



COVID-19 PLANT SHUTDOWN CHECKLIST

With the news of the COVID-19 virus, we would like share ideas on how to safely shut down your plant for an extended period. Several jurisdictions are already issuing shelter in place edicts which has caused numerous companies to shutdown with short notice. Please note that this list covers the shutdown basics and is not all inclusive for your unique operations.

Certain equipment manufacturers and suppliers have specific procedures for long-term shutdown of equipment and storage of chemicals and flammable liquids. Following these guidelines reduce the potential for equipment breakdowns, maintenance issues, fires or other unexpected events when your plant eventually reopens.

Please review the following:

- Housekeeping
- Shutting off utilities
- Securing the building
- Protection of warehoused goods & stock
- Reducing fire and theft exposures
- Periodic site inspections
- Communication with employees
- Remote site monitoring

One final housekeeping effort should be done before the plant closes. It is important to remove rubbish, sawdust and scrap from inside the building, and under or around the machines before the shutdown. Excess material should be removed from the building and stored outside for waste pickup to reduce the fire load in the building. Flammable and combustible liquids should be returned to their safety containers and/or flammable storage cabinets. Don't forget one final check in the employee break rooms, bathrooms, and locker rooms.

Whenever possible, power should be turned off to your production equipment and nonessential areas of the plant. This greatly reduces the potential for electrical fire. Please remember to leave the circuits on for the building's lighting, so that employees involved in checking on the facilities can safely do so. In the office areas, equipment and chargers should be unplugged. Small appliances in the break room should be disconnected, and any refrigerators should be emptied.

Outside and around the buildings, please lock any external storage tanks and disconnect the power. Propane storage cabinets should also be locked to prevent tampering and theft. Vehicles and equipment should be located near the security lighting and positioned so that they can be seen from the roadway. All of the units should be locked, and the keys removed and stored in a secured location.

The police, fire department, utilities and the alarm company should be aware of whom the emergency contacts are for your company. If not, now would be a good time to update that information.

Routine checks on the premises by designated employees should also be planned. They should have keys and access cards to tour the buildings and grounds to check for hazards and any needed repairs. Off-site video access of surveillance feeds is another measure your company can use to monitor the site. Please update who has access to these systems. If any problems are observed, these individuals should have a list of phone numbers to call to report them.

Many of your employees could be working from home. Contact numbers should be printed out and saved in addition to having specific instructions on the computer or email systems. Update your computer backup and cloud storage activities before leaving the site.

The following is a checklist to help in your shutdown activities. It is our goal that this will help your company efficiently shut down your business and help reduce the possibility of a loss during the extended shutdown.



BUSINESS SHUTDOWN CHECKLIST

PENNSYLVANIA LUMBERMENS MUTUAL INSURANCE COMPANY

PLM is committed to your business's safety. Use this checklist to help you efficiently shut down your business and help reduce the possibility of a loss during the extended shutdown.

HOUSEKEEPING & WASTE DISPOSAL:	YES	NO	COMMENTS
1. Has "No Smoking" been strictly enforced 6 hours before shutdown?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Have combustible and flammable refuse material been removed and disposed of safely outside the building?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Have in-process materials been removed from the production lines, saws and other production equipment?	<input type="checkbox"/>	<input type="checkbox"/>	
4. Have areas under machines, processes, motors and bearings been cleaned of dust and debris?	<input type="checkbox"/>	<input type="checkbox"/>	
5. Have flammable residues been removed from hoods, spray booths, ducts, ovens, floors, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	
6. Have flammable and combustible liquids been returned to safety containers, flammable storage cabinets and flammable storage rooms?	<input type="checkbox"/>	<input type="checkbox"/>	
7. Have bonding and grounding been checked?	<input type="checkbox"/>	<input type="checkbox"/>	
8. Are passageways free and clear?	<input type="checkbox"/>	<input type="checkbox"/>	
9. Is there an 18" clear space between sprinklers and structural members and storage? (Pay attention in the storage areas.)	<input type="checkbox"/>	<input type="checkbox"/>	
10. Are fire doors unblocked and operating freely?	<input type="checkbox"/>	<input type="checkbox"/>	
11. Has dust accumulation been removed from rafters, overhead piping, machinery, motors, breaker panels, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	
12. Has the breakroom refrigerator been cleaned out of food items and small electric appliances unplugged?	<input type="checkbox"/>	<input type="checkbox"/>	
13. Have drains and sinks had one final flush to make sure the P traps are filled with water to reduce the potential for sewer gas entering the building?	<input type="checkbox"/>	<input type="checkbox"/>	

