

Winery Safety Plan

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EMERGENCY PROCEDURES:

A. IN CASE OF AN EMERGENCY CALL: 9.1.1

Calmly state . . .

- Your name.
- The location of the emergency.
- The nature of the emergency: fire, heart attack, poisoning, etc.
- Whether any injuries have occurred.
- A phone number and location at the scene where you can be reached
Winery office phone: 765.494.1749 Winery lab phone: 765.494.3624

While waiting for assistance, stay calm. The dispatcher will contact the necessary emergency services. The dispatcher may ask you to stay on the phone. Do not hang up until told to do so by dispatcher.

B. PROCEDURES IN CASE OF FIRE (or EXPLOSION)

- Leave the area of immediate danger; be sure that other people are out.
- Close the Doors!
- Activate the nearest building fire alarm.
- Dial **9.1.1**: The Purdue Fire Department will answer.

If the fire is small, attempt to extinguish it without endangering yourself as follows:

Fire extinguishers are located in the barrel room, fermentation room, bottling area, shipping area and warehouse (2). Their location is clearly marked.

- Get the nearest fire extinguisher and keep low with the exit to your back so you have an escape route.
- Pull the safety pin, which runs through the handle. A small, plastic band keeps the pin in place. Twist the pin until the band breaks, then pull the pin.
- Swing the nozzle or hose away from the extinguisher.
- Squeeze the handle of the extinguisher and hold down. A very loud noise can be heard as the extinguishing agent is discharged. The extinguisher will "shoot" for only about 10 seconds.
- Aim at the base of the flames. Sweep the nozzle from side to side while extinguishing.

If the fire becomes large - Get out and close the door!

Stand by to advise the Fire Department when they arrive. The Fire Department should be advised if chemicals are involved in the fire. **Material Safety Data Sheets (MSDS)** for all chemicals used in the winery are located near the entrance door to the winery laboratory.

C. FIRE PROTECTION

Fire Extinguishers

Everyone working in the winery should know the location and correct use of fire extinguishers. Fire extinguishers are designed to fight small fires [trash can size]. Your responsibility in case of a fire is to:

Report it to the Purdue Fire Department at 9-1-1, and quickly evacuate the area, closing the door as you leave. Personnel should remain in the area to use an extinguisher only if the fire is limited in size. It is important to use the right kind of extinguisher for the fire. Not all extinguishers can be safely used on all types of fires. The following letters identifies the four classes of fire: A, B, C, and D:

A. Ordinary combustible solids including paper, wood, coal, rubber, and textiles.

B Flammable and combustible liquids, incl.gasoline, diesel fuel, alcohol, motor oil, and grease.

C Electrical equipment.

D. Combustible or reactive metals metal hydrides, or organometallics.

Each fire extinguisher is clearly marked by the letters of the classes of fire that it can extinguish.

The extinguisher must be stored on its designated hook and not resting on the floor. Report to your supervisor all fires of any size, after extinguished, and if an extinguisher has been discharged or is missing.

E. REPORTING ACCIDENTS

In the event of an injury or illness, notify your supervisor (Jill Blume 4.1749) and the personnel office (Sheri Fell 4.7892) immediately by phone. Call 9-1-1 in case of a medical emergency.

CONFINED SPACE SAFETY:

A. ENTRY PERMITS

There are X wine tanks and one wine press in the winery that can be considered confined spaces.

Tanks# X, Y, and Z do not have a top manhole and shall NOT be entered.

Only two personnel are permitted to enter the other confined spaces, unless permission is given by the Winemaker:

1. The Winemaker
2. The Assistant Winemaker

B. TANK ENTRY

The tanks are only to be entered when the following conditions are in place:

- Both manholes are fully open.
- A box fan has been placed over the top manhole and is turned on to ventilate the tank by blowing air INTO it and OUT the bottom manhole. The fan has been running for at least five minutes prior to tank entry.
- The tank shall only be entered and exited through the bottom manhole.
- The person entering the tank is wearing a safety harness and lanyard connected to it. The end of the safety rope connected to the lanyard is placed outside of the tank through the bottom manhole.
- Two people are present in the immediate outside area of the tank to pull the person inside to safety if necessary.
- No second person is allowed to enter the tank even in case of an emergency.

C. PRESS ENTRY

The wine press is only to be entered when the following conditions are in place:

- Both press doors are fully open.
- The press has been rotated so that the press doors are facing the floor (position "doors down").
- The valve for the pneumatic line of the press doors closing mechanism has been turned shut.
- The press has been turned off at the master switch, and the lock-out key has been pulled and is in possession of the person entering the press.
- A second person is present in the immediate outside area of the press.

LOCKOUT PROCEDURES:

This procedure establishes the minimum requirements for the lockout of energy isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the machine or equipment or release of stored energy could cause injury.

