three-fourths (3/4) inch.
 - d. One-sixteenths (1/16) inch for diameters seven-eighths (7/8) inch to one and one-eighths (1/8) inch inclusive.
 - e. Three-thirty-seconds (3/32) inch for diameters one and one-fourth to one and one-half (1/4 to 1/2) inches inclusive.
- In standing ropes, more than two (2) broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection.
- When evidence of core failure in rotation resistant ropes is recognized by a lengthening of the lay and localized reduction in diameter.
- Wire rope safety factors shall be in accordance with American National Standards Institute standards.

HOOKS

The load block shall be inspected every ten (10) hours or daily for the following:

- Hook pivots freely.
- Sheaves rotates freely.
- End play in the thrust bearing.
- Evidence of corrosion from heat, weather, or chemical attack.

Hooks, hook bolts, and nuts shall be tested and inspected every five hundred (500) hours or annually as directed by the manufacturer and OSHA, and replaced if one of the following conditions exist:

- One (1) or more cracks are found on the hook, threads, or nut.
- Wear, cracks, pulling, or other damage.
- Any thread damages.
- Hardness of nut not following manufacturer's recommendations.

Rental mobile hoisting equipment hook assemblies shall be inspected upon arrival to site. Proof of annual inspection should be current. Hooks shall be immediately taken out of service and destroyed or returned to the rental company when any of the following conditions exist:

- Cracked, gouges, or other indications of wear.
- Opened more than five (5%) percent of the normal throat opening measured at the narrowest point.
- Twisted more than zero (0) degrees from the plane of the unbent hook.
- Evidence of corrosion from heat, weather, or chemical attack.
- Any evidence of damage or wear that would make use unsafe.



SLINGS

Wire rope slings shall not be used in excess of the rated load capacities shown in 29 CFR 1910.184 Table N-184-3 through N-184-14.

Slings not included in these tables shall be used only in accordance with sling manufacturer's recommendations.

Each sling shall be marked to show rated capacities. Each sling shall be marked for inspection identification.

The safe operating temperature ranges are:

- Fiber core wire rope of all grades shall be permanently removed from service and destroyed if exposed to temperatures in excess of 200° F.
- Non fiber core wire rope of any grade is 60°F. to 400°F. When used above or below this range the sling manufacture's recommendations shall be followed.

End attachments shall be proof tested by the sling manufacturer or equivalent entity at twice their rated capacity **PRIOR** to initial use. The certificate of proof testing shall be maintained for the life of the sling.

Wire rope slings shall be immediately taken out of service and destroyed when any of the following conditions exist:

- More than two (2) broken wires in one lay in sections beyond end connections or more than one (1) broken wire at end connections.
- Safe operating temperature exceeded.
- Ten (10) randomly distributed broken wires in one rope lay, or five (5) broken wires in one strand in one rope lay.
- Wear or scraping of one-third (1/3) the original diameter of outside individual wires.
- Kinking, bird caging, crushing or any other damage resulting in distortion of the wire rope structure.
- End attachments that are cracked, deformed, or worn.
- Hooks that have been opened more than five (5%) percent of the normal throat opening measured at the narrowest point or twisted more than zero (0) degrees from the plane of the unbent hook.
- Corrosion of the rope or end attachment.

ALLOY STEEL CHAIN

- Alloy steel chain slings shall not be used in excess of the rated load capacities found in 29 CFR 1910.184 Table N-184-1.
- Slings not included in this table shall be used only in accordance with sling manufacturer's recommendations.
- Each alloy steel chain sling shall be marked to show rated capacity.
- Each alloy steel chain sling shall be marked for inspection identification.
- The safe operating temperature ranges are:
 - Reduction of maximum working load limits found in Table N-184-1 according to manufacturer's recommendations when exposed to service temperatures in excess of 600 degrees F.
 - Immediately and permanently removed from service when heated to 1000 degrees F. or above.
- End attachments shall have a rated capacity at least equal to that of the alloy steel chain with which they are used.
- Use of alloy steel chain slings is not recommended. If it is to be used either:



- New chains are purchased, used one time, and destroyed.
- After use, if kept, all applicable regulatory inspections are met.
- The following inspections are to be performed if kept:
 - Permanently affixed, durable identification stating size, grade, rated capacity, and reach.
 - Attachments - hooks, rings, oblong links, pear shaped links, or other attachments shall have a rated capacity equal to the alloy steel chain.
 - Makeshift links or fasteners formed of bolts or rods, or other such attachments shall not be used.
 - Periodic inspection on a regular basis based on the following criteria:
 1. Frequency of use.
 2. Severity of service conditions.
 3. Nature of lifts being made.
 4. Experience gained in similar circumstances.
 5. Not greater than twelve (12) months.
- The most recent month in which an inspection was made shall be recorded and maintained for the life of the alloy steel chain.
- The designated competent person shall inspect for the following:
 - Wear.
 - Defective welds.
 - Deformation.
 - Increase in length.
- Proof testing shall be conducted before use and each new, repaired, or reconditioned alloy steel chain sling, including all welded components in the sling assembly by the sling manufacturer or equivalent entity, in accordance with paragraph 5.2 of the American Society of Testing and Materials Specification A391-65, and ANSI G61.1-1968.
- The certificate of proof test shall be maintained for the life of the alloy steel sling.
- Alloy steel chain slings shall be immediately removed from service when:
 - Hooks are cracked.
 - Opened more than five (5%) percent of the normal throat opening measured at the narrowest point.
 - Twisted more than zero (0) degrees from plane of the unbent hook.

NATURAL OR SYNTHETIC FIBER ROPE

- Made from conventional three strand construction fiber, rope shall not be used with loads in excess of the rated load capacities prescribed in Tables N-184-16 through N-184-19 of 29 CFR 1910.184.
- Fiber rope slings shall have a diameter of curvature meeting at least the minimums specified in Figures N-184-4 and N-184-5.
- Slings not included in these tables shall be used only in accordance with the manufacturer's recommendations.
- Each fiber rope sling shall be marked to show rated capacities.
- Each fiber rope sling shall be marked for inspection identification.
- The safe operating temperature range is from minus 20 degrees F. to plus 180 degrees F.
- Sliced fiber rope is not to be used unless the requirements of 29 CFR 1910.184 (h) (3) "Splicing" are used.
- End attachments shall not have sharp edges or projections.
- Natural or synthetic fiber rope slings shall be immediately taken out of service if any of the following conditions are present:
 - Abnormal wear.
 - Powdered fiber between strands.



- Broken or cut fibers.
- Variations in the size or roundness of strands.
- Discoloration or rotting.
- Distortion of hardware in the sling.
- Use of repaired or reconditioned fiber rope slings is prohibited.

SYNTHETIC WEB

- Synthetic web slings shall not be used with loads in excess of the rated load capacities found in 29 CFR 1910.184 Tables N-184-20 through N-184-22.
- Slings not included in these tables shall be used only in accordance with sling manufacturer's recommendations.
- Each sling shall be marked to show rated capacities for each type of hitch and type of synthetic web material.
- Each sling shall be marked for inspection identification.
- Webbing shall be of uniform thickness and width and selvage edges shall not be split from the webbing's width.
- Fittings shall be of a minimum breaking strength equal to that of the sling and have no sharp edges or projections.
- Stitching shall be the only method of attachment of fittings to webbing and to form eyes.
- The following restrictions apply:
 - Nylon web slings are not to be used where fumes, vapors, sprays, mists, or liquids of acids or phenols are present.
 - Polyester and polypropylene web slings are not to be used where fumes, vapors, sprays, mists, or liquids of caustics are present.
 - Web slings with aluminum fittings shall not be used where fumes, vapors, sprays, mists, or liquids of caustics are present.
- Synthetic web slings of polyester or nylon shall not be used at temperatures in excess of 180 degrees F. Polypropylene web slings shall not be used at temperatures in excess of 200 degrees F.
- Repaired synthetic web slings are not to be used unless the repair is done by the sling manufacturer or an equivalent entity.
- Each repaired sling shall be proof tested to twice the rated capacity by the sling manufacturer or an equivalent entity PRIOR to returning to service.
- The certificate of the proof test shall be maintained for the life of the sling.
- Synthetic web slings shall be immediately removed from service if any of the following conditions exist:
 - Acid or caustic burns.
 - Melting or charring of any part of the sling.
 - Snags, punctures, cuts, or tears.
 - Broken or worn stitches.
 - Distorted fittings.

METAL MESH

- Metal mesh slings shall not be used in excess of their rated capacities.
- Slings shall be used in accordance with manufacturer's recommendations.
- Metal mesh slings shall have attached to it a durable marking that states the rated capacity for vertical basket hitch and choker hitch loadings.
- Each metal mesh sling shall be marked for inspection identification.
- Handles shall have a rated capacity at least equal to the metal fabric.



- Handle attachment shall conform to the following:
 - The rated load capacity of the sling is not reduced.
 - The load is evenly distributed across the width of the fabric.
 - Sharp edges or projections will not damage the fabric.
 - All new and repaired metal mesh slings shall be proof tested by the manufacturer or equivalent entity PRIOR to use.
 - The certificate of proof testing shall be maintained for the life of the sling.
- The safe operating temperatures are as follows:
 - Nonimpregnated metal mesh slings minus 20° F. though plus 550° F.
 - Polyvinyl chloride or neoprene impregnated metal mesh slings zero degrees to plus 200° F.
 - Operations outside these temperature ranges OR all other impregnating materials the sling manufacturer's recommendations shall be followed.
- The sling manufacturer or equivalent entity can repair metal mesh slings.
- Metal mesh slings shall be immediately removed from service if any of the following conditions exist:
 - Broken weld or brazed joint along the sling edge.
 - Reduction in wire diameter of twenty-five (25%) percent due to abrasion or fifteen (15%) percent due to corrosion.
 - Lack of flexibility due to distortion of fabric.
 - Distortion of the female handle so the depth of the slot is increased more than ten (10%) percent.
 - Distortion of either handle so that the width of the eye is decreased more than ten (10%) percent.
 - A fifteen (15%) percent reduction of the original cross-sectional area of metal at any point around the handle eye.
 - Distortions of either handle out of its plane.

SHEAVES

- Sheaves shall be inspected for:
 - Groove depth, width, contour, and smoothness.
 - Broken or chipped flanges.
 - Cracks in hubs and spokes.
 - Signs of rope contact with sheave guards.
 - Sheave bearings and shaft.
 - Out of round condition.
 - Alignment with other sheaves.
 - Sheaves too small or large for diameter of rope used.

AUDIT REQUIREMENTS

- All equipment must be inspected prior to use.
- Supervision will inspect equipment and records of inspections as work is being performed.
- No formal audit is required.

TRAINING REQUIREMENTS

Training will be conducted on these requirements whenever these requirements are revised, or when a new crane operator and/or rigger are hired.



ROPE, CABLE, AND SLING INSPECTION

PURPOSE

To provide guidelines for the inspection of all ropes and cables used for personnel and material handling prior to use and as deemed necessary during their use, in order to ensure the safety of workers.

POLICY

Although OSHA Standard 29 CFR 1926.251 pertains primarily to rigging equipment for material handling, the rope, cable and sling portions of the standard will be applied to all hoisting equipment, winches, puller, and safety lines in use by the company. The OSHA guidelines regarding visual and detailed inspections, disposition of damaged items and lubrication procedures, will be the policy of Selzer-Ornst.

The use of ropes, cables and slings, regardless of whether they are made of natural or synthetic fibers, steel wire, or metal mesh are subject to certain hazards that cannot be removed by mechanical means, but only by the exercise of intelligence, care, and common sense. It is therefore essential to have personnel involved in the proper care, use and inspection of this equipment who are competent, careful, and well trained.

VISUAL INSPECTION

Since safety depends on the proper use and care of all types of ropes, cables, and slings a competent person must perform a visual inspection of these items daily. Items to look for while conducting the visual inspection should include the following:

- Kinks or severe twists.
- Nicks, breaks, frayed, or unraveled edges.
- Deformed, worn, or flattened surfaces.
- Corroded or pitted surfaces.
- Shortened or lengthened rope lays.

DETAILED INSPECTION

The following, more detailed inspection must be performed by a designated person at least monthly, or at more frequent intervals, depending on operating conditions and use:

- Run out rope completely and note conditions such as number of broken strands, broken wires in one lay, reduction in rope diameter, corrosion, shorting of the lay, or fraying.
- Run a soft cloth, preferably cotton, over the entire length of wire rope and examine any rope lays which pick up threads of the cloth.
- Determine the extent of damage due to broken wires, nicks, cuts, frayed or unraveled edges.
- Ensure that wire rope is properly lubricated.

When any of the above conditions exist and show evidence of abnormal deterioration, the item must be watched and re-inspected daily. If this condition continues to worsen, the item must be condemned and replaced.



