	NORTH CAROLINA DEPARTMENT OF LABOR	No. 20-4
	OSH DIVISION	Date: 10/2009
	OSHNC INDUSTRIAL DATA REPORT	Pages: 4

Industry: **Food and Kindred Products**

Sub-Group: **Beverage, Beer or Ale, Wines and Soft Drinks**

SIC: **2082, 2084 and 2086**

NAICS: **312111, 312112, 312120 and 312130**

PROCESS DESCRIPTION:

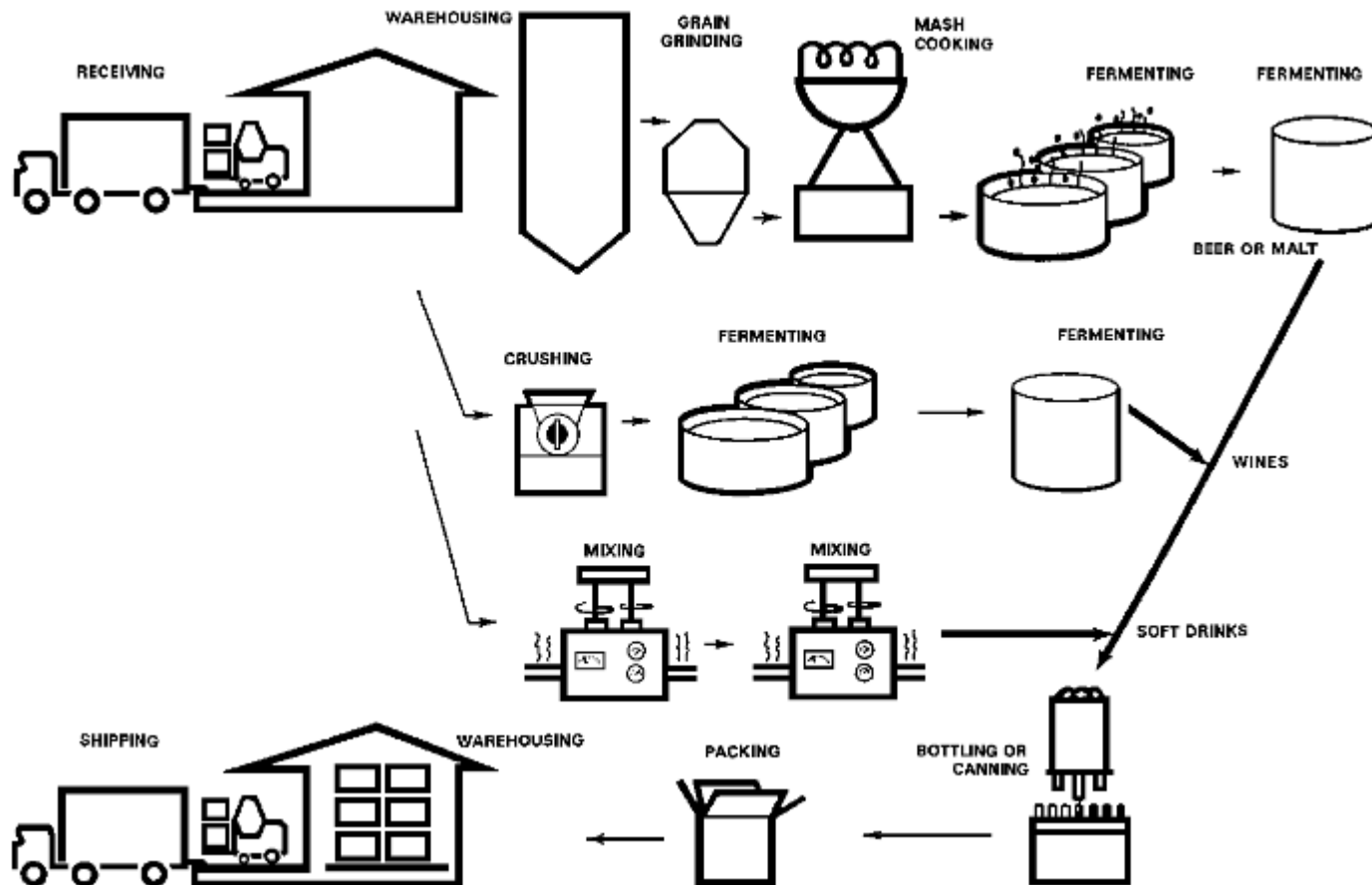
Beer or Ale: Grains are pulverized in a grinder and conveyed to a mash cooker where water is added. The mash is cooked under pressure and passed through straining tubes. The liquid is sterilized and transferred to aging tanks, carbonated, filtered and pumped to a bottling area.