All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. All employees, upon observing a machine or piece of equipment which is locked out to perform servicing or maintenance shall not attempt to start, energize, or use that machine or equipment.

DEVICES

- **Destemmer-**
- **Crusher**
- **Presses**
- **Bottling Line**

SEQUENCE OF LOCKOUT

- (1)** Notify all affected employees that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance.
- (2)** The authorized employee shall refer to the company procedure to identify the type and magnitude of the energy that the machine or equipment utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.
- (3)** If the machine or equipment is operating, shut it down by the normal stopping procedure (depress the stop button, open switch, close valve, etc.).
- (4)** De-activate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s).
- (5)** Lock out the energy isolating device(s) with assigned individual lock(s).
- (6)** Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.
- (7)** Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate.
Caution: Return operating control(s) to neutral or "off" position after verifying the isolation of the equipment.
- (8)** The machine or equipment is now locked out.

RESTORING EQUIPMENT TO SERVICE

- (1)** Check the machine or equipment and the immediate area around the machine to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.
- (2)** Check the work area to ensure that all employees have been safely positioned or removed from the area.
- (3)** Verify that the controls are in neutral.
- (4)** Remove the lockout devices and reenergize the machine or equipment.
- (5)** Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.

LADDER SAFETY

A. GENERAL

All ladders used at the winery shall be designed, constructed and maintained according to OSHA standards. Wherever ladders are required to provide access to places where winery personnel need to work, they shall be provided and be properly maintained.

B. PLACEMENT

- Ladders shall be placed so that each side rail is on a level and firm footing and so that the ladder is rigid, stable and secure.
- The side rails shall not be supported by boxes, loose bricks, or other loose packing.
- No ladder shall be placed in front of a door opening towards the ladder unless the door is guarded.
- Wherever possible, ladders shall be used at such an angle that the horizontal distance from the foot of the ladder to the structure the ladder rests against is one quarter (1/4) of the length of the ladder.
- Whenever possible, a ladder used as a place from which a person has to work shall rise to a height of at least three feet above the highest rung upon which the person must stand to work. If a height of three feet above the working height cannot be achieved, then the ladder should reach as far as possible above the level at which the person is required to work.
- Step ladders shall be set up on a level and firm footing. They shall not be stood on loose bricks or any other loose packing or surface.

C. SECURING

- Ladders shall be securely fixed at the top and foot so that they cannot move either from their top or from their bottom points of rest. If it is not possible to secure a ladder at both the top and bottom then it shall be securely fixed at the base. If this is not possible, then a person should stand at the base of the ladder and secure it manually against slipping.
- Ladders set up in public thoroughfares or other places (where there is potential for accidental collision with them) must be provided with effective means to prevent the displacement of the ladders due to collisions, for example, use of safety chains to secure the ladder to a tank.

D. USE

- Only one person at a time may use or work from a single ladder.
- Always face the ladder when ascending or descending it.
- Do not use a ladder or step ladder if:
 - there is a missing or a weakened, broken or otherwise defective rung or tread, or a broken or defective stile; or
 - any rung or tread depends for its support solely on nails, spikes, or other similar fixing device.
- No metal ladder shall be used in the vicinity of any electrical conductor or of any electrified equipment or apparatus as such use may result in a person receiving an electric shock.
- Ladders shall not be joined together to form a longer ladder.
- A ladder shall not be used as a brace, strut, beam, skid, or for any use other than its correct use as a ladder.

PERSONAL PROTECTION:

A. EYE PROTECTION

Safety Spectacles - Safety spectacles with side shields should be worn at all times while working in the bottling area. The purpose of wearing eye protection at all times while in the bottling area is to protect the eyes from accidental exposure to flying particles, in particular glass from broken bottles. Additional eye protection, such as a face shield, should be used as necessary to more fully protect the eyes when disgorging sparkling wine and repairing on spring-loaded equipment. Face shields also protect the face, neck, and ears from splash or flying particles. Special safety spectacles are available for people wearing prescription glasses.

B. RESPIRATORY PROTECTION

Dust masks, cartridge respirators, and self-contained breathing apparatus should **NOT** be necessary in the winery. If you have a known allergy against sulfur dioxide (sulfites), you are not allowed to work in the winery. **Potassium metabisulfite** which can release sulfur dioxide when mixed with wine or acids shall only be handled in well-ventilated areas of the winery or the winery laboratory.

C. SKIN AND BODY PROTECTION

Gloves - Gloves protect the hands against incidental contact with chemicals, and also against abrasion and extremes of heat and cold. Before use, check gloves for worn spots, cracks, holes, and other signs of wear. Your supervisor will provide you with gloves of the proper size as needed.

Shoes - Sturdy closed-toe, closed-heel shoes should be worn in the laboratory at all times to protect against spills, splashes and dropped equipment. Leather shoes offer better protection against corrosion than canvas shoes; open-toed shoes and bare feet are prohibited in the laboratory.

D. HEARING PROTECTION

Standards for hearing protection and acceptable noise levels have been established by federal and state regulation. If you feel hazardous levels of noise exists in your work area, contact your supervisor who will provide you with hearing protection.

E. SAFE LIFTING AND BACK INJURY PREVENTION

- Winery employees shall not lift any object weighing more than 50 pounds.
- Hold the object close to your body rather than at the end of your reach. Never bend your back to pick something up.
- Feet shoulder width apart. A solid base of support is important; holding your feet too close together will be unstable, too far apart will hinder movement.
- Bend your legs and keep your back straight.
- Tighten your stomach muscles. This will hold your back in a good lifting position and will help prevent excessive force on the spine.
- Lift with your legs. Your legs are many times stronger than your back muscles.
- If you're straining, get help. If an object is too heavy, or awkward in shape, make sure you have someone around who can help you lift. Wear a back support belt. Your supervisor will provide you with a back support belt if requested.

CHEMICAL ANALYSIS, HANDLING, STORAGE AND DISPOSAL (RIGHT-TO-KNOW/MSDS)

A. CHEMICAL ANALYSIS METHODS

The following chemical analyses are conducted in the winery laboratory:

Reference: *Techniques for Chemical Analysis and Quality Monitoring During Winemaking*.
P. Iland et al. Patrick Iland Wine Promotions, Campbelltown, South Australia, Australia, 2000.

- Total Soluble Solids (Refractometry) Page 66
- Total Soluble Solids (Hydrometry) Page 64
- Free Sulfur Dioxide (Aeration-Oxidation) Page 82
- Titratable Acidity Page 75
- pH Page 72
- Volatile Acidity Page 86
- Alcoholic Strength (Ebulliometry) Page 90

B. STABILITY TEST METHODS

The following wine stability tests are conducted in the winery laboratory:

Reference: *Techniques for Chemical Analysis and Quality Monitoring During Winemaking*.
P. Iland et al. Patrick Iland Wine Promotions, Campbelltown, South Australia, Australia, 2000.

- Protein Stability ("Heat Stability") Page 43
- Tartrate Stability ("Cold Stability") Page 44

C. HAZARD COMMUNICATION STANDARD (*RIGHT-TO-KNOW*)

- Occupational Safety and Health Administration (OSHA) rule 29 CFR 1910.1200 (also known as the Hazard Communication Standard) requires all employers having hazardous chemicals in their workplaces to develop a written hazard communication program including a chemical hygiene plan. Employers must list all these chemicals and describe how the company will address requirements to
 - Label containers used to store hazardous chemicals,
 - Obtain or develop Material Safety Data Sheets (MSDS) for hazardous chemicals (see below),
 - Provide potentially exposed workers with information about and training in working around hazardous chemicals, and
 - Provide appropriate protective measures (see above).

MATERIAL SAFETY DATA SHEETS (MSDS)

All MSDS for the winery are located next to the entrance door to the winery laboratory.

The following labeled chemicals are present in the winery area:

- Ascorbic Acid
- Bentonite
- Bi-Brite
- Buffer pH 3
- Buffer pH 4
- Buffer pH 7
- Citric Acid
- Copper Sulfate
- Cupric Sulfate
- Enoferm Alpha
- Ethyl Alcohol
- Hydrochloric Acid
- Instant Dry Yeast
- Iodine
- Potassium Bitartrate
- Potassium Carbonate
- Potassium Hydrogen Phthalate
- Potassium Metabisulfide
- Potassium Sorbate
- Reagent Alcohol
- Sanitary Spray Lube
- Sodium Thiosulfate
- Starch Indicator
- Sulfuric Acid
- Tartaric Acid
- ZEP I-DINE
- ZEP MW Grease
- ZEP Super Penetrant
- ZEP Trifoam

COMPRESSED GASES, HANDLING AND STORAGE

A. HANDLING

- Gas cylinders in use must be securely chained to a fixed object to prevent being knocked over.
- Never remove the valve cap until the cylinder is secure and ready for use.

B. STORAGE

- Cylinders in storage must be secured to prevent being knocked over.
- When gas cylinders are not in use, they must be capped for valve protection.

Source: Compressed Gas Association <http://www.cganet.com>

DRAFT

Winery Employee Training Checklist

Winery Safety Plan

Employee:	Job Title:
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Plan Item	<input checked="" type="checkbox"/>
Emergency Procedures	<input type="checkbox"/>
Confined Space Safety	<input type="checkbox"/>
Lockout Procedures	<input type="checkbox"/>
Ladder Safety	<input type="checkbox"/>
Personal Protection	<input type="checkbox"/>
Chemicals (incl. Right-To-Know/MSDS use)	<input type="checkbox"/>
Compressed Gases, Handling and Storage	<input type="checkbox"/>

<i>Date of Training</i>	<i>Employee Signature</i>	<i>Trained by:</i>
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