DISPOSITION OF DAMAGED RUNNING ROPE

The length and type of service, as well as the severity of operation, must be taken into consideration before determining the disposition of ropes or cables which show signs of damage. Where failure of the rope or cable might endanger life or equipment, the rope or cable must be condemned and replaced immediately. In all cases, the rope or cable must be condemned and replaced if any of the following conditions are found to exist:

- **Broken Wires:** Six or more wires broken in any one wire lay. Three or more wires broken in any one strand of one rope lay.
- **Worn Outside Wires:** Wearing of one-third or more of the original diameter of any of the outside individual wires.
- **Broken Strand:** One or more broken strands.
- **Kinking, Crushing, Un-stranding, or Other Damage:** Rope severely kinked, crushed, cut, frayed, bird-caged, un-stranded, or unraveled, or any damage resulting in distortion of the rope structure.
- **Heat or Weld Damage:** Any evidence of heat damage or weld splatter.
- **Corrosion:** Considerable corrosion in the valleys between strands or corroded or broken wires at end connections.
- **Reduction in Diameter:** Noticeable reduction from normal rope diameter.

SLINGS

Slings are generally used in conjunction with other material handling equipment for the movement of material by hoisting. Slings are made of alloy steel chain, wire rope, metal mesh, natural or synthetic fiber, or fibers woven into a web. Many manufacturers of slings will produce their slings with a safety mark already on them. An example of this would be a sling with a red colored strand woven right into the material. If the sling has been cut or nicked to the point where the red colored strand is visible, the sling should be replaced immediately.

However, since not all manufacturers make this safety mark, it will have to be up to the inspector to determine when the sling should be replaced.

SLING INSPECTION

Each day, before each use, the sling and all fastenings and attachments must be inspected for damage or defects by a competent person designated by the company. Damaged slings shall be removed from service per manufacturer recommendations.

Additional monthly inspection should be performed during sling use, and where service conditions warrant. Damaged or defective slings must be immediately removed from service and/or replaced.

Wire rope slings shall not be used if in any length of eight diameters, the total number of visible broken wires exceeds 10% of the total number of wires, or if the rope shows other signs of excessive wear, corrosion or defect.

In the case of alloy steel chain slings, the inspection shall include a thorough check for wear, defective welds, deformation of the links, and increase in length. Where such defects or deterioration are present, the chain sling must be immediately removed from use.



ROPE CLIPS

Fixtures are usually attached to wire rope by means of wire rope clips, commonly referred to as either **“U” Clips** or **“U” Bolts**. These wire rope clips are also used when making a loop at the end of a wire rope. There is a right way and a wrong way to use a wire rope clip. The correct method for installing a wire rope clip is to attach the clip with the base or saddle of the clip against the live or long end of the wire rope. This will allow the clip to develop 80 to 90 percent efficiency and is the **only** correct method of attaching wire rope clips. The saying, *“never saddle a dead horse”* will help prevent incorrect mounting of wire rope clips.

RECORDS

Inspection Records shall be maintained in the Project Safety files.



PURPOSE

To provide guidelines for the safe use of power tools.

POLICY

General Requirements

- Follow all manufacturers' instructions regarding the safe storage, operation, and maintenance of power tools.
- Do not use a power tool unless you have been trained on how to use it properly and safely.
- All guards must be in place before operating the tool.
- Appropriate eye protection must be worn when operating or working near power tools.
- Do not wear loose fitting clothing or jewelry when using power tools.
- Disconnect the tool from its power source before changing blades, bits, etc.
- Remove chuck keys, etc. before using a power tool.
- Disconnect electric power tools from the power source by pulling on the plug – not the power cord.
- Make sure that electric tools are either double insulated or have three prong plugs with grounded extension cords and receptacles.
- Keep your finger off the trigger and make sure the switch is "off" before plugging in a tool.
- Do not use electric tools that have worn or damaged plugs or cords.
- Never tape or rig a power tool's on/off switch to have it remain constantly in the 'on' mode.
- Secure small pieces of work with a clamp, or in a vise.
- When using any power tool, keep the work area free of any trip hazards, or slippery conditions.
- Never use compressed air to blow off equipment or clothing; use a brush.

SAWS

- Do not jam or force saws into the work.
- Portable saws should have a spring-loaded operating switch.
- Stay out of the saw's line of cutting.
- Start and stop the saw outside the work piece.
- Wear appropriate eye and hearing protection.

CIRCULAR SAWS

- Do not retract the lower guard while the blade is moving.
- Use the retracting handle or safety lift lever to move the lower guard.
- Do not clamp or tie the guard open.
- Do not operate the saw if the guard is not working properly.
- Keep your hand away from the blade while using the saw.
- Keep the power cord out of the line of the saw cut.

RECIPROCATING SAWS

- Do not lock the trigger if the saw needs to be stopped quickly.
- Do not use the saw unless the insulating boot is in place.



- Be especially careful to keep your hands away from the blade when using this tool.

PORTABLE BAND SAWS

- Return dull or damaged blades to the tool room. Do not leave blades in work area. They create serious trip hazards.

RADIAL ARM SAWS

- The radial arm shall be self-retracting.
- Do not remove any manufacturer's guards.
- Only approved and trained employees are to use a radial arm saw.

DRILLS

- Wear appropriate eye protection.
- Do not use dull or chipped bits.
- Let the bit cool down before changing or adjusting.
- Do not force the drill into the work.
- Use light oil to keep bit lubricated and cool during use.

PNEUMATIC TOOLS

- Wear appropriate eye and hearing protection.
- Pneumatic power tools must be attached to the compressed air hose.
- Do not adjust pneumatic tools until you are sure that no air pressure is being supplied to the hose or tool.
- Do not hoist or carry a tool by the hose.
- Pneumatic impact tools must have safety clips to retain tool bits.
- Follow the manufacturer's guidelines for safe operating pressures.
- Locate all air hoses so they do not present a tripping hazard.

GRINDERS

- Wear appropriate eye protection.
- Grinding wheels must be covered with a safety guard.
- Tool rests must be well supported and be no more than 1/8" from the wheel. Never adjust a tool rest while the wheel is in motion.
- Do not grind on the side of the wheel unless it is designed to be used as a slide grinder.
- Never leave a running grinder unattended.
- Make sure the work area around the grinder is clear before starting it up. Stand off to one side of the grinder at start-up.
- Bench grinders shall be set up in a non-traffic area.

MAGNETIC BASE DRILLS

- Always use a safety chain to secure magnetic drills to work.
- Tag electrical cord connections.

PORTABLE GRINDERS

- Always wear full-face shield over safety glasses.
- Always tuck shirt in when using grinders.



- Do not operate grinders without proper guards.
- Do not use a portable side grinder as a replacement for a bench grinder.

BENCH GRINDERS

- Abrasive wheel bench or stand grinders must have safety guards strong enough to withstand bursting wheels.
- Adjust work rests on grinders to a clearance not to exceed 1/8 inch between rest and tool surface.
- Inspect and ring test abrasive wheels before mounting.
- Always leave wheel in working condition for the next user.

PERSONAL PROTECTIVE EQUIPMENT

- In accordance with the PPE section of this Safety Manual, the use of power tools, and most hand tools, requires the proper personal protective equipment. This includes eye protection, face shields, gloves, hard hats, respirators, and other equipment as designated within that section.
- Personal Protective Equipment may also be required while in the area of others using power tools, such as ear protection for loud equipment, face shields, welding screens, and clothing suited for the task and tool.



RESPIRATORY PROTECTION

PURPOSE

To establish uniform guidelines for complying with the requirements of the Occupational Safety and Health Administration (OSHA) for Respiratory Protection, Title 29, 1926.103, this provides procedures for the proper selection, use and care of respiratory protective equipment.

GENERAL REQUIREMENTS

Every consideration will be given to the use of effective engineering controls to eliminate or reduce exposure to respiratory hazards to the point where respirators are not required; however, when feasible engineering controls are not effective in controlling toxic substances, appropriate respiratory protective equipment will be provided by the company, at no charge to the employee.

These respiratory protective devices will be of the type approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) or acceptable to the U.S. Department of Labor (OSHA) for the specific containment to which the employee is exposed.

Employees required to use respiratory protective devices because of exposure to toxic substances would do so as a condition of employment. Employees required to use respirators will be properly fitted, appropriately tested, medically screened, and thoroughly trained in their use. If using them voluntarily because the hazard is below the Action levels employees will need to sign appendix D.

PURCHASE OF APPROVED EQUIPMENT

In order to comply with the provisions of OSHA's standard; all respiratory protective equipment will be purchased by Selzer-Ornst and will have been tested and approved by the National Institute for Occupational Safety and Health and will carry a joint NIOSH/MSHA approval number for that specific respirator assembly.

WORK AREA SURVEILLANCE

The Respiratory Protection Standard 29 CFR 1910.134 standard requires "appropriate surveillance." This should include identification of the contaminant, nature of the hazard, concentration at the breathing zone, and, if appropriate, biological monitoring. An Industrial Hygienist, who is conducting the air sampling, should carefully and fully document any apparent deficiencies in surveillance necessary to the respirator program.

RESPIRATOR SELECTION

In selecting the correct respirator for a given circumstance, the following factors must be taken into consideration:

Nature of the Hazard. In order to make subsequent decisions, the nature of the hazard must be identified to ensure that an overexposure does not occur. These include oxygen deficiency, physical properties of the hazard, chemical properties of the hazard, physiologic effects on the body, actual concentrations of the toxic substances, the Permissible Exposure Limits (PEL), and the warning properties.



Nature of the Hazardous Operation. For proper respirator selection, it is necessary to know the details of the operations that require employees to use respiratory devices. These include operation or process characteristics, work area characteristics, materials used or produced during the process, the employee's duties and actions, and any abnormal situation characteristics which may necessitate alternate respirator selection.

Location of the Hazardous Area. This is important in the selection process so that a backup system may be planned if necessary. Respirable air locations must be known prior to entry into a hazardous area so escape or emergency operations may be planned.

Time Respiratory Protection is Required. The length of time a respirator will have to be worn by an employee is a factor that must be evaluated. This is most pronounced when using SCBA equipment, where, by definition, the air supply is finite. However, time is also a factor during routine use of air-purifying respirators when the employee's breathing and comfort become affected by a clogged filter cartridge which needs changing.

Employee's Health. Effective usage of a respirator is dependent on an individual's ability to wear a respirator, as determined by a physician. Most respiratory devices increase physical stress on the body, especially the heart and lungs. Care should be taken to ensure that a medical determination has been made that an individual is capable of wearing a respirator for the duration of the work assignment.

Work Activity. The type of work activities to be performed while wearing a respirator is vitally important in the respirator selection. The proper respirator will be one, which is least disruptive to the task being conducted yet providing the desired protection.

Respirator Characteristics, Capabilities and Limitations. The Tables in Exhibits "A" have been reproduced from ANSI Z88.2-1980. They provide a description of various respirator characteristics, capabilities, and limitations.

Protection Factors. The protection afforded by respirators is dependent upon the type of respirator used, seal of the facepiece to the face, leakage around valves, and leakage through or around cartridges or canisters. Depending on these criteria, the degree of protection may be ascertained, and a relative safety factor assigned. Protection factors are only applicable if all elements of an effective respirator program are in place and being enforced.

COMFORT

Once the type of respirator has been selected that is applicable and suitable for the purpose intended, the selection process should give consideration to the fit and comfort of the respirator.

The employee should be given the opportunity to select a respirator that provides the most comfortable fit. Since each respirator represents a different size and shape, a respirator which fits better during selection will provide better protection after fit testing. The employee should be shown how to assess a comfortable device and should eliminate those that are obviously ill-fitting.

An assessment of comfort should include the following points:

- Chin properly placed.
- Fit across nose bridge.



- Positioning of mask on nose.
- Room for safety glasses.
- Strap tension.
- Distance from nose to bridge.
- Room to talk.
- Tendency to slip.
- Cheeks filled out.
- Hindrance to movement.

ISSUANCE OF EQUIPMENT

The issuance of respirators to employees shall be, at a minimum, based on the following considerations:

- A person must have received appropriate documented training and must have received medical clearance where applicable.
- A person who has hair, e.g., beard growth, moustache, sideburns, stubble, low hairline, bangs, which passes between the face and the sealing surface of the respirator facepiece shall not be permitted to wear such a respirator.
- A person who has hair which interferes with the function of a respirator valve(s) shall not be permitted to wear the respirator.
- A corrective vision spectacle which has temple bars or straps which pass between the sealing surface of a full-face piece and the wearer's face shall not be permitted.
- A head covering which passes between the sealing surface of a respirator facepiece and the wearer's face shall not be permitted.
- The wearing of a spectacle, a goggle, a face shield, a welding helmet, or other eye and face protective device, which interferes with the seal of a respirator to the wearer, shall not be permitted.
- If scars, hollow temples, excessively protruding cheekbones, deep creases in facial skin, the absence of teeth or dentures, or unusual facial configurations prevent a seal of a respirator facepiece to a wearer's face, the person shall not be permitted to wear the respirator.
- If missing teeth or dentures prevent a seal of respirator mouthpiece in a person's mouth, the person shall not be allowed to wear a respirator equipped with a mouthpiece.
- If a person has a nose of a shape or size that prevents the closing of the nose by the nose clamp or a mouthpiece/nose-clamp type of escape respirator, the person shall not be permitted to wear this type of respirator.