Wines: Wines are made by crushing fruit which is transferred to initial and secondary fermenting tanks. The wine is filtered and distilled for brandies or bottled directly as wines.


Soft Drinks: Soft drinks are made from syrup, water and carbon dioxide in a series of mixing tanks and passed to the bottling process.

Bottling processes consist of bottle preparation and automatic filling and sealing. Canning involves can preparation and automatic filling and sealing. Both processes then transfer containers and shipping cartons for distribution.

PROCESS FLOW:




 NCDOL <i>N.C. Department of Labor</i>	NORTH CAROLINA DEPARTMENT OF LABOR				No. 20-4
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Hazards Analysis					
Major Hazards			Other Hazards		
Location	Item	Hazard	Location	Item	Hazard
Grainery	Grain dust	Fire and explosion; respiratory illness	Plant	Slippery floors	Bodily injury from slips, trips and falls
Warehouse	Fork lifts	Pedestrian and driver injuries, and carbon monoxide	Warehouse	Heavy containers	Lifting and crushing injuries
Manufacturing	Machinery	Exposed points of operation and power transmission apparatus	Manufacturing	Noise	Hearing loss
	Carbon Dioxide	Inhalation and asphyxiation			
	Ammonia	Inhalation and burns			
	Caustics	Burns and respiratory problems			
	Tanks	Suffocation and death during cleaning			
Plant	Electrical equipment	Fire and explosion, electrocution and shock	Plant	Bottles and air cleaning	Exploding bottles, cuts and eye injuries
Loading and unloading docks	Large cartons and crates of beer, wine and soft drinks	Crushing injuries, sprains and strains	Shipping and receiving	Forklifts and tractor trailers	Carbon monoxide and accidents
				Dockplates	Overtured forklifts and accidents
Grain storage area	Combustible dust	Fire and explosion	Storage	Bins, hoppers and silos	Oxygen deficient atmosphere and combustible dusts

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Storage warehouses, lies and conveyors	Stacking heavy cartons and crates	Items stacked too high, uneven and not interlocked; slick floors	Preparation area	Housekeeping	Slips, trips and falls
Work area	Mixers, hot water, electrical hazards, ungrounded machinery, wet floors	Danger of hands in V-belts, conveyors, pulleys, gears, burns from hot water, slips and falls, electric shocks and electrocution	Throughout plant	Mechanical power, transmission apparatus Manlifts Chemicals	Amputation and injured limbs from contact with gears shafts, pulleys, be chains and sprockets Falls Overexposure
Receiving	Floor holes Housekeeping Screw conveyors Railroad cars	Falls into openings Slips, trips and falls Nip points Crushing by rolling or moving vehicles	Shop	Improper tools, punches, chisels, etc.	Sprains, abrasions, puncture wounds and eye injuries
Key OSHNC Standards					
Reference		29 CFR 1910 - General Industry Standards			
NCGS 95-129		General duty clause – ergonomics			
Subpart D		Walking and working surfaces			
Subpart E		Exit Routes, Emergency Action Plans, and Fire Prevention Plans			
Subpart I		Personal protective			
Subpart O		Machinery and machine guarding			
Subpart S		Electrical			
1910.95		Occupational noise exposure			
1910.119		Process safety management			
1910.146		Permit-required confined space entry			
1910.147		Control of hazardous energy – (lockout/tagout)			
1910.176		Material handling			
1910.178		Powered industrial trucks			
1910.242		Hand and portable powered tools and equipment, general			

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1910.1000	Air contaminants		
1910.1026	Hexavalent Chromium		
1910.1200	Hazard Communication		
Inspection Analysis			
<p>Raw materials are received and stored in warehouses and grain storage facilities. Grain storage areas must be scrutinized for adherence to electrical code for dust hazard areas.</p> <p>Material handling and storage must be checked as well as receiving areas. In manufacturing areas carbon dioxide and ammonia hazards must be evaluated. Machinery shall be inspected for point-of-operation, rotating parts and in-running nip points guarding.</p> <p>High noise areas must be surveyed. Caustic handling must be evaluated. Tank cleaning procedures must be evaluated for applicability of permit-required confined space entry. Walking surfaces must be maintained in safe conditions at all times.</p> <p>Determine refrigerant type and quantity for applicability of Process Safety Management. Review emergency response policies.</p>			
Other Pertinent Comments:			