

Public Refrigerated Warehouse (PRW) Hazard Assessment Checklist



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Introduction

This checklist was developed by Lockton and the IARW Safety Committee for the International Association of Refrigerated Warehouses (IARW) to help IARW Warehouse Members assess hazards within temperature-controlled facilities and, if necessary, address those hazards. This checklist is divided into 25 sections. Each section is followed by a list of suggested resources that could be referenced in the event a user selects "no" for any item.

For additional information about employee safety, please contact IARW at +1 703 373 4300 or email@iarw.org.

To learn more about risk management, please contact Lockton, the official IARW Insurance Service Partner.



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1: Confined Space

YES NO N/A	
	1 Does the site have a current site specific Confined Space Entry and Rescue Program?
	2 Has the site designated a sufficient number of employees to perform Confined Space Rescue at each location where entries occur and, have each of these employees completed the required training in the past year?
	3 Has each maintenance employee completed confined space entrant and attendant training within the past 12 months?
	4 Does the site have the required Confined Space Entry and Rescue equipment; are monthly inspections conducted and documented; and, is all equipment observed to be well maintained and properly stored?
	5 Has the site created a list of all potential confined spaces and evaluated each to determine whether they meet the criteria for a confined space or permit required confined space and, is this evaluation documented on the appropriate form found in the appendices of the Confined Space Entry and Rescue Program?
	6 Has the site thoroughly completed the Confined Space Hazard Assessment, Entry, and Rescue Procedure Form for each confined space permit required?
	7 Are Confined Space Entry Permits thoroughly completed, posted during the entry, and maintained for one year from the date of closure?
	8 Is either natural or mechanical ventilation provided to confined space?
	9 Are appropriate atmospheric tests performed to check for oxygen deficiency, toxic substances, and explosive concentrations in the confined space before entry?
	10 Is adequate illumination provided for work to be performed in the confined space?
	11 Is the atmosphere inside the confined space frequently tested or continually monitored during conduct of work?
	12 Is there an assigned safety standby employee outside of the confined space, when required, whose sole responsibility is to watch the work in progress, sound an alarm if necessary, and render assistance?
	13 Is the standby employee appropriately trained and equipped to handle an emergency?

2: Contractor Safety

YES NO N/A		
	1	Does the location have a site specific contractor safety program?
	2	Does the site maintain current Contractor safety data and general information forms for each contractor who has performed work on-site in the past 12 months?
	3	Has the Facility Manager completed a Pre-Project Review Form for each contractor performing work on site in the past 12 months to ensure that safety related information is passed on to the contractor representative?
	4	Will the project require digging? If yes, has the contractor or site called 811 to have the utilities located prior to digging?
	5	Site representative(s) conducts routine safety walkthroughs of the job site for each major project and, are these walkthroughs properly documented using a Contractor Safety Walk-Through Log?
	6	Does the location require a documented contractor safety orientation?
	7	Does the location require contractor to wear appropriated safety equipment?
	8	Will the contractor use any known or potentially hazardous chemical or material while working on company property
	9	Will the contractor dispose of potentially hazardous chemicals or materials during work on this job?
	10	Will the contractor perform any work that will create heat, sparks, or flame?
	11	Does the contractor have a Hot Work Program, which includes training all employees in the proper safety procedures and obtaining Hot Work Permits as needed for the duration of the job?
	12	Does the contractor inspect the worksite daily, prior to starting work for hazardous conditions?
	13	Will the contractor perform any work that will impair a fire protection or detection system of the facility?
	14	Will the contractor perform any work on the roof or near an exhaust or intake equipment?
	15	Will the contractor perform any work that will involve electrical or mechanical systems?
	16	Does the contractor have a LOTO program for this job prior to starting work?
	17	Will the contractor utilize, store or otherwise expose the facility to flammable or combustible liquids, gases, or aerosols during the course of the work?

YES NO N/A	
	18 Does the contractor have access to SDS for hazardous chemicals located in the work area?
	19 Are safety procedures and precautions followed by contractors in the work area?
	20 Is information about the physical and health hazards available in the work area?
	21 Does the contractor understand the emergency procedures in the event of an accidental exposure or release of hazardous chemicals or materials?
	22 Does the contractor understand that all hazardous wastes generated during the work must be disposed of in a manner consistent with all applicable state and federal regulations?

3: Docks/Elevated Surfaces

YES NO N/A		
	1	Are signs posted showing the elevated surface load capacity?
	2	Are surfaces elevated more than 30 inches above the floor or ground equipped with standard guardrails?
	3	Are surfaces elevated to a height where people or machinery could be exposed to falling objects provided with standard 4-inch toe boards?
	4	Is a permanent means of access and egress provided to elevated storage and work surfaces?
	5	Is material on elevated surfaces piled, stacked, or racked in such a manner to prevent tipping, falling, collapsing, rolling, or spreading?
	6	Are dock boards or bridge plates used when transferring materials between docks and trailers, trucks or rail cars?
	7	Is required head room provided, where necessary?
	8	Are employees driving forklifts slowly on docks and dock plates?
	9	Are the dock plates secure?
	10	Can the dock plate safely support the load?
	11	Are employees ensuring forklifts are not backed up to the dock's edge?
	12	Are employees providing visual warnings near dock edges?
	13	Are there policies in place to ensure employees are not "dock jumping"?
	14	Do dock ladders and stairs meet OSHA specifications?
	15	Are employees trained in dock safety and that the rules are enforced?
	16	Are locking devices used on every vehicle at the dock?
	17	Are floors marked with yellow tape or paint to identify walkways, doorways, parking aisles and overhead obstacles?
	18	When traveling through the facility, are people protected from sharp corners and from falling off dock edges?
	19	Is the dock area inspected daily to ensure that emergency equipment is not blocked or damaged?
	20	Is the dock edge painted with a reflective yellow to provide a better view of the dock?
	21	Do the ladders from the dock floor to the dock meet all of OSHA specifications?
	22	Are exit routes in compliance with OSHA 29 CFR 1910.37(b)(1) illumination standard?

YES NO N/A	
\square \square \square 2	3 Are overhead hazards such as pipes, doors, and electrical wires marked?
□ □ □ 2	4 Are the floors of trailers and trucks inspected before forklifts or pallet jacks are driven onto them?
\square \square \square 2	5 Is the landing gear and stabilizing jacks inspected on trailers at the dock?
	6 Are the dock levelers returned to the stored position after being used?
□ □ □ 2	7 Are the dock seals or dock shelters in place to keep the rain and the snow off the loading docks?
	Is an inspection program in place to identify defective pallets?
□ □ □ 2	If the trailers are loaded by conveyor, is the conveyor height adjustable to reduce lower back stress?
□ □ □ 3	Are guards installed over conveyor sprockets, gears, and rollers to protect people from pinch points?
□ □ □ 3	I Is plastic or metal banding used to secure products to pallets for transport?
\square \square \square 3.	2 Are loose products shrink-wrapped for transportation or storage?
□ □ □ 3	3 Are the dock areas cleaned out periodically to remove accumulated debris?
□ □ □ 3	4 Are OSHA-trained and authorized employees only allowed to operated hand trucks and forklifts?

4: Electrical

YES	NO	N/A		
			1	Is the site utilizing a site specific Electrical Safety Work Practices Policy and Program?
			2	Has the site developed a documented process to identify and authorize "Qualified Persons" as defined by the policy and, is a list maintained by the Maintenance Department of all such "Qualified" employees?
			3	Have all Maintenance employees at each site location, received electrical safety training at the authorized level in the past twelve (12) months and, is this training properly documented?
			4	Has each "Qualified Person" working on exposed energized parts greater than 50 volts received appropriate Arc Flash training to include a review of PPE Hazard Assessment? (See NFPA 70E)
			5	Are nonconductive tools and PPE provided to each "Qualified Person" prior to performing covered tasks?
			6	Has the site implemented a documented process to inspect all nonconductive tools at least monthly?
			7	Are arc rated gloves replaced or inspected every six months and is documentation of this testing/replacement available?
			8	Have employees who use machinery been trained to recognize when a machine has been locked out and tagged (electrical power off, locked out, and machine tagged)?
			9	Is equipment wiring clear of combustibles?
			10	Is there adequate clearance around control panels?
			11	Are all disconnecting switches and circuit breakers labeled to indicate their use or equipment level?
			12	Are disconnecting means always opened before fuses are replaced?
			13	When electrical equipment or lines are to be serviced, maintained, or adjusted, are necessary switches opened, locked out, and tagged whenever possible?
			14	Are employees instructed to make preliminary inspections and/or appropriate tests to determine what conditions exist before starting work on electrical equipment?
			15	Are all employees required to report as soon as possible any obvious hazard to life or property observed in connection with electrical equipment?