Where practical, and where the above considerations are deemed acceptable, respirators should be assigned to individual employees for their exclusive use and labeled for identification in such a way as not to affect the performance of the respirator. **Only Selzer-Ornst Construction Company will provide respirators.** Workers may not bring in their own respirators without permission from Selzer-Ornst Construction Company management.

MEDICAL SURVEILLANCE REQUIREMENTS

Prior to the use of respiratory protection devices, a medical examination may be provided and/or required for all personnel in the following categories as required by OSHA:

- Employees who are or may be exposed to OSHA regulated airborne contaminants at or above the established Action Level (AL) or 30 or more days per year.
- Employees who are or may be exposed to OSHA regulated airborne contaminants at or above the established Permissible Exposure Limit (PEL) for 10 or more days per year.



- Employees who are or may be required to use a Self-Contained Breathing Apparatus (SCBA), e.g., as a member of a confined space entry team, as a member of a first aid/rescue team, or during hazardous material response operations.
- Employees who use negative pressure, air purifying respirators in work areas that contain asbestos.

A licensed physician shall determine what physiological and psychological conditions are pertinent for the wearing of different types of respirators. The respirator program administrator or his designee, using guidelines established by the physician, shall determine whether or not a person may be assigned to a task requiring the use of a respirator.

When applicable, medical surveillance, including bioassay, shall be carried out periodically to determine if respirator wearers are receiving adequate respiratory protection. The licensed physician shall determine the requirements of the surveillance program.

Employees included in the medical surveillance program shall, as a minimum, be provided with annual surveillance examinations. If the examining physician determines that any of the examinations should be provided more frequently than specified, Selzer-Ornst provide such examinations to affected employees at the frequencies specified by the physician.

MEDICAL FORMS

In addition to the standardized questionnaires, the physician must also be furnished with a copy of the latest OSHA Standard governing the type of exposure the employee will be subjected to. A description of the employee's duties as they relate to the exposure, the anticipated exposure level, a description of the respiratory protection equipment to be used, and any information from previous medical examinations of the employee must also be furnished to the physician.

At the conclusion of the examination, the physician will submit a written opinion to Selzer-Ornst Construction Company. This will contain the results of the examination, any conditions discovered by the physician that will prohibit the employee from using a respirator and any recommendations from the physician regarding the employee's limitations. It will also contain a statement from the physician that he/she has informed the employee of the results of the examination.

The company must furnish a copy of the physician's opinion to the employee within 30 days of its receipt by the company.

SPECIAL PROBLEMS – VISION

When a respirator user must wear corrective lenses, a protective spectacle or goggle, a face shield, a welding helmet, or other eye and face protective device, the item shall be fitted to provide good vision and shall be worn in such a manner as not to interfere with the seal of the respirator to the wearer.

Temple bars or straps of a corrective spectacle which pass between the sealing surface of a full facepiece respirator and the wearer's face, may prevent a good seal of the facepiece to the face and therefore such a spectacle shall not be used when a full-face piece respirator is worn. Special corrective lenses, which are made to be mounted inside a full-face piece, are available from each specified respirator manufacturer, and should be provided by the employer for the employee who needs corrective lenses.



The wearing of contact lenses by persons who must wear a respirator in a contaminated atmosphere is prohibited.

TRAINING

Respirators will not be issued to individuals (including Selzer-Ornst officials, subcontractors, or visitors) who have not received the appropriate respirator training and/or medical clearance.

TRAINING PROGRAM

The extent and frequency of employee training depends primarily on the nature and extent of the hazard. As a minimum, all employees and supervisory personnel will be trained in basic respirator practices. It must be remembered that respirators are effective only when they are acceptable to the employee and worn properly. Because proper use depends especially upon the wearer's motivation, it is important that the need for the respirator be explained fully.

The basic respirator training program must include:

- A discussion of the nature of airborne contaminants against which the employee must be protected, and why engineering controls have not been effective in controlling exposure to the point where respirators are not required.
- A discussion of why the respirator, which has been selected for this job, is the proper device for this particular purpose.
- An explanation of the differences between air-purifying and supplied air respirators, and how their use is controlled by the amount of exposure.
- Instruction on the respirator's limitations, emphasizing such things as oxygen deficiency, toxic contaminants, which are immediately dangerous one's health, particulates (such as asbestos) which are not immediately dangerous to life or health, and the need to change filter cartridges when indicated to do so by testing, or when breathing resistance increases to an uncomfortable level.
- Instructions on how to inspect the respirator and ensure that it is in proper working condition.
- Instructions on how to put on the respirator, how it should be positioned on the face, how to set strap tension, and how to wear the respirator comfortably.
- Instructions on the method of fit testing used and the proper way to conduct positive and negative pressure tests each time the respirator is put on. During this instruction, the wearer must be made to understand that the respirator cannot be used when conditions prevent a satisfactory facepiece-to-face seal. If this condition cannot be corrected, the employee cannot be allowed into the area requiring the use of a respirator.
- Instructions in the proper care and maintenance of the respirator.
- A discussion on the value of medical surveillance and air-sample monitoring.
- Field training to recognize and cope with any type of emergency while using a respirator.

FITTING

After the employee has been shown how to assess a respirator, he/she should be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension, and how to determine a proper fit.

NOTE: This instruction should take the form of a review and should not be considered the employee's formal training.



The employee should hold each facepiece up to the face and eliminate those that obviously do not give a comfortable or proper fit.

FAMILIARIZATION

Once the proper fitting respirator has been selected, the employee should put on the device, adjusting the facepiece and tensioning the straps. The employee should wear the mask for at least five minutes before taking it off and putting it on several times, adjusting the straps each time to become familiar with the respirator and adept at setting the proper tension on the straps.

FIT-TESTING REQUIREMENTS

OSHA requires that respirators be fitted properly, and that they be tested for their facepiece-to-face seal. There are currently two methods acceptable for conducting these tests: Qualitative and Quantitative Fit-Testing. The Qualitative method is a fast, easily conducted test that can be performed almost anywhere, while the Quantitative methods require the use of bulky test chambers and electronic equipment. The Quantitative method applies only to negative pressure, non-powered air-purifying respirators.

Due to the high potential for exposure in the type of work in which Selzer-Ornst *is* presently involved, the numerous field locations in which fit-testing must be accomplished, the Qualitative fit-testing method will be utilized throughout the Selzer-Ornst *organization*. In keeping with Selzer-Ornst's *high* regard for employee safety, corporate policy will continue to require qualitative fit-testing for both negative pressure and powered air-purifying respirators (PAPR).

Qualitative fit-testing is based on the wearer's subjective response to a challenge atmosphere, of which three popular tests are: the irritant smoke test, the odorous vapor test, and the ammonia irritant test. (See Exhibit "C" for procedures). The following represents a brief summary of how to conduct each of these tests.

Irritant Smoke Test: The irritant smoke test is performed by directing an irritant smoke, usually either stannic chloride or titanous tetrachloride, from a smoke tube towards the respirator being worn. If the wearer cannot detect the irritant smoke, a satisfactory fit is assumed to be achieved.

The respirator wearer will react involuntarily, usually by coughing or sneezing, to a leakage around or through the respirator. Since this type of test provokes an involuntary response from the employee, it is the preferred testing method when available. In this type of qualitative test, the person administering the test should be interested in any response to the smoke and not necessarily to the degree of the response.

When an air-purifying respirator is being tested in this method, it must be equipped with a high efficiency filter cartridge.

NOTE: The test substances are irritants to the eyes, skin, and mucus membranes. Therefore, the respirator wearer should keep his/her eyes closed during testing.

Odorous Vapor Test: The odorous vapor test relies on the respirator wearer's ability to detect an odorous material, usually iso-amyl acetate (banana oil) inside the respirator. The test is performed by passing an iso-amyl acetate saturated material around the outside of the respirator. If the wearer is unable to smell the chemical, then a satisfactory fit is assumed to be achieved.



When an air-purifying respirator is tested by this method, it should be equipped with an organic-vapor cartridge that removes the test vapor from the air.

NOTE: This test is solely dependent upon the employee's honest response since there is no involuntary reaction.

Ammonia Irritant Test: The ammonia irritant test relies upon the wearer's ability to detect an irritant organic chemical substance, usually an ammonia inhalant. The test is performed by placing an enclosure over the respirator wearer's head and shoulders and administering the inhalant vapor from an ampule. If the wearer does not react, then a satisfactory fit is assumed.

NOTE: This test is not dependent on the wearer's indication of taste. There is an involuntary response, and therefore is preferred as a method of testing.

FIELD TESTS

There are two tests that are used in the field to check the seal of the respirator. These are known as the positive and negative pressure sealing tests. Each of these two tests must be performed every time a respirator is put on and prior to entering a contaminated area.

NOTE: Although both the positive and negative pressure tests are considered essential to a good respiratory protection program and should always be used prior to entering an area of exposure, they are recognized solely as a field test and cannot be substituted for the qualitative fit test.

POSITIVE PRESSURE TEST

- This test only applies to those respirators that have an exhalation valve that can be blocked.
- Close or "block off" the exhalation valve.
- Exhale gently into the facepiece.
- If a slightly positive pressure is built up with no apparent outward leakage around the seal, then the face piece-to-face seal is satisfactory.

NEGATIVE PRESSURE TEST

- Close the inlet opening or hose of the respirator facepiece with the hand(s), tape, or other means.
- Inhale gently so that the facepiece collapses slightly and hold the breath for ten seconds.
- If the face piece remains slightly collapsed and no inward leakage occurs, then the facepiece-to-face seal is deemed to be satisfactory.

CARE AND MAINTENANCE

Personnel involved in respirator maintenance must be thoroughly trained. Substitution of parts from different brands or types of respirators invalidates approval of the device. Repairs and adjustments should never be made beyond the manufacturer's recommendations.

CLEANING THE RESPIRATOR

Respirators must be cleaned and disinfected after each day's use when they are assigned to one individual or after each use if they are assigned to more than one person. The following procedures are recommended for cleaning and disinfecting respirators:

- If required, remove and discard any filters or cartridges.



- Wash facepiece and breathing tube in detergent and warm water (120°F) or a cleaner/disinfectant solution. Use a soft brush to facilitate removal of dirt. Disinfectant solutions are available from respirator manufacturers, or it can be made by using a solution of water and household chemicals. A two-minute immersion of the respirator into either solution is sufficient for disinfection.
- Rinse completely in clean, warm water and air dry in clean air
- Clean out other parts as recommended by the manufacturer.
- Inspect the valves, head straps and other parts and replace if defective.
- Place face piece in a plastic bag or container for storage in an assigned area.
- Insert new filters or cartridges prior to use, making sure the seals are tight.

STORING THE RESPIRATOR

When they are not being used, respirators should be individually sealed in plastic bags and stored at convenient locations in order to protect them against dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals. They should be stored in such a way, that the facepiece and exhalation valve are not being distorted.

INSPECTING THE RESPIRATOR

All respirators should be inspected before and after use and at least monthly by a competent person to ensure that they are in satisfactory working condition.

An inspection should include:

- Tightness of connections.
- Conditions of face piece, straps, connecting tubes, and cartridges.
- Condition of exhalation and inhalation valves. If the sides of the exhalation valve gap even slightly, it must be replaced with a new valve.
- Pliability and flexibility of rubber parts. Deteriorated rubber parts must be replaced. Unused rubber parts should be worked, stretched and manipulated with a massaging action.
- Condition of lenses should be checked. Lenses must be tight, and scratched or damaged lenses must be replaced.
- On self-contained breathing apparatus, the charge of the compressed air cylinders should be checked and fully charged.

PROGRAM EVALUATION

The program administrator should periodically assess the effectiveness of the respiratory protection program during all phases of operation in which respirators are being used. Frequent walk-through inspections during these activities should be conducted to monitor and document supervisory and worker compliance with the requirements of the program. In addition to general assessment of the overall respiratory protection program, specific calculations of the respirator cleaning, inspection, maintenance, repair, storage, and use procedures should be frequently conducted to ensure that the desired results of these operations are consistently achieved.

REPORTING RESPIRATOR PROBLEMS

Occasionally, the company may find a defect in the design or performance of a respirator. The course to follow is to report these findings to the Selzer-Ornst *Safety Manager*.

