



NORTH CAROLINA DEPARTMENT OF LABOR

No. 20-4

OSH DIVISION

Date: 10/2009

OSHNC INDUSTRIAL DATA REPORT

Pages: 4

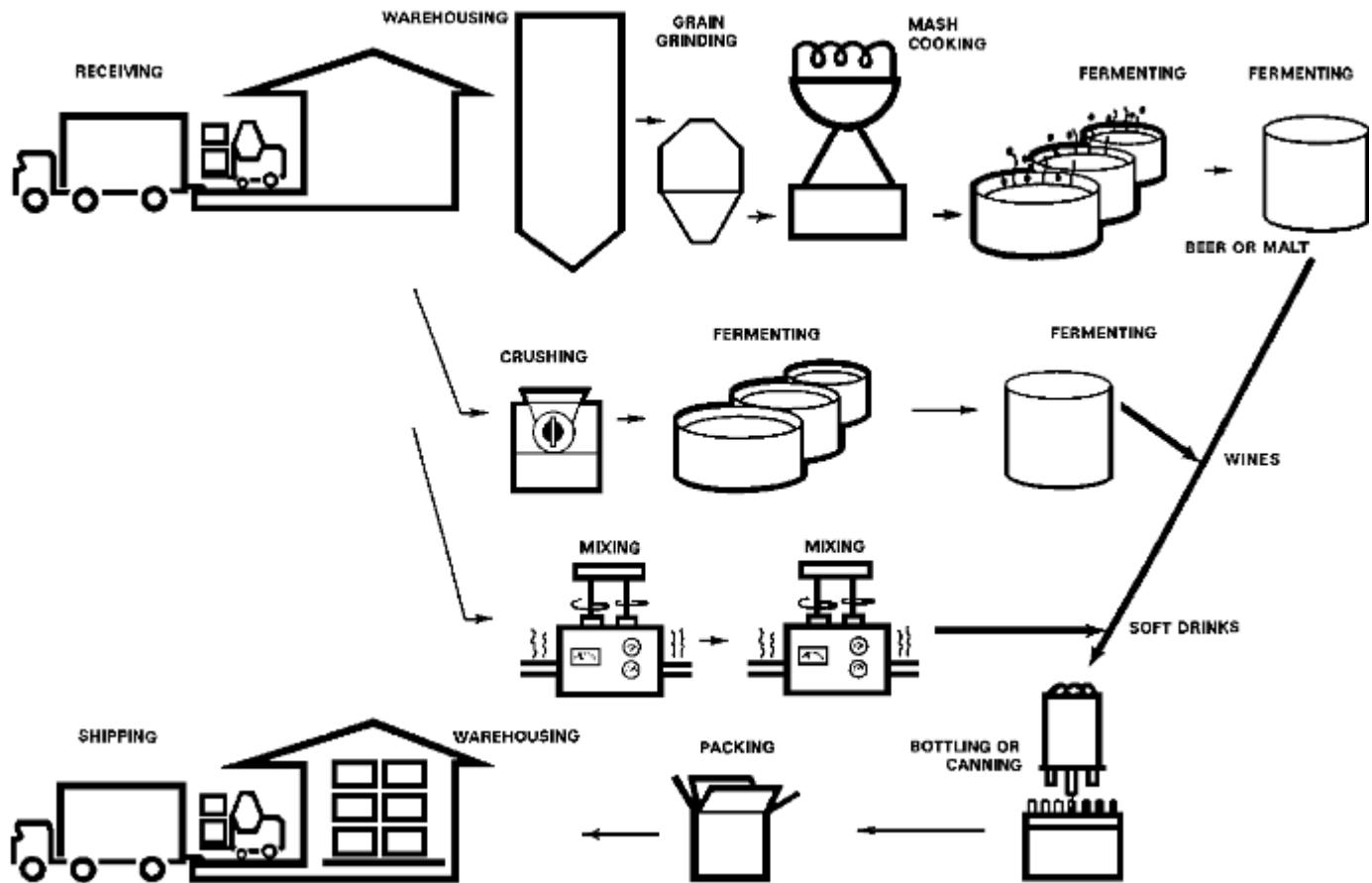
Industry: Food and Kindred ProductsSub-Group: Beverage, Beer or Ale, Wines and Soft DrinksSIC: 2082, 2084 and 2086NAICS: 312111, 312112, 312120 and 312130**PROCESS DESCRIPTION:**

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:**

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## Hazards Analysis

<b>Major Hazards</b>			<b>Other Hazards</b>		
<b>Location</b>	<b>Item</b>	<b>Hazard</b>	<b>Location</b>	<b>Item</b>	<b>Hazard</b>
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	Overturned 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**

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.

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.

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.

Determine refrigerant type and quantity for applicability of Process Safety Management. Review emergency response policies.

### **Other Pertinent Comments:**