YES	NO	N/A		
			16	Are portable electrical tools and equipment grounded or the double insulated type?
			17	Are electrical appliances such as vacuum cleaners, polishers, and vending machines grounded?
			18	Do extension cords in use have a grounding conductor?
			19	Are multiple plug adapters prohibited?
			20	Are ground fault circuit interrupters installed on each temporary 15 or 20 ampere, 120-volt AC circuit at locations where construction, demolition, modifications, alterations, or excavations are being performed?
			21	Are all temporary circuits protected by suitable disconnecting switches or plug connectors at the junctions with permanent wiring?
			22	Are exposed wiring and cords with frayed or deteriorated insulation repaired or replaced promptly?
			23	Are flexible cords and cables free of splices or power strips?
			24	Are clamps or other securing means provided on flexible cords or cables at plugs, receptacles, tools, equipment, etc., and is the cord jacket securely held in place?
			25	Are all cord, cable, and raceway connections intact and secure?
			26	In wet or damp locations, are electrical tools and equipment appropriate for the location or otherwise protected?
			27	Is the location of electrical power lines and cables (overhead, underground, under floor, other side of walls, etc.) located before digging, drilling, or similar work is begun?
			28	Are metal measuring tapes, ropes, hand lines, or similar devices with metallic thread woven into the fabric prohibited where they could come in contact with energized parts of equipment or circuit conductors?
			29	Is the use of metal ladders prohibited in areas where the ladder or the person using the ladder could come in contact with energized parts of equipment, fixtures, or circuit conductors?
			30	Do all interior wiring systems include provisions for grounding metal parts of electrical raceways, equipment, and enclosures?
			31	Are all electrical raceways and enclosures securely fastened in place?
			32	Are all energized parts of electric circuits and equipment guarded against accidental contact by approved cabinets or enclosures?

YES NO N/A	
□ □ □ 33	Is sufficient access and working space provided and maintained for all electrical equipment to permit ready and safe operations and maintenance?
□ □ □ 34	Are all unused openings (including conduit knockouts) in electrical enclosures and fittings closed with appropriate covers, plugs or plates?
□ □ □ 35	Are electrical enclosures such as switches, receptacles, junction boxes, etc., provided with tight-fitting covers or plates?
□ □ □ 36	Are disconnecting switches for electrical motors in excess of 2 HP capable of opening the circuit when the motor is in a stalled condition without exploding? (Switches must be horsepower rated equal to or in excess of the motor HP rating.)
□ □ □ 37	Is low voltage protection provided in the control device of motor-driven machines or equipment that could cause probable injury from inadvertently starting?
□ □ □ 38	Is each motor located within sight of its controller or is the controller disconnecting means capable of being locked in the open position? Is a separate disconnecting means installed in the circuit within sight of the motor?
□ □ □ 39	Is each motor's disconnecting switch or circuit breaker located within sight of the motor control device?
□ □ □ 40	Is the controller for each motor in excess of 2 HP rated in horsepower equal to or in excess of the rating of the motor it serves?
□ □ □ 41	Are employees who regularly work on or around energized electrical equipment or lines trained in CPR?
□ □ □ 42	Are employees prohibited from working alone on energized lines or equipment?
□ □ □ 43	Are employees prohibited from working on energized lines until trained in NFPA 70E?

5: Emergency Response Procedures

YES NO N/A		
	1	Does the site have an Emergency Response and Action Plan?
	2	Has each employee designated as a member of the Hazardous Materials (Haz/Mat) Team completed the required training and response drill in the past year? Is documentation of drills available for review?
	3	Have HazMat Team members participated in a quarterly drill and/or practical training sessions within the past 12 months?
	4	Is there sufficient equipment available for performing hazardous material response appropriate to the chemicals in the facility, is it observed to be well maintained, properly stored, and is a documented inspected conducted monthly?
	5	Does the facility have an Ammonia Response plan?
	6	Are evacuation drawings posted at each facility showing both primary and secondary exit routes and are employees familiar with the exit routes from their department(s) and the appropriate assembly area(s)?
	7	Has each location conducted a fire evacuation drill on each shift in the past 12 months and has the plant conducted a separate chemical release evacuation drill on each shift?
	8	Are emergency lights inspected monthly and are these inspections documented?
	9	Does the facility have an organized emergency response plan established for when Nitrogen displaces oxygen to levels below 19.5 percent?

6: Ergonomics

YES NO N/A	
	1 Can the work be done without twisting or excessively bending the lower back?
	2 Can employees get help with lifting more than 30 pounds (as per NIOSE recommendations)?
	3 Have employees been trained in proper lifting methods?
	4 Are job tasks that require repetitive movements varied or rotated?
	5 Are tools, instruments, and machinery shaped, positioned, and handled so that tasks can be performed comfortably?
	6 Can the job task be completed without prolonged raising of the arms?
	7 Is the task designed so that the neck and shoulders do not have to be stooped to view the task?
	8 Have pressure points on any part of the body (wrists, forearms, back of thighs) been eliminated?
	9 Can the work be done using the larger muscles of the body?
	10 Are there sufficient rest breaks, in addition to the regular rest breaks, to relieve stress from repetitive-motion tasks?
	11 Are all pieces of furniture adjusted, positioned, and arranged to minimize strain on all parts of the body?

7: Exiting, Egress and Exit Doors

YES	NO	N/A		
			1	Are all exits marked with an exit sign and illuminated by a reliable light source?
			2	Are the directions to exits marked with visible signs?
			3	Are doors, passageways, or stairways which are neither exits nor access to exits and which could be mistaken as exits, appropriately marked "NOT AN EXIT," "TO BASEMENT", "STOREROOM", etc.?
			4	Are exit signs provided with the word "EXIT" in lettering at least 5 inches high and the stroke of the lettering at least .5-inch wide?
			5	Are exit doors side hinged (swing outward)?
			6	Are all exits kept free of obstructions?
			7	Are there at least two means of egress provided from elevated platforms, pits, or rooms where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable, or explosive substances?
			8	Are there sufficient exits to permit prompt escape in case of emergency?
			9	Are special precautions taken to protect employees during construction and repair operations?
			10	Are the number of exits from each floor of a building and the number of exits from the building itself appropriate for the building occupancy load?
			11	Are exit stairways, which are required to be separated from other parts of the building, enclosed by at least two-hour fire-resistive construction in buildings more than four stories in height, and not less than one-hour fire-resistive construction elsewhere?
			12	Where ramps are used as part of the required exiting from a building, is the ramp slope limited to 1 foot vertical and 12 feet horizontal?
			13	Where exiting through frameless glass doors, glass exit doors, storm doors, etc., are the doors fully tempered, meeting the safety requirements for human impact?
			14	Are doors that are required to serve as exits designed and constructed so that the way of exit travel is obvious and direct?
			15	Are windows that could be mistaken for exit doors made inaccessible by means of barriers or railings?

YES NO N/A	
	16 Are exit doors openable from the direction of exit travel without the use of a key or any special knowledge or effort when the building is occupied?
	17 Is a revolving, sliding, or overhead door prohibited from serving as a required exit door?
	18 Where panic hardware is installed on a required exit door, will it allow the door to open by applying a force of 15 pounds or less in the direction of the exit traffic?
	19 Are doors on cold storage rooms provided with an inside release mechanism that will release the latch and open the door even if it is padlocked or otherwise locked from the outside?
	20 Where exit doors open directly onto any street, alley, or other area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees from stepping into the path of traffic?
	21 Are doors that swing in both directions and are located between rooms where there is frequent traffic provided with viewing panels in each door?

8: Fall Protection

YES NO N/A		
	1	Is there a site specific written Fall Protection and Prevention Program?
	2	Has each maintenance and sanitation employee (at a minimum) completed training in fall protection/prevention at the authorized level within the past twelve (12) months?
	3	Is fall protection/prevention equipment observed to be properly stored and well maintained; and, are all harnesses, lifelines, and lanyards individually inspected on a monthly basis and the results of these inspections documented?