If the respirator carries with it the approval of the Mine Safety and Health Administration (MSHA) and the



National Institute for Occupational Safety and Health (NIOSH), the Corporate Safety Manager will report the findings to the respirator's manufacturers and to NIOSH.

This will be done by notifying the manufacturer of the defect in a report format and forwarding a copy of the report to NIOSH. The report will include the following:

- The name, address, and telephone number of Selzer-Ornst.
- The name of the respirator's manufacturer and model number.
- The name and part number (if possible) of the defective part.
- The lot number and/or serial number of the respirator and/or defective part.
- A brief description of the respirator's use when the defect was discovered.
- A description of the defect and any adverse effects from the defect.

RECORDS

RESPIRATOR TRAINING RECORDS

Upon completion of the basic respirator training program, the employee will be required to read and sign a Respirator Training Record (See Exhibit "D") attesting to the fact that they have received the basic training program and feel confident in their ability to use the respirator properly.

The signed and dated Respirator Training Record will then become a part of the employees' medical records and will be retained for the same period of time as those records.

RECORDKEEPING OF TEST RESULTS

A summary of the test results for each employee on whom a qualitative fit test was conducted, will be documented on the Respirator Fit Test Record (See Exhibit "E"). This record will then become a part of the employee's medical record and will be retained for the same time-period as the medical records.

CARE AND MAINTENANCE RECORDS

A written record should be maintained of the Care and Maintenance Program. Information contained on this record should include inspection reports, replacement parts used, dates of repair, cleaning and type of disinfectant used, and the names of persons doing the work. The respirator should be identified by manufacturer, model, and approval number. Records should be retained for a period of five years.

MEDICAL RECORDS

All records pertaining to the employee's medical examination and evaluation must be retained for a period in excess of thirty (30) years.



EXHIBIT "A" CAPABILITIES AND LIMITATIONS OF RESPIRATORS AIR-PURIFYING RESPIRATORS

Page 1 of 2

GENERAL LIMITATIONS

Air-purifying respirators do not protect against oxygen-deficient atmospheres or against skin irritations by, or absorption through the skin, or airborne contaminants.

The maximum contaminant concentration against which an air-purifying respirator will protect is determined by the design efficiency and capacity of the cartridge, canister, or filter, and the facepiece-to-face seal on the user. For gases and vapors, the maximum concentration for which the air-purifying element is designed is specified by the manufacturer or is listed on labels of cartridges and canisters.

Non-powered air-purifying respirators will not provide the maximum design protection specified unless the face piece of mouthpiece/nose clamp is carefully fitted to the wearer's face to prevent inward leakage. The time period, over which protection is provided is dependent on canister, cartridge, or filter type, concentration of contaminant, humidity levels in the ambient atmosphere, and the wearer's respiratory rate.

The proper type of canister, cartridge, or filter must be selected for the particular atmosphere and conditions. Non-powered air-purifying respirators may cause discomfort due to a noticeable resistance to inhalation. This problem is minimized in powered respirators. Respirator face pieces present special problems to individuals required to wear prescription lenses. These devices do not have the advantage of being small, light, and simple in operation.

Use of air-purifying respirators in atmospheres immediately dangerous to life or health is limited to specific devices under specified conditions.

VAPOR AND GAS-REMOVING RESPIRATORS

Limitations: No protection is provided against particulate contaminants. A rise in canister or cartridge temperature indicates that a gas or vapor is being removed from the inspired air.

An uncomfortably high temperature indicates a high concentration of gas or vapor and requires an immediate return to fresh air.



EXHIBIT "A"

CAPABILITIES AND LIMITATIONS OF RESPIRATORS AIR-PURIFYING RESPIRATORS

Page 2 of 2

Use should be avoided in atmospheres where the contaminant(s) lack sufficient warning properties (that is: odor, taste, or irritation at a concentration in air or above the permissible exposure limit.) Vapor- and gas-removing respirators are not approved for contaminants that lack adequate warning properties.

Not for use in atmospheres immediately dangerous to life or health unless the device is a powered-type respirator with escape provisions.

1. **Full Face piece Respirator.** Provides protection against eye irritation in addition to respiratory protection.
2. **Quarter Mast and Half Mask Face piece Respirator.** A fabric covering (facelet) available from some manufactures should not be used unless approved for use with respirator.
3. **Mouthpiece Respirator.** Shall be used **only** for escape applications. Mouth breathing prevents detection of contaminant by odor. Nose clamp must be securely in place to prevent nasal breathing.

This is a small lightweight device that can be donned quickly.

PARTICULATE-REMOVE RESPIRATORS

Limitations: Protection against nonvolatile particles only. No protection against gases and vapors.

1. **Full Face piece Respirator.** Provides protection against eye irritation in addition to respiratory protection.
2. **Quarter Mast and Half Mask Face piece Respirator.** A fabric covering (facelet) available from some manufactures should not be used unless approved for use with respirator.
3. **Mouthpiece Respirator.** Shall be used **only** for escape applications. Mouth breathing prevents detection of contaminant by odor. Nose clamp must be securely in place to prevent nasal breathing.

This is a small lightweight device that can be donned quickly.

COMBINATION PARTICULATE- & VAPOR- & GAS-REMOVING RESPIRATORS

The advantages and disadvantages of the component sections of the combination respirator as described above apply.



EXHIBIT “C”

AIR-PURIFYING RESPIRATOR QUALITATIVE FIT TEST PROCEDURE

Page 1 of 5

After respirator training and medical approval, all personnel who request or are required to wear a respirator will be fit-tested with an air-purifying respirator (APR) prior to respirator assignment and use. Fit testing will be accomplished using qualitative methods, which incorporate pressure tests and administration of challenge aerosols (irritants or vapors). Personnel will be allowed to select a respirator that is comfortable and achieves a proper face-to-mask seal.

NOTE: To ensure proper fitting, personnel without clean-shaven faces will not be allowed to undergo fit testing nor will they be allowed to wear respirators on the job (mustaches are permitted if not interference is encountered).

A written record of the fit-test result will be generated for inclusion into the project’s master file and for the employee’s records. The superintendent shall be responsible for conducting the fit test and generating the appropriate record.

Personnel will be instructed in the use, maintenance, inspection, and limitations of APRs. It will be stressed that any breakthrough (odor, taste, or irritation) or an increased inhalation resistance is reason to exit the respirator use area. Cartridges will be replaced as appropriate or specified by regulation.

RESPIRATOR SELECTION

1. The test subject should understand that he/she is being asked to select the respirator that provides the most comfortable fit for him/her. Each respirator represents a different size and shape and, if fitted and utilized properly, will provide adequate protection.
2. The test subject shall be allowed to select the most comfortable respirator from an array of various sizes and manufacturers that includes at least three sizes of elastomeric face pieces and units of at least two manufacturers.
3. The selection process shall be conducted in a room separate from the fit-test room to prevent olfactory fatigue. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension, and how to access a “comfortable” respirator. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This will not constitute his formal training on respirator use, only a review.
4. The test subject will hold each face piece up to his face and eliminate those that are obviously not giving a comfortable fit.



SELZER-ORNST
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EXHIBIT "C"

AIR-PURIFYING RESPIRATOR QUALITATIVE FIT TEST PROCEDURE

Page 2 of 5

5. The more comfortable face pieces will be recorded, and the most comfortable mask will be worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in Item 6 below. If the test subject is not familiar with using a particular respirator, he/she shall be directed to put on the mask several times and to adjust the straps each time, so that he/she becomes adept at setting proper tension on the straps.
6. Assessment of comfort shall include reviewing the following points with the test subject:
 - Proper chin placement.
 - Positioning of mask on face.
 - Strap tension.
 - Room for prescription spectacle insert(s).
 - Room to talk.
 - Tendency to slip.
 - Cheeks filled out.
 - Self-observation in mirror.
 - Adequate time for assessment.
7. Each test subject shall wear his/her respirator for at least 10 minutes before starting the fit test.

FIT TESTING

Qualitative fit testing involves four distinct steps:

- Performance of positive/negative pressure checks.
- Administration of stannic chloride smoke challenge.
- Administration of ammonia inhalant vapor challenge.
- Administration of isoamyl acetate vapor challenge.

The test procedures incorporate aerosols, which are designed to produce an involuntary cough reflex and/or olfactory stimulation subject to face to seal breakthrough or leakage.

Fit Testing Procedure

1. Each respirator used for the fit testing shall be equipped with combination organic vapor and high-efficiency particulate cartridges (black/magenta).
2. After selecting, donning, and properly adjusting a respirator, the test subject shall wear it to the fit testing room. This room shall be separate from the room used for respirator selection, and shall be well-ventilated, as by an exhaust fan, to prevent general room contamination by the challenge aerosol.



EXHIBIT "C" AIR-PURIFYING RESPIRATOR QUALITATIVE FIT TEST PROCEDURE

Page 3 of 5

3. This test subject shall conduct the conventional negative-and positive-pressure fit checks (e.g., see ANSI Z889.2-1980). Before conducting the negative-or positive-pressure check, the subject shall be told to check and confirm the mask seal by rapidly moving the head side-to-side and up and down, taking a few deep breaths.
4. The test subject is now ready for fit testing.
5. The test conductor shall review this protocol with the test subject before testing.
6. Advise the test subject that the aerosol can be irritating to the eyes and instruct him/her to keep his eyes closed while the test is performed.
7. Break both ends of a ventilation smoke tube containing stannic oxychloride, such as the MSA part No. 5645, or equivalent. Attach a short length of tubing to one end of the smoke tub. Attach the other end of the smoke tube to an aspirator bulb.
8. The test conductor shall direct the stream of irritant aerosol from the tube towards the face seal area of the test subject. The conductor shall begin at least 12 inches from the face-piece and gradually move to within one inch, moving the whole perimeter of the mask.
9. The following exercises shall be performed while the aerosol is challenging the respirator seal. Each shall be performed for one minute.
 - Normal breathing
 - Deep breathing, being certain that breaths are deep and regular.
 - Turning head from side-to-side, being certain that movement is complete. Alert the test subject not to bump the respirator on the shoulders. Have the test subject inhale when the head is at either side.
 - Nodding head up and down. Be certain motions are complete and made about every second. Alert the test subject not to bump the respirator on the chest. Have the test subject inhale when his head is in the fully up position.
 - Talking. Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Reading it will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages, which serve the same purposes, may also be used.



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EXHIBIT “C”

AIR-PURIFYING RESPIRATOR QUALITATIVE FIT TEST PROCEDURE

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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.”

- Normal breathing.
10. Repeat fit testing steps 5 through 9, this time using vapors from an ammonia inhalant ampoule (MSA P/N 2156, or equivalent) as a secondary challenge atmosphere.
 11. Repeat fit testing steps 5 through 9, this time using vapors from an isoamyl acetate ampoule (North P/N 7002, or equivalent) as a third challenge atmosphere.
 12. If the irritant aerosols produce an involuntary reaction (cough) or if the test subject notices odors, the test conductor shall stop the test. In this case, the test respirator is rejected, and another respirator shall be selected.
 13. Each test subject passing the challenge tests without evidence of a response shall be given a sensitivity check of the aerosols to determine whether he reacts to them. Failure to evoke a response shall void the fit test.
 14. After passing the fit test, the test subject shall be questioned again regarding the comfort of the respirator. If it has become uncomfortable, another model of respirator shall be tried.
 15. The test subject shall be given the opportunity to select a different facepiece and be re-tested if during the use the chosen facepiece becomes unacceptably uncomfortable.
 16. Protection Factors (PF).



EXHIBIT “C”

AIR-PURIFYING RESPIRATOR QUALITATIVE FIT TEST PROCEDURE

Page 5 of 5

If a respirator passes the qualitative tests, it can be work in concentrations determined by the assigned PF. The Maximum Use Concentration (MUC) is calculated by multiplying the TLV of the contaminant by its PF. PFs for air purifying respirators are:

Half-face mask: 10

Full-face mask: 50

Example: MUC (ppm) = PF x TLV If TLV = 10 ppm and PF = 10;

Then, MUC = 10 x 10 = 100 ppm

Thus, for a substance with a TLV of 10 ppm, and half-mask respirator provides protection up to a maximum concentration of 100 ppm of the substance.

SEMI-ANNUAL TESTING

The qualitative fit-test should be repeated at least once every six months, if the user is assigned a new respirator or whenever one or more of the following occur:

- The employee has a weight change of 20 pounds or more.
- Facial scarring occurs in an area of the face seal.
- The employee has significant dental changes.
- The employee has reconstruction or cosmetic surgery of the face.
- Any other condition that may interfere with the face piece seating.

RECORDKEEPING

The Respirator Fit Test Record, shown in Exhibit E, must be completed after each fit-test.



EXHIBIT "D" RESPIRATOR TRAINING RECORD

Employee's Name (print) _____
(Last) (First) (M.I.)