UTILITIES, ELECTRICAL POWER & EQUIPMENT:	YES	NO	COMMENTS
1. Are security and emergency lights in service?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Are lights clean and clear of combustible materials?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Have temporary wiring and extension cords been removed?	<input type="checkbox"/>	<input type="checkbox"/>	
4. Have unnecessary circuits at main switchboard or electrical panels been:			
Disconnected?	<input type="checkbox"/>	<input type="checkbox"/>	
Locked out?	<input type="checkbox"/>	<input type="checkbox"/>	

UTILITIES, ELECTRICAL POWER & EQUIPMENT (CONT.):	YES	NO	COMMENTS
5. Is power available for:	<input type="checkbox"/>	<input type="checkbox"/>	
Alarm systems?	<input type="checkbox"/>	<input type="checkbox"/>	
Computers & Servers?	<input type="checkbox"/>	<input type="checkbox"/>	
Fire pump(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
Emergency elevator(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
Emergency and security cameras & lighting?	<input type="checkbox"/>	<input type="checkbox"/>	
Dry pipe valve air supply?	<input type="checkbox"/>	<input type="checkbox"/>	
6. Have unnecessary small chargers, transformer(s) been de-energized?	<input type="checkbox"/>	<input type="checkbox"/>	
7. Have unneeded electrical items at desks and workstations been unplugged?	<input type="checkbox"/>	<input type="checkbox"/>	
8. Have dirt and grease been cleaned from equipment that is necessary to remain operating?	<input type="checkbox"/>	<input type="checkbox"/>	

HYDRAULIC POWER EQUIPMENT:	YES	NO	COMMENTS
1. Has oil been removed from the unit(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Are hydraulic units clean and free of oil on and under the machines?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Is hydraulic oil stored in a safe place?	<input type="checkbox"/>	<input type="checkbox"/>	

BOILERS, STEAM POWER & HEATING:	YES	NO	COMMENTS
1. Is sufficient heat maintained and monitored for:			
Building(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
Fire pump house(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
Dry pipe valve house(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Is sufficient heat available to prevent the freezing of automatic sprinkler systems?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Are steam controls and "lift" relief valves in good operating condition and tested regularly?	<input type="checkbox"/>	<input type="checkbox"/>	
4. Is there an emergency water feed for boiler(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
5. For shut down of wood fired boilers, have screw augers or conveyors been cleaned out prior to the shutdown?	<input type="checkbox"/>	<input type="checkbox"/>	

FLAMMABLE GAS & EQUIPMENT:	YES	NO	COMMENTS
1. Have the following been shut off and locked:	<input type="checkbox"/>	<input type="checkbox"/>	
Individual burner valves and the main valve for heating equipment?	<input type="checkbox"/>	<input type="checkbox"/>	
Main valves outside or at meters, if possible?	<input type="checkbox"/>	<input type="checkbox"/>	
Power to outside storage tanks and pumps?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Are cylinders at manifolds disconnected and locked?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Have welding gas cylinders had the regulators removed and capped?	<input type="checkbox"/>	<input type="checkbox"/>	
4. Have the number of portable cylinders in main building(s) been reduced to a minimum?	<input type="checkbox"/>	<input type="checkbox"/>	

FLAMMABLE LIQUIDS AND EQUIPMENT:	YES	NO	COMMENTS
1. Have the following been shut off:	<input type="checkbox"/>	<input type="checkbox"/>	
Discharge valves on butane or propane storage tanks, unless needed for heating building(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
Pumps supplying fuel oil under pressure to plant distribution piping, except where needed for heating buildings(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Have liquids been removed from dip tanks, cleaning tanks, mixing tanks, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Have all liquids been relocated to safe storage areas?	<input type="checkbox"/>	<input type="checkbox"/>	
4. Have liquids that cannot be moved been covered tightly to prevent vapors from leaking?	<input type="checkbox"/>	<input type="checkbox"/>	
5. Have grounding or bonding wires and connections been checked?	<input type="checkbox"/>	<input type="checkbox"/>	