9: Fire Protection - NFPA

NPFA 72 National Fire Alarm and Signaling Code

YES NO N/A		
	1	Is there a site specific fire prevention plan?
	2	Does the fire prevention plan describe the type of fire protection equipment and/or systems?
	3	Are there any established practices and procedures to control potential fire hazards and ignition sources?
	4	Are employees aware of the fire hazards of the material and processes to which they are exposed?
	5	Is the local fire department well acquainted with your facilities, location, and specific hazards?
	6	If the Site has a fire alarm system, is it tested at minimum annually?
	7	If the Site has a fire alarm system, is it certified as required?
	8	If site has interior standpipes and valves, are they inspected regularly?
	9	If the site has outside private fire hydrants, are they flushed at least once a year and on a routine preventive maintenance schedule?
NFPA 80 Fire	Doors	s and Other Opening Protectives
YES NO N/A		
	1	Are fire doors and shutters in good operating condition?
	2	Are fire doors and shutters unobstructed and protected against obstructions, including their counterweights?
	3	Are fire doors and shutter fusible links in place?

NFPA 13 Installation of Sprinkler System

YES NO N/A	
	1 Is maintenance of automatic sprinkler system assigned to responsible employees or to a sprinkler contractor?
	2 Are sprinkler heads protected by metal guards when exposed to physical damage?
	3 Is proper clearance (18" of clear space) maintained below sprinkler heads?
NPFA 10 Fire E	xtinguishers
YES NO N/A	
	1 Are fire extinguishers mounted in readily accessible locations?
	2 Are fire extinguishers inspected monthly?
	3 Are fire extinguishers recharged regularly and noted on the inspection tag?
	4 Are employees periodically instructed in the use of extinguishers and fire protection procedures?

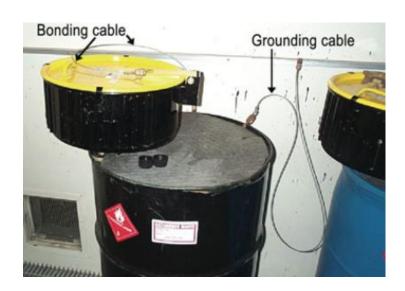
10: Flammable and Combustible Materials

YES	NO	N/A		
			1	Are combustible scrap, debris, and waste materials (i.e., oily rags) stored in covered metal receptacles and removed from the worksite promptly?
			2	Is proper storage practiced to minimize the risk of fire including spontaneous combustion?
			3	Are approved containers and tanks used for the storage and handling of flammable and combustible liquids?
			4	Are all connections on drums and combustible liquid piping, vapor, or liquid tight?
			5	Are all flammable liquids kept in closed containers when not in use (e.g., parts cleaning tanks, pans)?
			6	Are bulk drums of flammable liquids grounded and bonded to containers during dispensing?
			7	Do storage rooms for flammable and combustible liquids have mechanical or gravity ventilation?
			8	Is liquefied petroleum gas stored, handled, and used in accordance with safe practices and standards?
			9	Are liquefied petroleum storage tanks guarded to prevent damage from vehicles?
			10	Are all solvent wastes and flammable liquids kept in fire-resistant covered containers until they are removed from the worksite?
			11	Is vacuuming used whenever possible rather than blowing or sweeping combustible dust?
			12	Are fire separators placed between containers of combustibles or flammables, when stacked one upon another, to assure their support and stability?
			13	Are fuel gas cylinders and oxygen cylinders separated by distance of 20 feet, fire resistant barriers of ½ hour fire resistant rating and 5 feet high, or other means while in storage?
			14	Are fire extinguishers selected and provided for the types of materials in areas where they are to be used? Class A: Ordinary combustible material fires.
				Class B: Flammable liquid, gas or grease fires.

YES NO N/A Class C: Energized-electrical equipment fires. 15 If a Halon 1301 fire extinguisher is used, can employees evacuate within the specified time for that extinguisher? **16** Are appropriate fire extinguishers mounted within 75 feet of outside areas containing flammable liquids and within 10 feet of any inside storage area for such materials? 17 Is the transfer/withdrawal of flammable or combustible liquids performed by trained personnel? 18 Are fire extinguishers mounted so that employees do not have to travel more than 75 feet for a class "A" fire extinguisher or 50 feet for a class "B" fire extinguisher? **19** Are employees trained in the use of fire extinguishers? **20** Are extinguishers free from obstructions or blockage? 21 Are all extinguishers serviced, maintained, and tagged at intervals not to exceed one year? 22 Are all extinguishers fully charged and in their designated places? 23 Is a record maintained of required monthly checks of extinguishers? 24 Where sprinkler systems are permanently installed, are the nozzle heads directed or arranged so that water will not be sprayed directly into operating electrical switchboards and equipment? 25 Are "NO SMOKING" signs posted where appropriate in areas where flammable or combustible materials are used or stored? **26** Are "NO SMOKING" signs posted on liquefied petroleum gas tanks? 27 Are "NO SMOKING" rules enforced in areas involving storage and use of flammable materials? 28 Are safety cans used for the dispensing of flammable or combustible liquids at the point of use? 29 Are all spills of flammable or combustible liquids cleaned up promptly? **30** Are storage tanks adequately vented to prevent the development of excessive vacuum or pressure as a result of filling, emptying, or atmosphere temperature changes? 31 Are storage tanks equipped with emergency venting that will relieve excessive internal pressure caused by fire exposure?

YES NO N/A

32 Are spare portable or butane tanks, which are used by industrial trucks, stored in accordance with regulations?



11: General Work Environment

YES NO N/A	
	1 Are all work surfaces properly illuminated?
	2 Are at least the minimum number of toilets and washing facilities provided?
	3 Are restrooms and washrooms kept clean and sanitary?
	4 Is all provided water for drinking, washing, and cooking potable?
	5 Are all outlets of water not suitable for drinking clearly identified?
	6 Are employees' physical capacities assessed before being assigned to jobs requiring heavy work?
	7 Are employees instructed in the proper manner of lifting heavy objects?
	8 Are exhaust stacks and air intakes located so that contaminated air will not be recirculated within a building or enclosed area?
	9 Are worksites clean and orderly?
	10 Are work surfaces kept dry or are appropriate means taken to assure the surfaces are slip-resistant?
	11 Are all spilled materials or liquids cleaned up immediately?
	12 Are combustible scrap, debris, and waste stored safely and removed from elevated surfaces, including the overhead structure of buildings immediately and appropriately?
	13 Are covered metal waste cans used for oily and paint-soaked waste?
	14 Are all oil and gas-fired devices equipped with flame failure controls that will prevent flow of fuel in pilots or main burners that are not working?
	15 Are pits and floor openings covered or otherwise guarded?
	16 Are there clean eating areas where there is no exposure to toxic substances?
	17 Is the Cal/OSHA poster "Safety and Health Protection on the Job" displayed in a location where all employees are likely to see it (required in California)?
	18 Is there a written Injury and Illness Prevention Program (IIPP) (required in California)?

YES NO N/A	
□ □ □ 19	Are Workers' Compensation and all Federal and State required information posted appropriately?
□ □ □ 20	Does everyone know who is responsible for the IIPP in the worksite (required in California)?
□ □ □ 21	Have all employees received work place violence training?
	Have all employees received health and safety training in a manner and language all can understand?
□ □ □ 23	Where employees do not understand English, are safety instructions and warnings presented in a language the employees understand?
□ □ □ 24	Is there someone in the worksite trained in first aid and CPR? (At least 1 trained worker for every 20 employees) Who?
\square \square \square 25	Are adequate first-aid materials immediately available?
□ □ □ 26	At remote locations, are provisions made in advance for prompt medical attention?
□ □ □ 27	Have arrangements been made to maintain required records for the legal period of time?
\square \square \square 28	Are there lockout/tag-out procedures in place?
□ □ □ 29	Are Risk Assessments conducted routinely?
\square \square \square 30	Are control measures for hazards (example: machine guards) monitored?
□ □ □ 31	Is there is a procedure for reporting issues in the general work environment?
\square \square \square 32	Are Emergency Procedures in place?
□ □ □ 33	Are there confined space areas? Are they identified? Have employees been trained?

12: Hazard Communication/Chemical Hazards/Respirators

YES NO N/A					
	1	Is there a written hazard communication program meeting the requirements of the Globally Harmonized System? Is the written program available upon request by the employee or designated representative?		PAINT (METHYL FLAMMALINE, LEAD CHROMOMIUM) DANGER Causes damage to the liver and kidneys through prolonged or repeated exposure to the skin. Keep away from food and drink. Wash hands throughly after use and before eating. Highly flammable liquid and vapour. Keep away from heat and ignition sources. FIRST AID Call emergency medical care. Wash affected area of body thoroughly with soap and fresh water. Great Lake Paints Inc., Columbus, Ohio, USA. Telephone 999 999 9999	Pictograms • Conveys specific information about the hazard(s) of a chemical Product I dentified • Chemical name or number to identify the chemical Signal Word • Asirst level of severify of hazard Hazard Statement • Describes the nature of hazard(s) associated with a chemical Precautionary Statement • Recommended measures to take to prevent adverse effects First Aid Statement • Emergency care information Supplier Information Name, address and site/pone number of the chemical manufacture; importer or other responsible party
	2	Have Safety Data Sheet (SD (including pesticides) used a	<i>'</i>		ls
	3	Are employees told where the readily accessible during each in their work areas?		=	•
	4	Are all employees trained in requirements, the chemical haread and understand SDS and prevent exposures? (Electron maintaining proper copies of as no barriers to immediate excreated by such options.)	nazards to d chemic nic access the safe	o which they are expose al labels, and precaution as and other alternative to ty data sheets are permi	d, how to ns to tted as long
	5	Are employees aware of pote stored or used in the workpla phenols, etc.?		· ·	
	6	Are eye wash fountains and corrosive chemicals are hand	=	=	
	7	Are all containers such as va contents, e.g., CAUSTICS?	ts, storag	ge tanks, etc., labeled as	to their
	8	Are employees required to use equipment when handling chetc.)?	-	•	
	9	Are flammable or toxic chen use?	nicals ke _l	pt in closed containers v	when not in

YES NO N/A	
	10 Are chemical piping systems clearly marked as to their content?
	11 Where corrosive liquids are frequently handled in open containers or drawn from storage vessels or pipelines, are adequate means readily available for properly and safely neutralizing or disposing of spills or overflow? Where flammable and combustible liquids are transferred between containers, are there adequate means to discharge static charges?
	12 Have standard operating procedures been established, and are they being followed when cleaning up chemical spills?
	13 Are emergency respirators stored in convenient, clean, and sanitary locations?
	14 Are emergency respirators adequate for the various uses for which they may be needed?
	15 Are employees prohibited from eating in areas where hazardous chemicals are present?
	16 Is personal protective equipment provided, used, and maintained whenever necessary?
	17 Is there a site specific respiratory protective program? Are employees instructed on the correct usage and limitation of the respirators? Are the respirators NIOSH approved for this particular application? Are they regularly inspected and cleaned, sanitized, and maintained? Self-Contained Breathing Apparatus (SCBA) are required to be inspected monthly.
	18 Are written standard operating procedures for the selection and use of respirators posted where applicable?
	19 Are non-mandatory use forms completed for each employee requesting to wear respirators when not required?
	20 Has the site implemented a documented monthly inspection procedure for all Air Purifying Respirators (APRs) and, are both APRs and associated cartridges observed to be in good condition, well maintained, and properly stored when not in use?
	21 Has each employee covered under this program been fit tested within the past twelve (12) months? Has each employee covered under this program been medically cleared to wear a respirator by a physician?

YES NO N/A	
	22 Has each maintenance employee and any other employee covered under this program received respiratory protection training at the authorized level (in addition to any training which may have been conducted during HazMat training) within the past twelve (12) months?
	23 Is the site utilizing multi-gas cartridges for individually assigned APRs and tracking use with a Respirator Cartridge change out form?
	24 If hazardous substances are used, is there an Industrial Hygiene sampling plan? Is employee exposure to chemicals kept below the permissible exposure limits?
	25 Has the site conducted sufficient monitoring both initially and ongoing to accurately identify potential exposure and Threshold Limit Values or Permissible Exposure Limits of airborne contaminants and physical agents used in your workplace?
	26 Has the site documented exposures using a work zone area inventory guide or map?
	27 Whenever possible, are hazardous substances handled in properly designed and exhausted booths or other appropriate locations?
	28 Does the site use general dilution or local exhaust ventilation systems to control dusts, vapors, gases, fumes, smoke, solvents, or mists that may be generated in your workplace?
	29 Are employee's complaints about dizziness, headaches, nausea, irritation, or other factors of discomfort when using solvents or other chemicals addressed?
	30 Are employees' complaints about dryness, irritation, or sensitization of the skin addressed?
	31 If internal combustion engines are used, is carbon monoxide kept within acceptable levels?
	32 Is vacuuming, rather than blowing or sweeping dust, used whenever possible for clean up?
	33 Does the site possess sufficient air monitoring equipment to adequately assess site hazards during both routine and emergency situations?

13: Hearing Conservation

YES NO N/A	
	Is there a site specific Hearing Conservation Program?
□ □ □ 2	Do all employees in the hearing conservation program have annual training? Per OSHA 29 CFR 1910.95(k)(2), the training program shall be repeated annually for each employee included in the hearing conservation program.
□ □ □ 3	Does the hearing conversation program identify who is in the program? i.e. whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent.
4	Do all employees in the hearing conservation program have annual audiograms conducted and documented? Per OSHA 29 CFR 1910.95(g)(6), "Annual audiogram." At least annually after obtaining the baseline audiogram, the employer shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels.
□ □ □ 5	Is the OSHA hearing conservation standard posted in the work place? Per OSHA 29 CFR 1910.95(l)(1), the employer shall make available to affected employees or their representatives copies of this standard and shall also post a copy in the workplace.
□ □ □ 6	Do all employees that are in the hearing conservation program have a baseline hearing test conducted within 6 months of their hire date?
7	Does each employee who has a recorded Standard Threshold Shift review their results, receive retraining in hearing conservation and, provided with new hearing protection providing a higher noise reduction rating than that worn at the time of the shift if necessary? Per OSHA 29 CFR 1910.95(g)(8)(ii)(B), employees already using hearing protectors shall be refitted and retrained in the use of hearing protectors and provided with hearing protectors offering greater attenuation if necessary.
\square \square \square 8	Is the threshold shift recorded on the OSHA log?
9	Are 8 Hour TWA Personal Dosimetry samples taken annually in areas where recordable hearing losses have occurred and where there have been changes in operations or when hearing protection used is rendered inadequate?
	Has the site conducted an area sound level survey within the past twelve (12) months?

YES NO N/A	
	11 Is hearing protection provided sufficient to reduce occupational noise
ппп	exposure to less than 85dB? 12 Are hearing protection signs posted in areas where the Time Weight
	Average Levels were found to be above 85 dRs?

14: Hoist and Auxiliary Equipment

YES NO N/A	
	1 Is each overhead electric hoist equipped with a limit device to stop the hook at its highest and lowest point of safe travel?
	Will each hoist automatically stop and hold any load up to 125 percent of its rated load if it's actuating force is removed?
	3 Is the rated load of each hoist legibly marked and visible to the operator?
	4 Are stops provided at the safe limits of travel for trolley hoists?
	5 Are the controls of hoists plainly marked to indicate the direction of travel or motion?
	6 Is each cage-controlled hoist equipped with an effective warning device?
	7 Are close-fitting guards or other suitable devices installed on hoists to assure hoist ropes will be maintained in the sheave groves?
	8 Are all hoist chains or ropes of sufficient length to handle the full range of movement for the application while still maintaining two full wraps on the drum at all times?
	9 Are nip contact points between hoist ropes and sheaves guarded when permanently located within seven feet of the floor, ground, or working platform?
	10 Is it prohibited to use chains or rope slings that are kinked or twisted?
	11 Is it prohibited to use the hoist rope or chain wrapped around the load as a substitute for a sling?
	12 Is the operator instructed to avoid carrying loads over people?
	13 Are employees, who have been trained in the proper use of hoists, allowed to operate them?



15: Hot Work

YES NO N/A 1 Is the site utilizing a current Hot Work Permit Policy? Has all site specific information been completed? 2 Are hot work permits available for review on work performed in areas not designated as hot work safe areas, and are these completed permits maintained for 90 days? 3 Has the site developed a documented process to identify and authorize "Qualified Cutter/Welders" as defined by the policy and is a list maintained by the Safety Department of all such "Qualified" employees? 4 Have all employees authorized to perform hot work and/or serve as fire watch completed training at the authorized level in safe hot work procedures and their specific duties within the past 12 months? Are designated hot work areas provided with a welding screen(s)?