Craft: _____ SSN: _____

Project Name: _____ Job No.: _____

Your signature on this Training Record will attest to your having received and understood the basic respirator training program which Selzer-Ornst Construction Company require as part of an acceptable respiratory protection program.

The basic respirator training program consists of the following elements:

- The reasons for the need of respiratory protection.
- The nature, extent, and effects of respiratory hazards to which the person may be exposed.
- An explanation of why engineering controls are not being applied or are not adequate and of what effort is being made to reduce or eliminate the need for respirators.
- An explanation of the operation and the capabilities and limitations of the respirator selected.
- Instruction in inspecting, donning, checking of the fit of, and wearing the respirator.
- An opportunity for each respirator wearer to handle the respirator, learn how to don and wear it properly, check its seals, wear it in a safe atmosphere, and wear it in a test atmosphere.
- An explanation of how maintenance and storage of the respirator is carried out.
- Instructions in how to recognize and cope with emergency situations.
- Instructions as needed for special respirator use.
- Regulations concerning respirator use.

Employee's Signature _____ Date ____/____/____

Trainer's Signature _____

Trainer's Title _____



EXHIBIT "E" RESPIRATOR FIT TEST RECORD

Employee's Name (print) _____
(Last) (First) (M.I.)

Craft: _____ SSN: _____

Project Name: _____ Job No.: _____

RESPIRATOR: Brand _____ Model: _____ Size: _____

Half Mask

Full Mask

Escape

Air Purifying

PAPR

Airline SCBA

FIT TEST RESULTS

Test Parameter

Positive/Negative

Irritant Smoke

Ammonia Vapor

Isoamyl Acetate

Acceptable Unacceptable

COMFORT FACTOR

Very Comfortable

Comfortable

Tolerable

Uncomfortable

Very Uncomfortable

COMMENTS: _____

PERSON ADMINISTERING TEST: _____

TITLE: _____

ACKNOWLEDGEMENT OF FIT:

NAME: _____ DATE: _____

(Signature)



SCAFFOLD SAFETY

PURPOSE

To provide safety guidelines for working on elevated work platforms.

DEFINITIONS

Fixed Scaffolds – includes the following: tubular welded frame, bracket scaffolds, tube and coupler (tube Lox) scaffolds, woodpile scaffolds, and trestle scaffolds.

Suspended Scaffolds – includes the following: two-point suspended scaffolds, multilevel suspended scaffolds, floats, needle-beam scaffolds, boatswain's chair, and electric hoist platforms.

POLICY

GENERAL REQUIREMENTS

Any elevated work presenting a potential fall hazard; therefore, it is essential the precautionary measures be thorough.

Each scaffold and scaffold component shall be capable of supporting, without failure, its own weight and at least 4 times the maximum intended load applied or transmitted to it.

Posts shall be plumb and scaffold platforms shall be level.

Supported scaffolds with a height to base width (including outrigger supports, if used) ratio of more than four to one (4:1) shall be restrained from tipping by guying, tying, bracing, or equivalent means, as follows:

Guys, ties, and braces shall be installed at locations where horizontal members support both inner and outer legs.

Guys, ties, and braces shall be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member to the 4:1 height and be repeated vertically at locations of horizontal members every 20 feet (6.1 m) or less thereafter for scaffolds 3 feet (0.91 m) wide or less, and every 26 feet (7.9 m) or less thereafter for scaffolds greater than 3 feet (0.91 m) wide. The top guy, tie or brace of completed scaffolds shall be placed no further than the 4:1 height from the top. Such guys, ties and braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet (9.1 m) (measured from one end [not both] towards the other).

A qualified person shall determine the structural integrity of structural steel, reinforcing steel, and concrete or building members prior to the attachment of scaffolds by bracing or tying off.

Where persons are required to work or walk under scaffolding, a screen or mesh guard, or solid panels shall be provided between the toe board and handrail. The screen or panels must withstand a horizontal force of at least 150 lbs.

All workers shall tie off with a safety harness when there is no or incomplete handrail, when there are openings over 18 in. in the working platform or when on suspended working platforms.

Where there is danger of tools, materials, or equipment falling from a scaffold and striking employees below, a toe board of at least 3 ½ in. shall be installed. Toe boards shall withstand a horizontal force of at



least 50 lbs.

Swinging stages floats and boatswains shall be tested before using (test by applying a dead load with unit close to floor or ground).

Crews requiring scaffolds shall requisition them well in advance to avoid delays and to allow time to provide the best scaffold for the job.

Scaffold erection crews shall inspect all components for defects as the erection proceeds. Any components found to be defective shall be set aside and tagged for repair or disposal.

Daily inspections shall be performed under the direction of competent supervision responsible for the work being performed. All defects shall be corrected at once or have “defective” tags attached.

SCAFFOLD ERECTION AND DISMANTLING REQUIREMENTS

A serious accident potential may exist when scaffolds are being erected or dismantled. Because of this Selzer-Ornst employees will not erect or dismantle large scaffold arrangements. Selzer-Ornst will hire qualified contractors that specialize in this work.

MOUNTING AND DISMOUNTING SCAFFOLDS REQUIREMENTS

This activity is most associated with scaffold accidents. Therefore, all individuals mounting and dismantling scaffolds shall comply with the following safety rules and regulations:

- When scaffold platforms are more than 2 ft. above or below a point of access, portable ladders, hook-on ladders, attachable ladders, stairway-type ladders, stair towers, ramps, walkways, integral prefabricated scaffold access shall be used. Cross braces shall not be used as a means of access.
- Do not carry objects in hands, but keep both hands empty for climbing handholds.
- Step only on secured ladder or access rungs. “Walk-through” end frames are not designed to be climbable.
- Hook-on, attachable ladders, and climbable end frames shall have uniformly spaced rungs with a maximum spacing between rungs of 16 $\frac{3}{4}$ in.
- Give full attention to stability while getting on and off the working platform. Do not use the toe board as a handhold or foothold.

SCAFFOLD TAGGING

GENERAL SCAFFOLD TAGGING REQUIREMENTS

- This scaffold tagging procedure is designed to ensure the safe use of all jobsite scaffolds.
- A scaffold that is ready for use shall be tagged with either a green or a yellow tag.
- A green scaffold tag designates a complete scaffold, as defined by the manufacturer.
- A yellow scaffold tag designates a scaffold that is not complete, but which is altered to suit a specific job and may be used safely. A yellow scaffold tag shall detail the reason or reasons the scaffold is incomplete and safety measures needed.
- If a scaffold is in the process of being erected, changed, or dismantled, it shall have a red tag. A scaffold that contains a red scaffold tag shall be considered unsafe and shall not be used.
- If a scaffold has been damaged or is defective, a “Red Tag” must be attached.



TAG DESCRIPTION

The yellow, red, and green scaffold tags may be found in Exhibits A, B and C.

INSTALLATION AND REMOVAL OF SCAFFOLD TAGS

- The superintendent/foreman shall determine whether a useable scaffold receives a yellow or a green tag. He/She shall be responsible for completing all pertinent information on the tag and affixing the tag to any scaffold erected under his/her supervision.
- The Scaffold tag shall be affixed to each scaffold access ladder approximately 5 ft. 6 in. from the base, where it will not interfere with normal access.
- The superintendent/foreman or safety manager may remove a scaffold tag from a scaffold which has been damaged, has been improperly modified, is missing components, or is deficient in any safety aspect. A red tag may be used in these circumstances.
- After a scaffold has been repaired, the superintendent/foreman shall inspect it to determine whether it is ready to be re-tagged and shall do so accordingly.
- Periodic inspections shall be performed to ensure that all tags are legible and in good condition.
- Inspection, attention, and stability are three keys to scaffold safety.
- No tag on a scaffold shall be considered the same as a red tag.

Inspection and Testing – Scaffold Planks

- Scaffold planks shall be inspected and tested upon receipt, prior to use, and users shall examine each plank visually prior to each use.
- Examine planks for knots, excessive grain slope, shakes, decay, dry rot and other defects.
- All scaffold planks shall be scaffold grade or equivalent as recognized by approved grading rules.
- Planks shall be 2 in. x 10 in. or 2 in. heavy duty (75 psi on 6 ft. span).
- Discard the plank if evidence of a defect is noted.

SPECIAL SCAFFOLDING

Any scaffold that must be adapted to the workplace where the above requirements cannot be met, must be approved by a qualified supervisor, project manager, and safety manager.

STORAGE OF SCAFFOLDING

- Scaffold materials shall be temporarily stored in a manner that will protect and prevent damage to them.
- Scaffold materials shall not be left in work areas where they obstruct traffic and/or cause fire hazards.



SELZER-ORNST
CONSTRUCTION COMPANY LLC

EXHIBIT "A"
SCAFFOLD TAG-GREEN

**THIS SCAFFOLD HAS BEEN ERECTED TO
MEET FEDERAL/STATE STANDARDS AND IS
SAFE FOR ALL CRAFTWORK.**

DO NOT ALTER

DATE: _____

LOCATION: _____

SIGNED: _____

Selzer-Ornst Construction Company

No. _____



SELZER-ORNST
CONSTRUCTION COMPANY LLC

EXHIBIT "B"
SCAFFOLD TAG-YELLOW

**THIS SCAFFOLD DOES NOT MEET
FEDERAL/STATE STANDARDS.**

**EMPLOYEES WORKING FROM THIS SCAFFOLD
MUST WEAR AND USE APPROVED SAFETY
HARNES AND LANYARDS.**

DATE: _____

LOCATION: _____

SIGNED: _____

Selzer-Ornst Construction Company

No. _____



SELZER-ORNST
CONSTRUCTION COMPANY LLC

EXHIBIT "C"
SCAFFOLD TAG-RED

DO NOT USE THIS SCAFFOLD

KEEP OFF

**THIS SCAFFOLD IS BEING
ERECTED OR TAKEN DOWN**

**ONLY AUTHORIZED EMPLOYEE USING REQUIRED PERSONAL
PROTECTIVE EQUIPMENT MAY WORK ON THIS SCAFFOLD**

DATE: _____

LOCATION: _____

SIGNED: _____

Selzer-Ornst Construction Company **No.** _____



STEEL ERECTION

PURPOSE

To provide guidelines to ensure the safety of all employees involved in steel erection.

POLICY

General Requirements

- Erection gangs on structural steel shall work under the direction of experienced foreman.
- Workers shall not ride on steel being hoisted, nor slide down ropes, columns, or ladders.
- Wire rope slings shall be used when lifting loads over 500 pounds. Care shall be taken to avoid sharp bends by using wood or similar type padding between wire rope and load.
- Reinforcing steel shall not be lifted by bundling ties.
- If float scaffolds are used during steel erection, they shall be used in accordance with OSHA 1926.451 (S) or other applicable regulations.
- The used of wire rope or equal material for temporary safety railing shall be discouraged in substitution for permanent railing.
- The fall protection procedure will be strictly adhered to.
- Wood planking shall be of proper thickness to carry the working load but shall be not less than 2 inches thick full size undressed, exterior grade plywood, at least ¾ inch thick or equivalent material.
- Metal decking of sufficient strength shall be laid tight and secured to prevent movement.
- Planks shall overlap the bearing on each end by a minimum of 12 inches.
- Wire mesh, exterior plywood, or equivalent, shall be used around columns where planks do not fit tightly.
- Provisions shall be made to secure temporary flooring against displacement.
- All unused opening in floors, temporary or permanent, shall be completely planked over or guarded in accordance with OSHA 1926.501.
- Employees shall use safety harnesses in accordance with OSHA 1926.502 when they are working on float scaffolds.
- Air hoses located in walkways shall be protected to prevent damage and prevent interference with the air source.

FLOORING REQUIREMENTS

Permanent Flooring-Skeleton Steel Construction in Tiered Buildings

- The permanent floors shall be installed as the erection of structural members' progress, and there shall not be more than eight stories between the erection floor and the uppermost permanent floor, except where the structural integrity is maintained as a result of the design. At no time shall there be more than four floors or 48 feet of unfinished bolting or welding above the foundation or uppermost permanently secured floor.

Temporary Flooring-Skeleton Steel Construction in Tiered Buildings

- The derrick or erection floor of every building shall be solidly planked or decked over its entire surface except for access openings. Planking or decking or equivalent strength shall be of proper thickness to carry the working load. Planking shall be not less than 2 inches thick full size undressed and shall be laid tight and secure to prevent movement.



Floor Periphery-Safety Railing

A standard railing including mid-rail and toe boards shall be installed 42 inches high at the periphery (including all floor openings) of all temporary-planked or temporary metal-decked floors of tier buildings and other multi-floored structures during structural steel assembly.

Note: The use of wire rope for periphery guarding shall be at the discretion of the PM and superintendent. Wire rope shall only be used when other means of periphery guarding cannot be done and then only in accordance with OSHA and state regulations. Maintaining of periphery wire rope guarding shall be on a daily basis.

