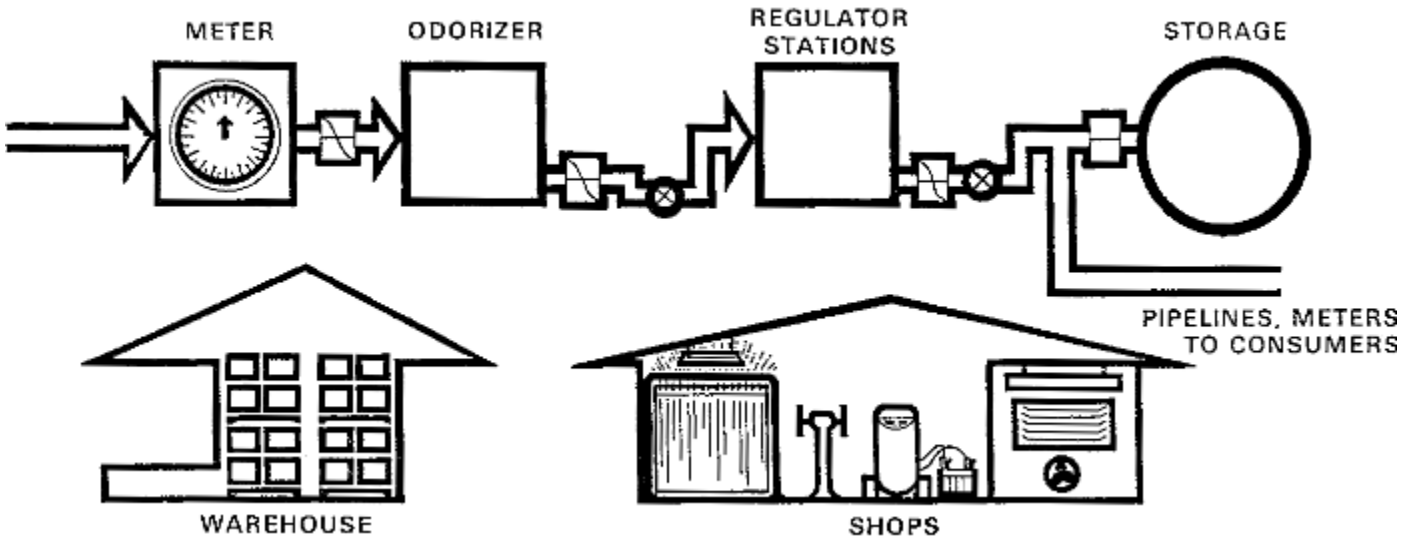
	NORTH CAROLINA DEPARTMENT OF LABOR	**No. 49-1**
	OSH DIVISION	**Date: 15Oct05**
	OSHNC INDUSTRIAL DATA REPORT	**Pages: 4**

Industry: **Gas Companies and Systems**	Sub-Group: **Natural Gas Distributing**
SIC: **4924**	NAICS: **221210**

PROCESS DESCRIPTION: Natural gas is received through pipelines, meters, odorized and pumped through subsequent regulator stations, reducing from main line and intermediate pressures to ultimate utilization pressure for the consumer. Installation maintenance and preventative maintenance of gas mains, service lines, pressure regulating and metering equipment is performed. Sales, installation and service of gas appliances; meter reading; chart changing, billing, general commercial and administrative office functions are included.

PROCESS FLOW:



Hazards Analysis

Major Hazards			Other Hazards		
Location	**Item**	**Hazard**	**Location**	**Item**	**Hazard**
Pumping station and regulator stations	Leaking gas, housekeeping and toxic gas Power transmission apparatus	Fire and explosion, respiratory ailments In running nip points created by belts, pulleys and chain and sprockets rotating parts	Warehouse	Lack of head protection	Falling objects