OSHA 29 CFR 1910.26 Portable Metal Ladders

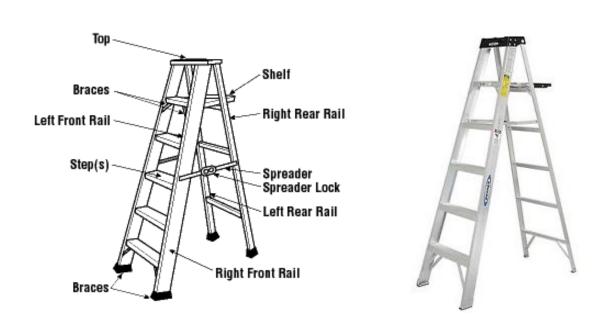
YES NO N/A		
	1	Are ladders maintained in good condition, joints between steps and side rails tight, all hardware and fittings securely attached, and movable parts operating freely without binding or undue play?
	2	Are non-slip safety feet provided on each metal or rung ladder?
	3	Are ladder rungs and steps free of grease and oil?
	4	Is it prohibited to place a ladder in front of doors opening toward the ladder, except when the door is blocked open, locked, or guarded?
	5	Is it prohibited to place ladders on boxes, barrels, or other unstable bases to obtain additional height?
	6	Do employees face the ladder when ascending and descending?
	7	Are employees prohibited from using ladders that are broken, have missing steps, rungs, or cleats, or have broken side rails or other faulty parts?
	8	Do employees use the top step of ordinary stepladders as a step?
	9	When portable rung ladders are used to gain access to elevated platforms, roofs, etc., does the ladder always extend at least three feet above the elevated surface?
	10	Is it required that when portable rungs or cleat-type ladders are used, the base is placed so that slipping will not occur, or is it lashed or otherwise held in place?
	11	Are portable metal ladders legibly marked with signs reading "CAUTION—Do Not Use Around Electrical Equipment" or equivalent wording?
	12	Are employees prohibited from using ladders as guys, braces, skids, gin poles, or for anything other than their intended purpose?
	13	Are load rating warning stickers legible?
	14	Are ladder safety labels legible?
	15	Employees only can adjust extension ladders while standing at a base (not while standing on the ladder or from a position above the ladder).
	16	Are ladders inspected for damage before each use?

17 Are the rungs of ladders uniformly spaced at least 12 inches center to center?
18 Are appropriate ladders available for the job and in good condition?
19 Have employees been trained in ladder safety as needed?
20 Are ladders strong enough for intended use?
21 Are metal ladders marked KEEP AWAY FROM ELECTRICAL SOURCES: so used and stored?
22 Are wooden ladders free of paint?

OSHA 29 CFR 1910.27 Fixed Ladders

YES NO N/A	
	1 Is it required that when portable rungs or cleat-type ladders are used the base is to be placed so that slipping will not occur, or is it lashed o otherwise held in place?
	2 Does the ladder have a minimum clear length of rungs or cleats of 16 inches?
	3 Do the side rails allow for adequate gripping surface without sharp edges, splinters, orburrs?
	4 Is there a clear width of at least 15 inches each way from the centerline of the ladder in the climbing space, except when cages or wells are necessary?
	5 Are cages provided on ladders of more than 20 feet to a maximum unbroken length of 30 feet?
	6 Are cages extended a minimum of 42 inches above the top of landing, unless other acceptable protection is provided?
	7 Are landing platforms provided for each 30 feet of height except where no cage, well, or ladder safety device is provided, landing platforms shall be provided for each 20 feet of height?
	8 Is each ladder section offset from adjacent sections?
	9 Are landing platforms equipped with standard railings and toe boards and are the platforms less than 24 inches in width and 30 inches in length?
	10 Are ladder way floor openings or platforms guarded by a standard railing with standard toe board on all exposed sides (except at entrance to opening), with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening?
	11 Is the perpendicular distance from the centerline of the rungs to the nearest permanent object on the climbing side of the ladder30 inches for a pitch of 90 degrees?
	12 Is the distance from the centerline rungs, cleats, or steps to the nearest permanent object in back of the ladder not more than 7 inches?
	13 Is the step-across distance for the nearest edge of ladder to the nearest edge of equipment or structure not more than 12 inches, or less than 2 ½ inches

- □ □ □ □ 14 Are the side rails of the through ladder extensions extended 3 ½ feet above the parapets and landings?
 □ □ □ □ 15 Do the through ladders extensions have the rungs omitted from the extensions and have no less than 18 inches or more than 24 inches clearance between rails on through ladders?
- □ □ □ 16 Is the pitch of the fixed ladder in the range of 75° and 90° with the horizontal?



17: Lockout/Tag-Out

YES NO N/A	
	1 Does the site have a current Energy Control Program?
	2 Has each authorized employee completed lockout/tag-out training in the last 12 months?
	3 Has the facility developed equipment specific lockout/tag-out procedures using an approved LO/TO equipment specific procedure form for each piece of equipment and, have these procedures been recertified in the past 12 months?
	4 Has the site implemented a process to track lock assignments and is a current list of lock assignments available for review?
	5 Is the emergency lock removal system utilized when necessary and is each such removal properly documented?
	6 Have all authorized employees undergone a documented evaluation for understanding of and compliance with the requirements of the facility's Energy Control Program using a LO/TO Authorized Employee Annual Review Form within the past 12 months?
	7 Is all machinery and equipment capable of movement required to be de- energized, locked, or tagged-out during cleaning, servicing, adjusting, or setting-up operations whenever required?
	8 Are means provided to assure the control circuit can also be disconnected and locked-out?
	9 Is the locking-out of control circuits, in lieu of locking-out main power disconnects, prohibited?
	10 Are all equipment control valve handles provided with a means for locking-out?
	11 Does the lock-out procedure require that stored energy (mechanical, hydraulic, air, etc.) be relieved, disconnected or restrained or otherwise rendered safe before work is done on the equipment?
	12 Are appropriate employees provided with individually keyed personal safety locks?
	13 Are employees required to keep personal control of their keys while they have safety locks in use?
	14 Is it required that only the employee exposed to the hazard place be able to remove the safety lock?
	15 Is it required that employees check the safety of the lock-out by attempting a start-up after making sure no one is exposed?

YES NO N/A	
	16 Are employees instructed to always push the control circuit stop button prior to re-energizing the main power switch?
	17 Is there means provided to identify any or all employees who are working on locked-out equipment by their locks or accompanying tags?
	18 Are a sufficient number of accident-preventive signs or tags and safety padlocks provided for any foreseeable reasonable repair emergency?
	19 When machine operations, configuration, or size requires the operator to leave their control station to install tools or perform other operations and part of the machine could move if accidentally activated, are such elements required to be separately locked or tagged-out?
	20 In the event the equipment or lines cannot be shut down, locked-out, and tagged, are safe job procedures established and rigidly followed?



18: Material Handling Safety

YES NO N/A	
	1 Is there a formal training program for material handling equipment operators with periodic updates?
	2 Is there a qualified material handling safety trainer on site?
	3 Is there a formal training process to qualify equipment operators?
	4 Is there a process to license operators?
	5 Are written records kept detailing the training and licensing of equipment operators?
	6 Is updated training offered for new equipment?
	7 Is individual training updated following an accident?
	8 Is a formal pre-operational check list used to ensure that all equipment is in acceptable working order.
	9 Are equipment maintenance records kept up-to-date?
	10 Are speed limits set within the operation?
	11 Are all operators aware of the weight and height limitations of the equipment?
	12 Is there a separate area set aside to refuel or change the fork lift batteries?
	13 Is there safe clearance for equipment to pass through aisles and doorways?
	14 Are aisle ways designated, permanently marked, and kept clear to allow unhindered passage?
	15 Are vehicle's shut off and brakes set prior to loading or unloading?
	16 Are containers of combustibles or flammables, when stacked while being moved, always separated by dunnage sufficient to provide stability?
	17 Are dock boards (bridge plates) used when loading or unloading operations take place between vehicles and docks?
	18 Are trucks and trailers secured from movement during loading and unloading operations?
	19 Are dock plates and loading ramps constructed and maintained with sufficient strength to support imposed loading?

YES NO N/A	
	20 Are hand trucks maintained in safe operating conditions?
	21 Are chutes equipped with sideboards of sufficient height to prevent handled materials from falling off?
	22 Are chutes and gravity roller sections firmly placed or secured to prevent displacement?
	23 At the delivery end of the rollers or chutes, are provisions made to break the movement of the handled materials?
	24 Are pallets visually inspected before being loaded or moved?
	25 Are hooks with safety latches or other arrangements used when hoisting materials so that slings or load attachments will not accidentally slip off the hoist hooks?
	26 Are securing chains, ropes, chokers, or slings adequate for the job to be performed?
	27 When hoisting material or equipment, are provisions made to assure no one will pass under the suspended loads?
	28 Are safety data sheets available to employees handling hazardous substance?



19: Medical Services/First Aid

YES NO N/A	
1	Do you require each employee to have a post-accident physical examination?
2	Is there a hospital, clinic, or infirmary for medical care in proximity to your workplace?
3	If medical and first aid facilities are not in proximity to your workplace, is at least one employee on each shift currently qualified to render first aid?
4	Are medical personnel readily available for advice and consolation on matters of an employee's health?
□ □ □ 5	Are emergency phone numbers posted?
<u> </u>	Are first aid kits easily accessible to each work area, with necessary supplies available, periodically inspected, and replenished as needed?
7	Have first aid kit supplies been approved by a physician, indicating they are adequate for a particular area or operation?
8	Are means provided for quick drenching or flushing of the eyes and body in areas where corrosive liquids or materials are handled?
9	Are supplies in first aid kits adequate, clear of obstructions, clean, and sanitary?
	Are emergency procedures posted?



20: Occupational Safety Professional or Designee

YES NO N/A		
	1	Is there a designated site safety person? Does the site safety professional participate in regularly scheduled staff meetings with the site management team?
	2	Has the site Safety Manager or designee participated in all Process Safety Management (PSM) team meetings to include Compliance Audits, Process Hazard Analysis, and Incident Investigations?
	3	Does the site safety person have the organizational tools to effectively facilitate the safety process within the organization?
	4	Has the site safety person maintained current certification and medical qualification (when physically able) in HazMat Response (Technician) and Confined Space Rescue?
	5	Does the site safety person maintain an updated safety audit corrective action tracking tool?

21: Personal Protective Equipment

YES NO N/A	
	Does the site have a Personal Protective Equipment policy and program?
	Has the site developed documented Job Safety Analysis (JSA's) for all jobs/tasks? Have these JSA's been evaluated within the past 12 months, and are they accurate in identifying hazards and appropriate personal protective equipment?
	For employees working in cold environments, are employees instructed to wear three layers of loose clothing to trap air, provide insulation and better ventilation? An inner wicking layer made from polyester, polypropylene, or synthetic material that draws moisture away from the skin and keeps it dry. Middle insulating layer of down, fleece, wool or other material that will hold in the body's heat. Outer layer for wind and water protection made of "breathable" waterproof fabric that allows some ventilation (like Gortex® or nylon) and is windproof, and that may also need to be resistant to oil, fire, chemicals, or abrasion.
	Are employees instructed to wear a cap or liner for the head to prevent excessive heat loss?
	Do gloves and insulated boots have felt liners?
	Are scheduled warming breaks consistent with ACGIH guidelines?
	Are Hi-Vis garments and accessories utilized in low light or high traffic areas?
	Are all garments (jackets, bibs, coveralls, etc.) properly maintained to be clean and totally functional? No obvious tears, rips, broken zippers or snaps, that could jeopardize the ability to keep the employee warm and safe.
	Are protective goggles or face shields provided and worn where there is danger of flying particles or corrosive materials?
	10 Are approved safety glasses required to be worn at all times in areas where there is a risk of eye injury such as punctures, abrasions, contusions, or burns?
	Are employees who need corrective lenses (glasses or contacts) in working environments with harmful exposures required to wear only approved safety glasses or protective goggles, or follow other medically approved precautionary procedures?
	Are protective gloves, aprons, shields, or other means provided against cuts, corrosive liquids, and chemicals?
	13 Are hard hats provided and worn where danger of falling objects exists?

YES NO N/A	
	14 Is appropriate foot protection required where there is risk of foot injury from hot, corrosive, or poisonous substances, falling objects, and crushing or penetrating motions?
	15 Are approved respirators provided for regular or emergency use?
	16 Is protective equipment maintained in sanitary conditions and ready for use?
	17 Are eye wash facilities and a quick drench shower located within the work area where employees are exposed to injurious corrosive materials?
	18 Is special equipment needed for electrical employees available?
	19 Are adequate work procedures, protective clothing, and equipment provided and used when cleaning up spilled toxic or otherwise hazardous materials or liquids?
	20 Are multiple sizes of Personal Protective Equipment (PPE) available to fit different employees?

	TLVs Wo	rk/Warr	n-up Sch	edule fo	or Outsid	e Worke	ers base	d on a Fo	our-Hou	Shift*			
Air Temperature - Sunny Sky		No Noticeable Wind		5 mph Wind		10 mph Wind		15 mph Wind		20 mph Wind			
°C (approx)	°F (approx)	Max. work Period	No. of Breaks **	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks		
-26° to -28°	-15° to -19°	(Norm b	reaks) 1	(Norm b	reaks) 1	75 min.		55 min.		40 min.	4		
-29°to - 31°	-20°to -24°	(Norm b	reaks) 1	75 min.	2	55 min.	3	40 min.	4	30 min.	5		
-32° to -34°	-25°to -29°	75 min.		55 min.		40 min.		30 min.					
-35° to -37°	-30° to -34°	55 min.		40 min.		30 min.		Non-emergency Non-emergency Non-emergency					
-38° to -39°	-35° to -39°	40 min.		30 min.									
-40° to -42°	-40°to -44°	30 min.				Non-emergency		Non-emergency work should cease		work should ' cease		cease	
-43° & below	-45° & below	work	nergency should ase		should (ase								

22: Powered Industrial Trucks

YES NO	N/A	
		Is the site utilizing a current Powered Industrial Truck (PIT) Safety Program?
		Are all operators provided with licenses showing expiration date, equipment/location/tasks for which the operator is certified?
		Has each operator completed required initial training covering all required topics and refresher training every three years?
		Is each PIT operator reviewed annually and is this review documented using an Operator's Review Form?
		Are documented pre-shift inspections being conducted and defects are being corrected?
		Has the site conducted retraining for each employee violating PIT procedures where termination was not the result of the violation?
		Are all PIT operators observed to be following safe operating procedures?
		3 Are only trained personnel allowed to operate industrial trucks?
		Is substantial overhead protective equipment provided on high-lift rider equipment?
		10 Are the required lift truck operating rules posted and enforced?
		1 Is directional lighting provided on each industrial truck that operates in areas with less than two foot candles per square foot of general lighting?
		2 Does each industrial truck have a warning horn, whistle, gong, or other device that can be clearly heard above the normal noise in areas where operated?
		Are the brakes on each industrial truck capable of bringing the vehicle to a complete and safe stop when fully loaded?
		Will the industrial truck's parking brake effectively prevent the vehicle from moving when unattended?
		15 Are industrial trucks operating in areas where flammable gases or vapors, combustible dust, or ignitable fibers may be present in the atmosphere approved for such locations?
		Are motorized hand and hand/rider trucks designed so that the brakes are applied and power to the drive motor shuts off when the operator releases their grip on the device that controls travel?

YES NO N/A	
	17 Are industrial trucks with combustible engines operated in buildings or
	enclosed areas carefully checked to ensure such operations do not cause
	harmful concentrations of dangerous gases or fumes?
	18 Is the "NO PASSENGERS" rule enforced?
	19 Are precautions taken during refueling or recharging?

23: Process Safety Management Standard Compliance Checklist

Use this checklist to help determine employer compliance with the *Process Safety Management Standard* issued by the Occupational Safety and Health Administration.

Note: the checklist does not include all of the standard's requirements and does not reflect all of OSHA interpretations in particular situations.

OSHA 29 CFR 1910.119(a) Application—OSHA Process Safety Management [PSM] Standard YES NO N/A Does the workplace have any of the following? 1 A process which involves a chemical at or above the specified threshold quantities listed in Appendix A (see OSHA 29 CFR 1910.119 App A); or 2 A process which involves a flammable liquid or gas (as defined in 1910.1200(c) of this part) on site in one location, in a quantity of 10,000 pounds (4535.9 kg) or more. Note: there are other interpretations that may exempt your facility from PSM coverage. ** IF THE WORKPLACE HAS ANY OF THESE OPERATIONS OR PROCESSES, IT MUST COMPLY WITH THE PSM STANDARD. ** OSHA 29 CFR 1910.119(c) Employee Participation YES NO N/A 1 Does the Employer have a written plan of action regarding the implementation of the employee participation? 2 Does the employer consult with employees and their representatives on the conduct and development of process hazards analyses and on the development of the other elements of process safety management in this standard? 3 Does the employer provide the employees and their representatives access to process hazard analyses and to all other information required to be developed under this standard?

OSHA 29 CFR 1910.119(d) Process Safety Information

YES NO N/A	
1	Has the employer completed a compilation of written process safety information before conducting any process hazard analysis required by the standard?
□ □ □ 2	Does this information include the hazards of the highly hazardous chemicals in the process (Safety Data Sheets may be used)?
	Does this information include the technology?
□ □ □ 4	Does this information include the equipment in the process?

OSHA 29 CFR 1910.119(e) Process Hazard Analysis

YES NO N/A	
	1 Has the employer performed an initial process hazard analysis (hazard evaluation) on processes covered by this standard?
	2 Has the employer used one or more of the following methodologies that are appropriate to determine and evaluate the hazards of the process:
	What-If;
	What-If/Checklist;
	Hazard and Operability Study (HAZOP);
	Failure Mode and Effects Analysis (FMEA);
	Fault Tree Analysis; or
	An appropriate equivalent methodology (even if not mentioned in the standard)?
	3 Has the process hazard analysis addressed the following:
	The hazards of the process;
	The identification of any previous incident which had a likely potential for catastrophic consequences in the workplace;
	Engineering and administrative controls applicable to the hazards and their interrelationships such as appropriate application of detection methodologies to provide early warning of releases;
	Consequences of failure of engineering and administrative controls; Facility siting; Human factors;
	A qualitative evaluation of a range of the possible safety and health effects of failure of controls on employees in the workplace?
	4 Was the process hazard analysis performed by a team with expertise in engineering and process operations, and included at least one employee who has experience and knowledge specific to the process being evaluated?
	5 Did the employer establish a system to:

	Promptly address the team's findings and recommendations;
	Assure that the recommendations are resolved in a timely manner and that the resolution is documented;
	Document what actions are to be taken;
	Complete actions as soon as possible;
	Develop a written schedule of when these actions are to be completed;
	Communicate the actions to operating, maintenance, and other employees whose work assignments are in the process and who may be affected by the recommendations or actions?
6	Has the process hazard analysis been updated and revalidated at least every five years?
7	Does the employer have process hazards analyses and updates or revalidations for each process?
8	Does the employer have the documented resolution of recommendations described in paragraph (e)(5)?

OSHA 29 CFR 1910.119(f) Operating Procedures

YES NO N/A	
	9 Does the employer have written operating procedures for each covered
	process including steps for each operating phase: Initial startup;
	Normal operations;
	Temporary operations;
	Emergency shutdown;
	Emergency Operations;
	Normal shutdown; and,
	Startup following a turnaround or after an emergency shutdown?
	10 Does the employer have written operating limits meeting criteria in OSHA 29 CFR 1910.119(f)(1)(ii)(A) – OSHA 29 CFR 1910.119(f)(4)?
	11 Does the employer have operating procedures addressing special situations involved with a covered process? For example, there may need to be procedures to prevent forklift damage in a refrigerated warehouse with ammonia refrigeration equipment.
1910.119(g) Tra	ining
YES NO N/A	
	1 Has the employer provided to each employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process, initial training in an overview of the process and in the operating procedures as specified in paragraph (f) of the standard?
	2 Does the training include emphasis on the specific safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks?
	3 Does training include discussion of human factors, such as excessive overtime and fatigue, and process siting, such as safe distance of control rooms or temporary maintenance facilities from processes using highly hazardous chemicals?

	4 Refresher Training — Has the employer provided refresher training at
	least every three years, and more often if necessary?Has the employer consulted with the employees involved in operating the process to determine the appropriate frequency of refresher training?
	6 Training Documentation — Has the employer documented that each employee has been trained and understood training?
OSHA 29 CFF	2 1910.119(h) Contractors Safety
YES NO N/A	
	1 Did the employer, when selecting a contractor, obtain and evaluate information regarding the contractor's employee safety performance and programs?
	2 Did the employer inform contract employers of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process?
	3 Did the employer explain to contract employees the applicable provisions of the emergency action plan?
	4 Did the employer develop and implement safe work practices?
	5 Did the employer periodically evaluate the performance of contract employees?
	6 Did the employer maintain a contract employee injury and illness log?
	7 Contract Employer Responsibilities — Did the contract employer assure that each contract employee is trained?
OSHA 29 CFF	2 1910.119(i) Pre-startup Safety Review
YES NO N/A	
	1 Did the employer perform a pre-startup safety review for new facilities and for modified facilities?

OSHA 29 CFR 1910.119(j) Mechanical Integrity of Process Equipment

YES NO N/A		
	1	Does the employer have written procedures to maintain the on-going integrity of process equipment?
	2	Has the employer trained each employee involved in maintaining the ongoing integrity of process equipment?
	3	Have inspections and tests been performed on process equipment?
	4	Are the frequency of inspections and tests of process equipment consistent with applicable manufacturers' recommendations and good engineering practices?
	5	Has the employer documented each inspection and test that has been performed on process equipment?
	6	Has the employer corrected deficiencies in equipment that are outside acceptable limits?
	7	Quality Assurance — Has the employer assured that fabricated equipment is suitable for the process application for which they will be used?
	8	Have appropriate checks and inspections been performed to assure that equipment is installed properly and is consistent with design specifications and the manufacturer's instructions?
	9	Has the employer assured that maintenance materials, spare parts, and equipment are suitable for the process application for which they will be used?
OSHA 29 CFR	191	0.119(k) Hot Work Permits
YES NO N/A		
	1	Has the employer issued a hot work permit for hot work operations conducted on or near a covered process?

OSHA 29 CFR 1910.119(l) Management of Change in Operations

YES NO N/A

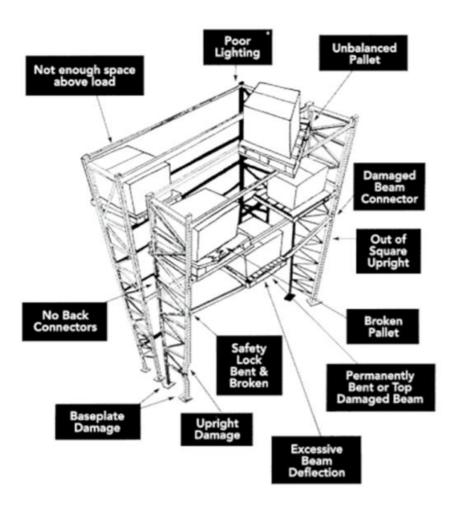
	1	Has the employer established and implemented written procedures to
	2	manage changes? Do the procedures assure that the following considerations are addressed
		prior to any change: The technical basis for the proposed change;
		Impact of change on safety and health;
		Modifications to operating procedures;
		Necessary time period for the change; and
		Authorization requirements for the proposed change?
	3	Have employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process been informed of, and trained in, the change prior to start-up of the process or affected part of the process?
OSHA 29 CFR	29	CFR 1910.119(m) Incident Investigations
YES NO N/A		
	1	Has the employer investigated each incident, which resulted in, or could reasonably have resulted in, a catastrophic release of highly hazardous chemical in the workplace?
	2	Has an incident investigation been initiated as promptly as possible, but no later than 48 hours following the incident?
	3	Has the investigation team consisted of at least one person knowledgeable in the process involved, including a contract employee if the incident involved work of the contractor, and other persons with appropriate knowledge and experience?
	4	Have reports been prepared at the conclusion of the investigation
	5	including documented resolutions and corrective actions? Have reports been reviewed with all affected personnel whose job tasks are relevant to the incident findings including contract employees where applicable?
	6	Have incident investigation reports been retained for five years?

OSHA 29 CFR 1910.119(n) Emergency Planning and Response Programs YES NO N/A 1 Has the employer established and implemented an emergency action plan for the entire plant in accordance with the provisions of OSHA 29 CFR 1910.38? OSHA 29 CFR 1910.119(o) Compliance Audits YES NO N/A 1 Has the employer certified that they have evaluated compliance with the provisions of this section at least every three years? Has the employer retained the two most recent compliance audit reports? OSHA 29 CFR 1910.119(p) Trade Secrets YES NO N/A 1 Has the employer made all information necessary to comply with the section available to those persons responsible for compiling the process safety information? 2 Have employees and their designated representatives had access to trade secret information contained within the process hazard analysis and other

documents required to be developed by this standard?

24: Rack Safety

When it comes to storage rack integrity it is suggested that a storage rack safety inspection be performed annually. This annual inspection may be performed by the rack manufacturer and/or the rack manufacturer's authorized installer. If the facility wishes to perform its own inspection by an "In-house" employee, it is recommended that the person in charge of rack inspection be trained and competent in storage rack integrity/safety. It is also suggested that all rack inspections are documented and kept on file for a minimum of two years.



The following "Racking Inspection Checklist" is used by United States Cold Storage and is a good example of a rack integrity/safety inspection form. For further information, relating to storage racking systems, it is recommended to read Chapter 13 – Racking; in the IACSC-IARW Guide to Effective Warehouse Design, Maintenance, and Modernization.