- Where skeleton steel erection is being done, a tightly planked and substantial floor shall be maintained within two stories or 30 feet, whichever is less, below and directly under that portion of each tier of beams on which any work is being performed, except when gathering and stacking temporary floor planks on a lower floor, in preparation for transferring such planks for use on an upper floor.

When gathering and stacking temporary floor planks, the planks shall be removed successively, working toward the last panel of the temporary floor so that the work is always done from the planked floor.

FLOORING – OTHER CONSTRUCTION

- In the erection of a building having double wood floor construction, the rough flooring shall be completed as the building progresses, including the tier below the one on which floor joists are being installed.
- For single wood floor or other flooring systems, the floor immediately below the story where the floor joists are being installed shall be kept planked or decked over.

STRUCTURAL STEEL ASSEMBLY

During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with not less than two bolts, or the equivalent at each connection and drawn up wrench tight.

Open web steel joists shall not be placed on any structural steel framework unless such framework is safely bolted or welded.

- In steel framing, where bar joists are utilized and columns are not framed in at least two directions with structural steel members, a bar joist shall be field bolted at columns to provide lateral stability during construction.
- Where long span joists or trusses, 40 feet or longer, are used, a center row of bolted bridging shall be installed to provide lateral stability during construction prior to slacking of hoisting line.
- No load shall be placed on open web steel joists until these security requirements are met.

Tag lines shall be used for controlling loads.

When connectors are working together, only one competent qualified person shall give signals. That person shall make sure that their partner and others working in the area are in the clear. Each employee shall select a position to avoid being struck by a swinging load.

When connecting lugs, etc. are bent or otherwise damaged, the damaged item shall be returned to the



ground for repairs.

Areas below structural steel erection shall be barricade and “Overhead Work” warning signs posted.

No load-bearing structural members shall be materially weakened by cutting, welding, or other means, except in accordance with the advice of the designers of the structure or a licensed professional engineer.

BOLTING, FITTING-UP, AND PLUMBING-UP

General Requirements

- Containers shall be provided for storing or carrying bolts and drift pins and secured against accidental displacement when aloft.
- Pneumatic hand tools shall be disconnected from the power source and pressure in hose lines shall be released before any adjustments or repairs are made.
- Air line hose sections shall be tied together except when quick disconnect couplers are used to join sections.
- Eye protection shall be worn at all times during operation such as reaming, drilling, cutting, welding, and the driving of wedges, shims or pins.

Bolting

- When bolts or drift pins are being knocked out, means shall be provided to keep them from falling.
- Impact wrenches shall be provided with a locking device for retaining the socket.

Plumbing-Up

- Connections of the equipment used in plumbing-up shall be properly secured.
- The turnbuckles shall be secured to prevent unwinding while under stress.
- Plumbing-up guys and related equipment shall be placed so those employees can get at the connection points.
- Plumbing-up guys shall be removed only under the supervision of a competent person.
- Temporary bracing and/or guying shall be utilized to stabilize a structure until construction has been completed.

SAFE WALKING SURFACES ON STRUCTURAL MEMBERS

Structural members with studs, dowels, or shear connectors installed on the top side shall not be used as a walkway and/or means of access unless such studs, dowels, or shear connectors are covered with suitable material, and in such a manner that provides a walking surface at least as stable and free of hazards as the top surface of the member would provide without attachments installed. For the purpose of this section, “stud” shall mean all protruding metal to structural members.



EXHIBIT "A"

STEEL ERECTION PLAN

Page 1 of 3

PURPOSE

To provide guidelines to ensure the safety of all employees involved in steel erection.

GENERAL REQUIREMENTS

- Structural steel erection employees shall work under and take directions from an experienced steel erection foreman and general foreman. These employees shall be given safety instructions by their foreman and general foreman relative to performing their tasks safely and within the safety program.
- Workers are not allowed to ride on steel being hoisted, nor slide down ropes, columns or ladders. Riding the crane's headache ball and hook is prohibited.
- Steel erection employees shall not walk on open steel unless adequate fall protection is provided.
- All employees shall be protected from fall hazards by wearing a body harness with the safety lanyard tied off to a member of the structural steel or a static line, which has been installed for the specific purpose of fall protection. All employees shall be issued safety glasses with side shields and hard hats which must be worn 100% of the time while working on the project.

STRUCTURAL STEEL ASSEMBLY

As columns are erected, a positive means of securing each column shall be accomplished by using guy cables attached to concrete anchors or some other similar attachment for anchorage purposes to stabilize the steel framework.

After the structure's columns have been set (first elevation columns only), horizontal beams shall be installed with at least two bolts connecting each end of the beam to each column at the first-tier elevation. Other horizontal members shall then be connected to other horizontal beams.

All structural steel connectors shall have a safety harness with its safety lanyard tied off to the column when connecting. Should this type of primary fall protection not be practical for the task, a secondary type of fall protection must be provided and used by the connectors. Secondary fall protection includes but not limited to scaffolds, JLG's, safety nets, decking and ladders. Again, each connector must have his/her safety harness tied off to a structural member of the structure if a fall distance of 6-feet or more exists.

During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with not less than two bolts or the equivalent at each connection and drawn and drawn up wrench tight.

Open web steel joists shall not be placed on any structural steel framework unless such framework is safely bolted or welded.



EXHIBIT “A”

STEEL ERECTION PLAN

Page 2 of 3

In steel framing, where bar joists are used and columns are not framed in at least two directions with structural steel member, they are secured with not less than two bolts, or the equivalent at each connection and drawn up wrench tight.

In steel framing, where bar joists are used, and columns are not framed in at least two directions with structural steel members a bar joist shall be field bolted at columns to provide lateral stability during construction.

Tag lines shall be used for controlling loads while raising and placing structural steel members in place.

Areas below structural steel erection including lay-down storage and crane areas shall be barricaded and warning signs reflecting “overhead work-unauthorized personnel stay out” posted around entire barricaded area. (Crane rotating super structure shall be barricaded separately from the general overhead work areas).

Wire rope slings shall be used when lifting loads. After a structural beam has been set and bolted at both ends, the structural steel employee may secure his safety lanyard around the beam and “coon” out to detach the sling from the crane hook and the beam. Walking the steel is not permitted unless the employee is tied off to the horizontal lifeline attached to the beam. An alternative way of detaching the sling from the beam is by placing an extension ladder up to the beam and unhooking it.

If float scaffolds are used during steel erection, they shall be used in accordance with OSHA 1926.451 (W).

EMPLOYEE FALL PROTECTION

Anytime an employee ascends to six feet or more above the floor or ground, the employee shall be protected from the possibility of a fall hazard by using a body harness with the safety lanyard securely fastened to a member of the structural steel or other appropriate anchorage.

FLOORING REQUIREMENTS

Permanent and Temporary Flooring – Skeleton Steel Construction in Tiered Building

- The permanent floors shall be installed as the erection of the structure progresses when feasible.
- At no time shall there be more than four floors or 48 feet of unfinished bolting or welding above the foundation or uppermost permanently secured floor.



EXHIBIT “A” STEEL ERECTION PLAN

Page 3 of 3

- As the steel erection of the structure progresses, the permanent floors of the structure will be completed by the placement and tie-down of decking, rebar, and concrete placed over the decking. At no time will connectors be allowed to hang steel over unprotected employees working below. For those employees performing work activities below a complete floor (this shall be interpreted as a floor in which the concrete has had a reasonable time to harden), all perimeters, wire-rope, handrails, mid-rails, and toe boards have been installed and all interior floor openings have either permanent or temporary protection guardrails or floor covers provided.
Note: Complete decking by itself does not provide adequate overhead protection from potential falling materials or tools (beams, impact wrenches, etc.).
- To further protect those employees, installing decking and placement of rebar and concrete at lower elevations from overhead steel erection activities, steel erection operations will be halted unless some form of overhead protection is provided.
- The interior stairs including protective guardrails around each floor opening shall be completed as each floor is completed where possible. Interior stairs where the framework has been set in place but not yet completed shall not be used and must be barricaded off (standard guardrail system required) with appropriate warning signs.

BOLTING OPERATIONS

At least two bolts at each end of solid web structural member shall be drawn up wrench tight before the hoisting line is released. When bolts or drift pins are being knocked out, connectors must provide a positive means to prevent them from falling.

Each impact wrench shall be provided with a locking device for retaining the socket. Connectors must provide some positive means of securing tools, such as bolt bags, etc., to prevent them from falling to areas below.



TOOLBOX / SAFETY TALK MEETINGS

PURPOSE

The purpose of this policy is to:

- Provide guidelines for developing, scheduling, and delivery of safety awareness training for employees on the jobsite.
- Encourage safety awareness.
- Get employees actively involved in safety.
- Motivate employees to follow proper safety procedures.
- Eliminate safety hazards.
- Introduce workers to new safety rules, practices, and equipment.

REFERENCES

- Films, videocassettes, and written material available from the insurance carrier.
- Equipment manufactures representatives, suppliers, etc.
- Job site safety personnel.
- Selzer-Ornst Corporate Safety Policy.

WEEKLY SAFETY TALK MEETING

Superintendents / Foremen will be required to conduct a weekly safety talk meeting. These meetings are to provide employees with up-to-date safety information. The superintendent/foreman will discuss various aspects of job safety and health as it pertains to the work to be performed for the week.

Superintendents / Foremen will be required to conduct a supplement safety talk meeting for those employees who missed the regular scheduled meeting.

These meetings should be held early in the week, in the morning, and should last no longer than 15 minutes. The shop and/or field superintendent is responsible for developing ToolBox Talks.

QUARTERLY SAFETY HARNESS INSPECTION SAFETY TALK MEETINGS

At the beginning of each month (Jan/April/July/Oct.), the shop superintendent, as part of the weekly "Safety Talks", foreman / superintendents should remind their employees to bring in their harnesses and lanyards. At the beginning of each quarter, have your employees do a formal check of their harness (everyone should do a visual check every time they put on a harness). This should only take 5-10 minutes time to make sure they are in good condition; their lives depend on it!

If employees do not have the required harness and lanyard, this should be considered a policy violation and subject to disciplinary action in accordance with our disciplinary policy in the employee manual.

RECORDKEEPING

The superintendent / foreman will enter the date, job name, job number, safety topic(s) discussed, and any safety concerns on the weekly jobsite safety meeting sheet.

- To keep track of attendance, each employee will sign the weekly jobsite safety meeting sheet.



- If the superintendent / foreman is on vacation for an entire week, he/she should still turn in a safety meeting sheet indicating "On Vacation".
- If the superintendent / foreman attends the general crews' safety talk meeting, he/she should put their name in the field supervisor section alongside the supervisor giving the safety talk.
- If the superintendent / foreman does not have a crew for that week, he/she is still required to select a topic to review and fill out the weekly jobsite safety meeting sheet, indicating in the attended by section, "No Crew".
- The weekly jobsite safety meeting sheets will be maintained on file.



Weekly Jobsite Safety Meeting

Date ____/____/____ Job Number _____

Job Name _____

Field Supervisor(s) _____

Safety Topic _____

Attended by: *(Please Print First and Last Name)*

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Safety Concerns (unsafe acts, unsafe conditions, other safety problems)

1. _____
2. _____
3. _____
4. _____
5. _____



VEHICLE / POWERED INDUSTRIAL TRUCK SAFETY

PURPOSE

To establish guidelines for proper use of equipment and procedures for safe vehicle operation.

GENERAL REQUIREMENTS

- All employees operating vehicles and the passengers in these vehicles are required to wear seat belts at all times except for D.O.T. exempted vehicles.
- Drivers must have a current, valid, vehicle operator's license.
- Drivers must comply with all federal, state, and local traffic regulations.

TRANSPORTING PERSONNEL AND MATERIAL

- Personnel will not be used to support or steady loads while a vehicle is in motion.
- Truck running boards may not be ridden.
- Employees must be seated, with arms and legs within the confines of the vehicle. Employees may mount or dismount vehicles only when fully stopped. Personnel may not ride in the bed of a pick-up truck.
- Personnel are to vacate all vehicles being loaded by a crane, backhoe, shovel, loader, etc., and are to move away from the vehicle.
- Loads extending beyond the bed of the truck or wagon are to be flagged and marked at night with red lanterns or clearance lights. Loads are to be secured to prevent any movement.
- Only three (3) people may ride in the cab of a truck, unless designed to accommodate more. Seat belts must be used.
- When left unattended, vehicles must be shut off, and left in gear with brakes set. For vehicles with automatic transmission, the Park Position will be used. If vehicle is parked on a grade of incline, wheels must be chocked. Vehicles are not to be left running while unattended.

RECORDS

All vehicles or forklifts will be inspected daily using the vehicle or forklift safety inspection checklist (Exhibit "B" or Exhibit "C"). Completed inspection forms will be filed in the safety office.