SECURITY PROTECTION:	YES	NO	COMMENTS
1. Has the police department been notified of the shut down?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Will standard recorded hourly watch rounds be maintained 24 hours a day?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Do watch routes adequately cover the plant?	<input type="checkbox"/>	<input type="checkbox"/>	
4. Are watchpersons familiar with the plant layout?	<input type="checkbox"/>	<input type="checkbox"/>	
5. Are watchpersons familiar with the emergency plans for the plant?	<input type="checkbox"/>	<input type="checkbox"/>	
6. If no watch is being done, have your designated employees to periodically check on the building and grounds?	<input type="checkbox"/>	<input type="checkbox"/>	
7. Are there adequate, operating phone(s) available?	<input type="checkbox"/>	<input type="checkbox"/>	
8. Are emergency numbers at each phone?	<input type="checkbox"/>	<input type="checkbox"/>	
9. Are all buildings and fences secured and locked?	<input type="checkbox"/>	<input type="checkbox"/>	
10. Is security lighting provided and maintained inside and outside of building(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
11. Have you taken digital pictures of the interior, exterior of the building and grounds for recordkeeping?	<input type="checkbox"/>	<input type="checkbox"/>	

FIRE PROTECTION:	YES	NO	COMMENTS
1. Has the fire department been notified of the shut down?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Are all hydrants, hose equipment, hand extinguishers, fire pumps, etc. in operating order?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Are there adequate fire extinguishers available and easily accessible?	<input type="checkbox"/>	<input type="checkbox"/>	
4. Have key personnel been trained on the plant's emergency response plan?	<input type="checkbox"/>	<input type="checkbox"/>	
5. Is there a system set up for regular checking of all fire protection/detection equipment?	<input type="checkbox"/>	<input type="checkbox"/>	

CUTTING, WELDING & GRINDING:	YES	NO	COMMENTS
1. Has any heat, spark or flame producing work been done in the last 6 hours?	<input type="checkbox"/>	<input type="checkbox"/>	
If yes, were hot work permits issued and followed?	<input type="checkbox"/>	<input type="checkbox"/>	

CUTTING, WELDING & GRINDING (CONT.):	YES	NO	COMMENTS
2. Will there be any cutting and welding done during shut down?	<input type="checkbox"/>	<input type="checkbox"/>	
IF SO, "HOT WORKS PERMIT" SYSTEM SHOULD BE IMPLEMENTED.	<input type="checkbox"/>	<input type="checkbox"/>	

MOBILE EQUIPMENT & VEHICLES:	YES	NO	COMMENTS
1. Has mobile equipment been secured in locked and fenced area(s)?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Have fuel tanks been drained?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Have batteries been removed?	<input type="checkbox"/>	<input type="checkbox"/>	
4. Have you trained your employees to follow manufacturer's recommendations for electric forklift battery charging stations for an extended shutdown? (Certain forklift batteries create hazardous and explosive gases from extended charging or overcharging of the batteries)	<input type="checkbox"/>	<input type="checkbox"/>	
5. Have ignition keys been secured?	<input type="checkbox"/>	<input type="checkbox"/>	
6. Are items stored in plain view of the street and near security lighting?	<input type="checkbox"/>	<input type="checkbox"/>	
7. Have high dollar items been removed from plain view in your vehicles and equipment to reduce theft?	<input type="checkbox"/>	<input type="checkbox"/>	
8. Has all mobile equipment been separated a safe distance from each other to prevent a total loss?	<input type="checkbox"/>	<input type="checkbox"/>	

SPECIAL ACTIONS FOR EQUIPMENT:	YES	NO	COMMENTS
1. Have measures to protect equipment requiring special protection, covers or humidity controls such as computers, fluid pumps, delicate electronics, etc., been provided?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Has maintenance and / or operators conducted a final greasing/ lubrication of moving components to help prevent corrosion of bearings/etc.?	<input type="checkbox"/>	<input type="checkbox"/>	