RACK INSPECTION CHECKLIST

	LOCA	TION	LOCA	TION	LOCA	TION	LOCA	TION	LOCA	TION
Location		,,,,,,,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
Room ID / Aisle / Slot										
Inspected by										
Inspected by Inspectrion Date										
Warehouse Manager										
Page Number (X of XX)										
UPRIGHTS	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Front Post Damaged										
Rear Post Damaged										
Frame Not Plum or Square										
Shim Out of Place / Missing										
1st Horizontal Brace Damage / Missing										
1st Diagonal Brace Damaged / Missing										
2nd Horizontal Brace Damage / Missing										
2nd Diagonal Brace Damaged / Missing										
Front Post Anchor Missing										
Rear Post Anchor Missing										
Base Plate Damaged / Missing										
Frame - Dented / Other										
BEAMS / LOAD RAILS	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Front Beam Bent / Twisted										
Interior Beam Bent / Twisted										
Front Beam Clip Bent / Twisted										
Interior Beam Clip Bent / Twisted										
Left Load Rail Bent / Twisted										
Right Load Rail Bent / Twisted										
Left Rail Clip Damaged / Missing										
Right Rail Clip Damaged / Missing										
Rail Bolts Damaged / Missing/ Other										
Load Beam Damaged - Other										
Pallet Support Damaged - Other										
OTHER	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Improper Repairs or Components										
Signage Missing or Inadequate										
Corrective Action	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
In-house Repairs										
Replacement Components Required										
Contractor Required										
Professional Engineering Required										
Overall Safety Review	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Are aisle widths adequate for lift equipment?										
Pallet overhang?										
Overload conditions?										
Good quality pallets being used?										
Proper rack guarding installed?										
Capacity ratings posted?										

DAMAGE ID
Minor - No action required (MI)
Moderate - Create a schedule to have repairs underway within 30 days (MO)
Severe - Should be off loaded immediately and repairs scheduled accordingly (S)
COMMENTS

25: Walkways, Floors, Stairs, and Stairways

OSHA 29 CFR 1910.21 Walkways

YES NO N/A	
	1 Are aisles and passageways kept clear?
	2 Are aisles and walkways marked as appropriate?
	3 Are holes in the floor, sidewalk, or other walking surface repaired
	properly, covered, or otherwise made safe?4 Is there safe clearance for walking in aisles where motorized or mechanical handling equipment is operated?
	5 Are materials or equipment stored in such a way that sharp projections will not interfere with the walkway?
	6 Are changes of direction or elevation readily identifiable?
	7 Are aisles or walkways that pass near moving or operating machinery, welding operations, or similar operations arranged so employees will not be subjected to potential hazards?
	8 Is adequate headroom provided for the entire length of any aisle or walkway?
	9 Are standard guardrails provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or ground?
	10 Are bridges provided over conveyors and similar hazards?

OSHA 29 CFR 1910.23 Floors

YES NO N/A	
	1 Are floor openings guarded by a cover, guardrail, or equivalent on all
	sides (except at entrance to stairways or ladders)?
	2 Are toe boards installed around the edges of permanent floor openings
	where persons may pass below the opening?
	3 Are skylight screens comprised of such construction and mounting that they will withstand a load of at least 200 pounds?
	4 Is glass in windows, doors, glass walls, etc., subject to human impact of sufficient thickness and type for the condition or use?
	5 Are grates or similar-type covers over floor openings (such as floor drains) of such design that floor traffic or rolling equipment will not be affected by the grate spacing?
	6 Are unused portions of service pits and pits not in use either covered or protected by guardrails or equivalent?
	7 Are manhole covers, trench covers and similar covers, plus their supports, designed to carry a truck rear axle load of at least 20,000 pounds when located on roadways and subject to vehicle traffic?
	8 Are floor or wall openings in fire-resistive construction provided with doors or covers compatible with the fire rating of the structure, and provided with self-closing features when appropriate?

OSHA 29 CFR 1910.24 Stairs and Stairways

YES NO N/A	
	Are standard stair rails or handrails on all stairways with four or more risers?
	Are all stairways at least 22 inches wide?
	Do stairways have at least 7" measured from the leading edge of the tread per OSHA 29 CFR 1910.24(i)?
	Do stairs angle no more than 50 degrees and no less than 30 degrees?
	Are stairs of hollow pan-type treads and landings filled to nosing level and solid material?
	Are step risers on stairs uniform from top to bottom with no riser spacing greater than 7.5 inches?
	Are steps on stairs and stairways designed or provided with a surface that renders them slip-resistant?
	Are stairway handrails located between 30 and 34 inches above the leading edge of stair treads?
	Do stairway handrails have at least 3 inches of clearance between the handrails and the wall or surface they are mounted on, per OSHA 29 CFR 1910.23(e)(5)(iii) & (e)(6)?
	0 Are stairway handrails capable of withstanding a load of 200 pounds, applied in any direction?
	1 Where stairs and stairways exit directly into areas where vehicles may be operated, are adequate barriers and warnings provided to prevent employees from stepping into the path of traffic?
	2 Do stairway landings have a dimension measured in the direction of travel at least equal to the width of the stairway?
	3 Is the vertical distance between stairway landings limited to 12 feet or less?

Appendix A: Additional Guidance

General Contacts

- a. Annamarie Gibbs AGibbs@lockton.com
- b. Lowell Randel <u>lrandel@gcca.org</u>
- c. Paige Lowder plowder@lockton.com
- d. Robbie Collins rcollins@lockton.com

Resources by Chapter

- 1. Confined Space
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9797
- 2. Contractor Safety
 - a. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9760
- 3. <u>Docks/Elevated Surfaces</u>
 - a. <u>www.grainger.com/content/qt-367-loading-dock-safety</u>
 - b. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9715
- 4. Electrical
 - a. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9880
 - b. <u>www.osha.gov/SLTC/electrical/standards.html</u>
- 5. <u>Emergency Response Procedures</u>
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9765
 - b. www.osha.gov/SLTC/emergencypreparedness/gettingstarted.html
- 6. Ergonomics
 - a. www.osha.gov/Publications/osha3125.pdf
 - b. www.osha.gov/SLTC/ergonomics/faqs.html
 - c. www.nd.gov/risk/files/samples/ergonomics.pdf
 - d. www.emcins.com/ICEFiles/docs/lossControl/Ind-Ergo.docx
 - e. <u>www.osha.gov/SLTC/etools/computerworkstations/</u>
- 7. Exiting, Egress and Exit Doors
 - a. <u>www.nfpa.org/codes-and-standards/document-information-pages?mode=code&code=101b&tab=editions</u>
 - b. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9724
 - c. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9725
- 8. Fall Protection
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9730
- 9. Fire Protection NFPA
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=12887
 - b. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9819
 - c. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9812
 - d. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9813
 - e. www.nfpa.org/codes-and-standards/document-information-pages?mode=code&code=72
 - f. <u>www.nfpa.org/codes-and-standards/document-information-pages?mode=code&code=80</u>
 - $g. \quad \underline{www.nfpa.org/codes-and-standards/document-information-pages?mode=code\&code=13}\\$
 - h. www.nfpa.org/codes-and-standards/document-information-pages?mode=code&code=10
- 10. Flammable and Combustible Materials

 - b. https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=9752&p_table=standards
- 11. General Work Environment
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=OSHACT&p_id=3359
- 12. Hazard Communication/Chemical Hazards/Respirators

- a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10099
- b. <u>www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=12716</u>
- 13. Hearing Conservation
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9735
- 14. Hoist and Auxiliary Equipment
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9830
- 15. Hot Work
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9853
- 16. Ladders
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9715
 - b. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9718
 - c. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9719
- 17. Lockout/Tag-Out
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9804
- 18. Material Handling Safety
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9714
 - b. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9828#1910. 178%28q%29%287%29
 - c. www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=9722&p_table=STANDARDS
 - d. <u>www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10452</u>
 - e. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9834
 - f. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10099
 - g. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9824
- 19. Medical Services/First Aid
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9806
- 20. Occupational safety professional or designee
 - $a. \quad \underline{\text{http://www.asse.org/safety-professionals-handbook-management-applications-volumne-i/}}\\$
- 21. Personal protective equipment
 - a. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9777
 - b. www.acgih.org/tlv-bei-guidelines/tlv-chemical-substances-introduction
- 22. Powdered Industrial Trucks
 - a. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9828
- 23. Process Safety Management Standard Compliance Checklist
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9760
- 24. Rack Safety
 - a. www.gcca.org/resources/publications/technical-guides-manuals/guide-to-effective-warehouse-design-maintenance-and-modernization/
- 25. Walkways, Floors, Stairs, and Stairways
 - a. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9714
 - b. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9716
 - c. www.osha.gov/pls/oshaweb/owadisp.show document?p table=STANDARDS&p id=9715
 - d. www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9713



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