VEHICLE EQUIPMENT

All vehicles used on site will be equipped in accordance with state and local laws and regulations. Selzer-Ornst Safety Standards require the following equipment:

- Non-glare rear view mirror.
- Left-hand outside rear view mirror.
- Seat belts to accommodate all passengers.
- Turn signal.
- Three flares for emergency use. Flares should be placed 300' behind, 150' behind and adjacent to disable vehicle.
- Two windshield wipers.
- Back-up lights.
- First-aid kit.



- Snow tires and chains, where conditions warrant.
- A minimum 2-1/2 pound ABC rated fire extinguisher.
- A working horn.

**POWERED INDUSTRIAL TRUCKS
(Forklifts, Platform Lift trucks, Motorized Hand Trucks, etc.):**

- All new powered industrial trucks shall meet requirements established in ANSI B 56.1-1969.
- All nameplates and markings shall remain in place and be maintained in a legible condition.
- Only trained and authorized operator shall be permitted to operate powered industrial trucks. Operators shall be trained in the safe operation of each powered industrial truck used at the facility.
- No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.
- No person shall ride on the lifting mechanism of a forklift or use the forklift as a work platform. Manufacturer-approved personnel basket may be used if all stipulations of the manufacturer are met (Exhibit "A").
- When a powered industrial truck is left unattended, loads shall be fully lowered, controls neutralized, power shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline.
- If a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition. Authorized personnel shall make all repairs.



EXHIBIT “A” FORKLIFT MOUNTED WORK PLATFORMS

When personnel are being lifted on work platforms/scaffold platforms, on forklifts that are not equipped with controls elevatable with the lifting carriage, there must be compliance with the following guidelines:

The platform shall:

- Be sufficiently strong enough to support any load(s) that may be imposed on it.
- Securely attach to the lifting carriage or forks and secured so they do not pivot upward.
- Extend less than 10 inches either side of the load bearing tires.
- Designed so that employees will not be exposed to an ingoing nip point, which can be created between the rear of the platform and the structure of the powered industrial truck, as platform is raised and lowered.
- Designed so that personnel on the platform are protected from moving parts of the truck.
- Horizontal and centered, and not tilted forward or rearward when elevated.
- Moved in a smooth steady fashion when personnel are on it.
- Moved only when the personnel on it specifically request that it be moved.
- Moved after it has been elevated when there are personnel on it only when there is a need for minor horizontal adjustments.
- Provided with a fall protection system if it is elevated more than 4 feet (10 feet for scaffold platforms) above the waling/working surface or is above or adjacent to dangerous equipment. If a guardrail system is used it shall consist of a top rail approximately 38 inches in height, a midrail approximately 21 inches in height, and a toe board as needed.
- Provided with fall protection, at the opening used for access and egress from it, which provides protection equivalent to that of a standard guardrail system.
- Provided with fall protection, at the opening used for access and egress from it, which provides protection equivalent to that of a standard guardrail system.
- Provided with a slip resistant surface.

The truck shall:

- Be operated on a level surface and have firm and level footing.
- Be operated so that the overhead obstructions are avoided.
- Be operated so that the personnel do not come close to electric equipment than permitted by 1910.333 or 1926.41



FORKLIFT INSPECTION REPORT

MAKE	MODEL		UNIT NO.		WEEK ENDING	
CHECK ITEM	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Forks and Mast						
Hoist Chains & Cylinder						
Tires						
Lights and Reflectors						
Brakes						
Brakes - Emergency						
Steering System						
Hydraulic System						
Operator's Controls						
Glass, Mirrors						

Additional Items Noted By Inspector

Ideally, a visual and where appropriate functional review of these items should be completed each morning before operating this piece of equipment.

Report ALL items in need of repair to Maintenance Shop at the time of inspection and do not operate the equipment until it has been repaired.

Turn in check sheet to Equipment Supervisor at beginning of the week the inspection(s) were completed.

Operator _____
(Print Name) (Signature)

DATE REPORTED	REPAIRS	DATE REPAIRED

Foreman/Equipment Superintendent (Print Name) _____

Foreman/Equipment Superintendent (Signature) _____



SILICA EXPOSURE CONTROL PROGRAM

APPLICABILITY AND SCOPE

APPLICABILITY

This Written Exposure Control Plan (Plan) applies to Selzer-Ornst personnel who are potentially exposed to airborne concentrations of respirable crystalline silica (silica) because of their work activities or proximity to the work locations where airborne silica is being emitted. This Plan also applies to Selzer-Ornst superintendents, foremen, or safety personnel who may be responsible for overseeing a subcontractor's operations that have the potential to expose personnel to airborne concentrations of silica at or above regulatory, and industry action levels and exposure limits.

SCOPE

This Plan describes the hazards associated with projects involving potential exposure to airborne concentrations of silica and the issues to be addressed during these projects. These projects include, but are not limited to:

- Use of stationary masonry saws used to cut concrete, tile, concrete masonry block, sheet rock, gypsum fiber roof board, or any other product containing quartz.
- Handheld power saws used to cut concrete, asphalt, concrete masonry block, sheet rock, gypsum fiber roof board, or any other product containing quartz.
- Walk-behind saws used to cut concrete or asphalt.
- Rig-mounted or free-standing core saws or drills (including impact and rotary hammer drills) used to penetrate concrete, concrete masonry block, sheet rock, gypsum fiber roof board, or any other structural component or product containing quartz.
- Jackhammers and handheld powered chipping tools used to demolish or modify concrete, concrete masonry block, or any other structural component or product containing quartz.
- Vehicle mounted hammers or chipping tools used to demolish concrete, concrete masonry block, or any other structural component or product containing quartz.
- Handheld grinders or cut-off wheels used for mortar removal or cutting/grinding of concrete, concrete masonry block, sheet rock, gypsum fiber roof board, or any other structural component or product containing quartz.
- Walk-behind milling machines or bead blasters used for surfacing activities on concrete, concrete masonry block, asphalt, or any other product containing quartz.
- Installation or demolition of sheet rock, including mudding, taping, texturizing activities with quartz containing materials.
- Hand or power tool sanding of painted surfaces. Current latex paint products contain quartz and the painted substrate (sheet rock, concrete masonry block, concrete) contains quartz.
- All housekeeping operations associated with the activities described above.

Selzer-Ornst employees who work in proximity to silica-related operations must be aware of safe work practices and take all necessary precautions associated with avoiding and minimizing airborne silica exposure.

REGULATORY REVIEW

Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1153: Respirable Crystalline Silica (Construction Industry) and 29 CFR 1910.1053: Respirable Crystalline Silica (General Industry), contain regulatory requirements specific to respirable crystalline silica. This Written Exposure Control Plan is developed in accordance with the requirements in 29 CFR 1926.1153(g).



PROJECT PLANNING

TRAINING REQUIREMENTS

Selzer-Ornst employees who anticipate working on projects where they could be exposed to airborne silica will be provided training in silica hazards in accordance with the Selzer-Ornst program established to comply with the hazard communication standard (29 CFR 1910.1200). Each employee will have access to labels on containers of crystalline silica and safety data sheets and be provided information on the health hazards of silica including cancer, lung effects, immune system effects, and kidney effects. In addition, Selzer-Ornst employees will be provided training and information regarding specific activities identified in this plan that could result in airborne silica exposure, and the specific engineering controls, work practices and respiratory protection requirements, to mitigate the potential airborne silica exposures. This training will provide a discussion of silica hazards, initial exposure determination either by complying with 29 CFR 1926.1153 Table 1 requirements or air monitoring, specific engineering and work practice control measures, personal protective equipment (PPE), and medical surveillance requirements. The training will also identify the Selzer-Ornst competent person for silica exposure identification and determination of control requirements. All Selzer-Ornst employees will be provided with access to a copy of 29 CFR 1910.1153 and be trained on the contents of 29 CFR 1926.1153.

MEDICAL SURVEILLANCE REQUIREMENTS

Selzer-Ornst shall institute medical surveillance for any employees required by this plan to wear a respirator 30 or more days per year. Initial medical surveillance consists of medical and work history with emphasis on: past, present, and anticipated exposure to silica, dust, and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (e.g., shortness of breath, cough, wheezing); history of tuberculosis; and smoking status and history; a physical examination with emphasis on the respiratory system; chest X-ray (a single posterior-anterior radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems), interpreted and classified according to the International Labor Office (ILO) International Classification of Radiographs of Pneumoconiosis by a NIOSH-certified B Reader; a pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV1) and FEV1/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH approved spirometry course; testing for latent tuberculosis infection; and any other tests deemed appropriate by the Occupational Medicine Provider. Subcontractors are responsible for implementing a medical surveillance program for their employees.

COMPETENT PERSON REQUIREMENTS

Selzer-Ornst shall identify a competent person to inspect and oversee all activities with potential airborne silica exposure. Subcontractors working on projects within the scope of this Program shall appoint a competent person capable of executing the duties described herein. The competent person must have training in the inspection of work areas and equipment and in the determination of safe working conditions. This person shall have a working knowledge of the 1926.1153 standards, shall be capable of identifying airborne silica hazards, shall determine the need for initial and additional exposure monitoring, shall recommend and implement engineering and work practice controls, shall establish levels of PPE, and shall have the authority to take action to eliminate hazards and correct incidences of noncompliance.



PLANNING ACTIVITIES

Projects where anticipated activities involve concrete cutting, grinding, sandblasting, drilling, coring, or other abrasive operations are treated as potential sources for airborne silica exposure. Additionally, existing structures and materials such as sheetrock, any painted surfaces with low volatile organic compounds, tile, brick, or some insulation products may contain silica. Likewise, new material installation may involve silica-containing mortar, paints, or insulation. Where process knowledge indicates the presence of silica, Selzer-Ornst will either implement all controls required by 1926.1153 Table 1- Exposure Control Methods for Selected Construction Operations or conduct an initial determination in accordance with 29 CFR 1926.1153(d)(2).

PROJECT EXECUTION

SAFE WORK PRACTICES

The requirements of this section are to be followed by Selzer-Ornst employees, who may be exposed to airborne concentrations of silica at or above the regulatory limits.

EXPOSURE ASSESSMENT

Selzer-Ornst will either comply with and implement all controls required by 1926.1153 Table 1- Exposure Control Methods for Selected Construction Operations or conduct an initial determination in accordance with 29 CFR 1926.1153(d)(2).



**TABLE 1
SPECIFIED EXPOSURE CONTROL METHODS
(29 CFR 1926.1153)**

EQUIPMENT/TASK	ENGINEERING AND WORK PRACTICE CONTROL METHODS	REQUIRED RESPIRATORY PROTECTION AND MINIMUM APF	
		≤ 4 HOURS/SHIFT	> 4 HOURS/SHIFT
(i) Stationary masonry saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade	None	None
(ii) Handheld power saws (any blade diameter)	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions:		
	• When used outdoors	None	APF 10
	• When used indoors or in an enclosed area	APF 10	APF 10
(iii) Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less)	For tasks performed outdoors only: <ul style="list-style-type: none"> • Use saw equipped with commercially available dust collection system. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency. 	None	None
(iv) Walk-behind saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions:		
	• When used outdoors	None	APF 10
	• When used indoors or in an enclosed area	APF 10	APF 10
(v) Drivable saws	For tasks performed outdoors only: <ul style="list-style-type: none"> • Use saw equipped with integrated water delivery system that continuously feeds water to the blade. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. 	None	None
(vi) Rig-mounted core saws or drills	Use tool equipped with integrated water delivery system that supplies water to cutting surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
(vii) Handheld and stand-mounted drills (including impact and rotary hammer drills)	Use drill equipped with commercially available shroud or cowling with dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. Use a HEPA-filtered vacuum when cleaning holes.	None	None
(viii) Dowel drilling rigs for concrete	For tasks performed outdoors only: <ul style="list-style-type: none"> • Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter cleaning mechanism. • Use a HEPA-filtered vacuum when cleaning holes. 	APF 10	APF 10



(ix) Vehicle-mounted drilling rigs for rock and concrete	Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector; OR Operate from within an enclosed cab and use water for dust suppression on drill bit.	None	None	
(x) Jackhammers and handheld powered chipping tools	Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact:			
	• When used outdoors	None	APF 10	
	• When used indoors or in an enclosed area	APF 10	APF 10	
	OR Use tool equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism:			
	• When used outdoors	None	APF 10	
	• When used indoors or in an enclosed area	APF 10	APF 10	
(xi) Handheld grinders for mortar removal (i.e., tuckpointing)	Use grinder equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.	APF 10	APF 25	
(xii) Handheld grinders for uses other than mortar removal	For tasks performed outdoors only:			
	• Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface.			
	• Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None	
	OR Use grinder equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.			
	• When used outdoors	None	None	
	• When used indoors or in an enclosed area	None	APF 10	
(xiii) Walk-behind milling machines and floor grinders	Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None	
	OR Use machine equipped with dust collection system recommended by the manufacturer. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.	None	None	
(xiv) Small drivable milling machines (less than half-lane)	Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant. Operate and maintain machine to minimize dust emissions.	None	None	

If not following 1926.1153 Table 1 requirements or performing an activity with potential airborne silica exposure not identified in Table 1 the exposure assessment must contain elements listed below.

- An exposure assessment is required when employees may be exposed to airborne silica at or above the action level in order to determine the extent to which employees are exposed and the appropriate exposure controls required.
- An initial determination of exposure shall be made at the beginning of operations. The determination shall consist of the collection of personal air samples representative of a full shift including at least one sample for each job classification in each work area, either for each shift, or for the shift with the highest exposure level.
- During the initial determination, until such time that actual airborne concentrations are determined, personnel shall be protected by respiratory protection based on task- specific anticipated airborne concentrations of silica.
- During the initial determination, and in addition to the levels of respiratory protection required, personnel shall be provided with protective clothing and equipment, hygiene facilities, and training.



- Whenever a change in equipment, process, controls, or personnel occurs, or a new task has been initiated, an additional exposure assessment is required.
- When an assessment determines that exposure has occurred above the action level but below the PEL, additional monitoring shall be required at least every 6 months. Additional monitoring shall continue until such time that the monitoring results fall below the action level on two separate occasions at least 7 days apart.
- When monitoring yields results above the PEL, then quarterly monitoring is required. In addition, the quarterly monitoring may be suspended when additional monitoring results fall below the action level on two separate occasions at least 7 days apart.
- Where the competent person can clearly demonstrate, in the absence of air monitoring data, that a work activity will not create airborne silica concentrations in excess of the action level, then air monitoring may be unwarranted. Where a negative initial determination is reached without air monitoring, the competent person must develop a written explanation as to why exposures are not expected to exceed the action level.

COMMUNICATION OF HAZARDS

- Each employee shall be provided training and demonstrate knowledge and understanding of the following:
 - Health hazards associated with exposure to respirable crystalline silica.
 - Specific tasks that could result in exposure to respirable crystalline silica.
 - Specific measures that are required to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and required use of respiratory protection.
 - The contents of the 29 CFR 1926.1153.
 - The identity of the competent person.
 - Purpose and description of the medical surveillance program.
- A written compliance program shall be made available to all affected employees.
- In addition, notification to owners, contractors, and other personnel working in the area shall be made.

CONTROL METHODS

- Engineering and work practice controls, including administrative controls, shall be implemented to reduce and maintain employee exposure to silica at or below the PEL, to the extent that such controls are feasible.
- Where all feasible engineering and work practice controls that can be instituted are not sufficient to reduce employee exposure to or below the PEL, such controls shall be used, nonetheless, to reduce employee exposure to the lowest feasible level (and in conjunction with respiratory protection).
- Respiratory protection shall be selected based on guidance in 1926.1153 Table 1 or based on a Certified Industrial Hygienist's or competent person's assessment of the potential airborne exposure that may be created by the means and methods of work (high energy operations with high airborne dust generation or low energy operations with low dust generation).
- When using mechanical ventilation to control exposure, regularly evaluate the system's ability to effectively control exposure.
- If administrative controls are used to limit exposure, establish and implement a job rotation schedule that includes employee identification as well as the duration and exposure levels at each job or workstation where each affected employee is located.



- A written compliance program shall be established and implemented prior to the start of operations within the scope of this Written Compliance Plan. The written program shall outline the plans for maintaining employee exposure below the PEL.
- Maintain all surfaces as free as possible from accumulations of silica. Select methods for cleaning surfaces and floors that minimize the likelihood of silica becoming airborne (such as using a HEPA vacuum).
- If vacuuming is the method selected, specialized vacuums with HEPA filtration are required. Methods to use and empty vacuums in a manner that minimizes the reentry of silica into the workplace shall be described and used. Use of household vacuums with HEPA filters are not allowed at any time for the collection of dust or debris that contains silica.
- Never use compressed air to remove silica from any surface unless it is used in conjunction with a ventilation system designed to capture the airborne dust created while using the compressed air.
- Employees shall not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in any areas where exposure to silica is above the PEL (in other words, regulated areas).
- Do not allow employees to leave the workplace wearing any protective clothing or equipment that is required to be worn during their work shift without HEPA vacuum removal of dust.
- Where feasible, install shower facilities and require employees who work in regulated areas to shower at the end of their work shift. Also provide an adequate supply of cleaning agents and clean towels.
- Provide hand washing facilities for use by employees working in regulated areas. Furthermore, require employees to wash their hands and face at the end of the work shift and prior to eating or entering eating facilities, drinking, smoking, or applying cosmetics.
- Eating facilities or areas shall be provided for employees working in regulated areas. These facilities shall be maintained free of silica contamination and shall be readily accessible to those employees.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Respiratory protection must be used for the following conditions:

- During periods when employee exposure to airborne silica exceeds the PEL
- For work operations where engineering and work-practice controls are not sufficient to reduce employee exposure to or below the PEL
- During periods when an employee requests a respirator
- During periods when respirators are required to provide interim protection while conducting initial exposure assessments
- Powered air-purifying respirators (PAPR) shall be provided to employees who request such a respirator to use where it will provide adequate protection.
- Employees shall be provided, at no cost, protective work clothing and equipment including cotton coveralls or similar full-body clothing, gloves, hats, shoes or disposable shoe coverlets, face shields, vented goggles, or other appropriate PPE.



OPERATING COMPANY-OWNED VEHICLES

POLICY

It is the policy of Selzer-Ornst to provide safe, well maintained, company-owned vehicles and to establish rules and procedures concerning the operation of such vehicles to minimize risk of loss and/or injury to the vehicle operators, the general public and the company.

RULES & PROCEDURES

- Restrictions Concerning Use
 - Assigned Vehicles
 - Company-owned cars are to be driven only by the employees to which they are assigned or another company employee if and when such vehicles have to be used on company business.
 - Certain key personnel will be allowed the use of company-owned cars for their private use as well as for company use:
 - The company car can be driven only by the employee and his or her spouse.
 - The company must be reimbursed for the personal use of the car.
 - Trailer hitches and special equipment costs are the responsibility of the employees.
 - Trailers and their loads are not covered by Selzer-Ornst insurance and will not be the responsibility of Selzer-Ornst.
 - Vacations: The employee will be responsible for all gas and incidental repairs necessary while on vacation. Use of a company car outside of the State of Wisconsin for vacation must be preapproved by the President or Vice President of Selzer-Ornst.
- Unassigned Vehicles (Shop Trucks)
 - Company trucks are intended for business purposes only and are to be driven only by qualified, licensed drivers. Use of company trucks for non-company business will be allowed only with the written permission of the President or Vice-President.
 - Unauthorized persons will not be permitted to ride in company vehicles.
- Responsibilities of Drivers
 - Primary responsibility for the safe operation of company vehicles lies with the individual driver. In addition, supervisory personnel are, to the extent possible, responsible for monitoring the driving habits of individual drivers under their supervision.
 - All traffic laws must be obeyed. Company vehicle drivers have no highway or street rights different than other motorists.
 - Drivers should, at all times, operate their vehicle in a position on the road to be the least obstructive driver to other traffic.
 - Driving courtesy, in addition to reducing traffic hazards, creates goodwill for both the driver and the company. In this regard, Selzer-Ornst drivers are expected to set an example of driving courtesy worthy of being practiced by other drivers.
 - No vehicle shall be driven in a reckless or dangerous manner. This would include driving while vision is impaired as a result of fatigue, illness of any other cause.
- Cellular Safety
 - Drivers are prohibited from emailing, texting, or reading emails/texts while driving.
 - Cellular phones must be placed in an area that can be safely reached by driver.



- The use of cell phones while operating a company vehicle is prohibited. All Selzer-Ornst employees are to pull over to make and receive calls.
- Intoxicating Beverages & Drugs
 - Operation of company vehicles under the influence of drugs or alcohol or carrying these intoxicants in a company vehicle is strictly prohibited.
- Vehicle Equipment and its Usage
 - Headlights must be turned on between sundown and sunrise when company vehicles are being operated. All exterior lights (headlights, taillights, brake lights, etc.) should be checked and cleaned regularly and promptly replaced when necessary.
 - All safety devices such as turn signals, windshield wipers, defrosters, etc. should be checked regularly to ensure proper operation.
 - Driving of an unsafe or improperly equipped company vehicle will not be allowed.
- Defensive Driving
 - Drivers should make allowance for lack of skill and/or improper attitude of other drivers or pedestrians and always be alert to recognize a potential “accident-producing” situation far enough in advance to take preventative action.
- Safety First
 - Safe driving should be foremost in all drivers’ minds. Drivers must allow ample trip time for safe travel in order to arrive on schedule.
 - It is against company policy to ride in the back of trucks.
 - Hitchhikers shall not be picked up.
 - Seat belts must be worn by all occupants while traveling in any company vehicle and it is the driver’s responsibility to see that this policy is enforced.
- Loads
 - All loads on company trucks must be secured properly prior to moving the vehicle. Special consideration should be given to the safe transportation of hazardous or unusual cargo such as welders, gas cylinders (transport in upright position), top-heavy equipment, chemicals, etc.
 - All vehicle weight and load limits must be observed.
 - Proper towing practices must be used when towing trailers, compressors, welders, etc. When necessary, trailer lighting must be connected and checked to see if it is functioning properly. Safety chains must be used. Towing of other vehicles is not allowed.
- Vehicle Maintenance
 - Assigned Vehicles
 - Scheduling vehicle maintenance is the responsibility of the individual assigned to each vehicle. Maintenance should be scheduled so as not to conflict with the employee’s work schedule.
 - Major repairs or replacement over \$500 must be preapproved by the President or Vice President.
 - Routine maintenance (e.g., oil changes, tune-ups, etc.) is to be performed in accordance with the manufacturer’s recommendations.
 - Needed repairs should be scheduled promptly in order to maintain vehicles in a safe operation condition and/or avoid future major vehicle damage and repair costs.
 - Vehicles should be washed and waxed regularly, on employee’s own time, since the condition of the vehicles is a direct reflection of the company itself.
 - Unassigned Vehicles (Shop Trucks)
 - All routine maintenance of company trucks is the responsibility of the General Superintendent, or the individual designated by the General Superintendent to assume this responsibility.



- Drivers of company trucks should immediately report to the General Superintendent, or his designated representative, all malfunctions of the vehicles of which they become aware.
- Accident Reporting
 - Any accident must be reported to the President, Vice President, and Human Resources as soon as possible on the day of such accident.
 - WHAT TO DO IN CASE OF AN ACCIDENT
 - Check the medical condition of all persons involved.
 - Call proper authorities (police, sheriff, or highway patrol)
 - Exchange names, company phone numbers and address, license number of vehicle's, driver's license numbers, and names of insurance companies with all persons involved in the accident.
 - Take pictures of the accident with cell phone, if possible.
 - Make no comment or statement regarding the accident except to the policy.
 - All company vehicles are to be equipped with an accident-reporting packet to be used in the event of an accident. Use of the packet and prompt (same day) reporting of any accident to your supervisors are mandatory.
 - If it is determined that the employee is responsible for causing the accident through negligence, the company may require the employee to reimburse the company for the deductible portion of the cost of repairs.
- Action in Event of Statutory or Policy Violations
 - Any traffic violations incurred while driving personal vehicles which result in the loss of driving privileges by the state will also result in being excluded as a driver of company vehicles. If an occupation driving permit is granted by the state, the driver will be required to pick up and return the company vehicle to the company yard each day. The loss of driving privileges may result in termination of employment.
 - Operating of a company vehicle under the influence of drugs and alcohol will result in being excluded from operating a company vehicle in the future and could be the cause for immediate discharge.
 - Failure to report any accident is cause of termination of employment.
 - Any parking tickets or citations associated with traffic violations while driving a company vehicle may be the responsibility of the individual driver and may not be reimbursed by the company.
 - When vehicle use is a significant aspect of the employee's job, the loss of vehicle use for either statutory violations or company policy violations may result in termination.



SAFETY POLICY EMPLOYEE SIGN OFF SHEET

Selzer-Ornst Construction Company

DETACH AND RETURN THIS FORM TO YOUR FOREMAN AFTER YOU HAVE READ THIS SAFETY MANUAL:

Violation of these rules and regulations will endanger the life and safety of the individual and fellow employees. Deliberate violation of these rules is sufficient cause for disciplinary action and/or dismissal.

I also understand that in case I am injured, no matter how slight, while in the course of my work with Selzer-Ornst Construction Company I must report immediately to my foreman.

I hereby confirm that I have read thoroughly and understand the safety rules of Selzer-Ornst Construction Company and will to the best of my ability abide by them.

I understand that there is a Hazardous Material Booklet available for my inspection.

Signature

Date

Print Name