	Electrical installation Noise	Fire and electrical shock Hearing loss			
Spray paint booths, areas	Open containers, paints, thinners, lacquers Improper wiring, lights, electrical equipment	Fires and toxic vapors Fire and explosions	Shops	Grinding, welding, chipping Improper storage – oxygen, fuel, combustibles Unsafe ladders Excessive air pressure for cleaning Improper tools with mushroomed heads, punches, chisels, etc.	Foreign objects in eyes Fires and explosions Falling Eye injuries, puncture wounds Sprains, skinned hands, puncture wounds, eye injuries
Pipe installation	Trenches	Suffocation, crushing			
Welding	Confined areas	Toxic fumes and gases			
Vehicles	Improper operation	Collision			
Shops	Improper electrical wiring and equipment Improper guarding of belts and chains	Shocks and fires Amputation of fingers at nip points			

Key OSHNC Standards

Reference	29 CFR 1910 — General Industry Standards
1910.22 – 1910.23	Walking and working surfaces such as aisles and passageways clear and permanent aisleways marked, standards railings and toeboards provided for open-sided floors, platforms, walkways and runways, and fixed industrial stairs properly designed and constructed

1910.25 and 1910.26	Wooden and metal ladders
1910.95	Occupational noise exposure
1910.106	Flammable and combustible liquids
1910.107	Flammable and combustible liquids properly handled and stored
1910.132 – 1910.138	Personal protective equipment (PPE) such as respiratory protection against toxic fumes and gases from welding and in confined spaces
1910.146	Permit-required confined space entry
1910.151(c)	Facilities provided for quick flushing or drenching of the eyes and body where employee is exposed to injurious corrosive materials
1910.169(b)	Drains, traps, gages and valves of air receiver tanks properly installed
1910.176	Materials handling and storage
1910.178	Powered industrial trucks
1910.212	Machine guarding such as nip points, rotating parts and points of operation
1910.215(a)	Abrasive wheel grinders guarded
1910.219	Mechanical power transmission apparatus guarded
1910.242(a)	Hand tools in safe condition
1910.242(b)	Compressed air is reduced to less than 30 psi when used for cleaning, and protective equipment is used.
1910.252	General requirements for fire prevention and protection of employees when performing welding and cutting operations
1910.253	Proper installation and operation of oxygen-fuel gas systems for welding and cutting
1910.254	Proper installation and operation of arc equipment for welding and cutting
1910.1000 and 13 NCAC 7F.0101	Air contaminants (federal and state specific PELs) such as concentrations of carbon monoxide
1910.1200	Hazard communication – Employees trained and informed about the hazards of chemical substances to which they are exposed
Reference	**29 CFR 1926 — Construction Industry Standards**
1926.152(a)(1)	Gasoline stored in appropriate containers
1926.201(a)	Proper signaling at job site
1926.350 and 1926.351	Proper procedures followed in use and installation of gas/arc welding equipment used in welding and cutting
1926.400 – 1926.405	General and specific instructions and requirements met for electrical work
1926.407	Hazardous locations
1926.550(a)(2)	Rated load posted on all cranes and derricks
1926.601(b)	General and specific requirements for motor vehicles met
1926.651(b)	Excavation of underground installations
1926.652	Proper protective systems are used for trenching and excavation

Inspection Analysis

The inspection should begin inside the control building. Observe all power-transmission apparatus for proper guarding, electrical equipment for proper installation and grounding, housekeeping, protective equipment for

handling of chemicals and corrosives and any unsafe employee action. Also inspect adjoining or separate storage areas for proper handling of oxygen-fuel gas and chemicals.

For the large facility the next inspection area would be along the intake and process flow noting covers and/or railings for pits and standard railings and toeboards for walkways over ponds and basins (wet slippery surfaces occur over agitated bodies of water). Electrical installations (grounding of motors and equipment), especially in wet areas and guarding of belt and chain drives and shafting must be observed along with installation and use of fixed stairs and ladders, portable ladders and walkways and platforms. Note the use of welding apparatus (repairs) and portable hand tools guarding, grounding and usage. Observe and interview employees to ascertain if safe work practices are followed.

For small facilities (self-contained) the next inspection area would be along the ground level around the periphery of sub-surface tanks or atop elevated tanks. In addition to the areas listed for large facilities be especially watchful for plant-installed walkways which are often added to facilities as means of egress to working areas and/or process chambers of the tank system.

Other Pertinent Comments: