

## Running Horse Pipeline LLC System

Navajo Nation Oil and Gas Company DBA Running Horse Pipeline LLC (RHPL). RHPL operates two crude oil pipeline systems. The first system is comprised of approximately 37 miles of pipelines located in the vicinity of Montezuma Creek Utah. The second system is an interstate transmission system that traverses south eastern Utah, south western Colorado and terminating in south of Farmington New Mexico.

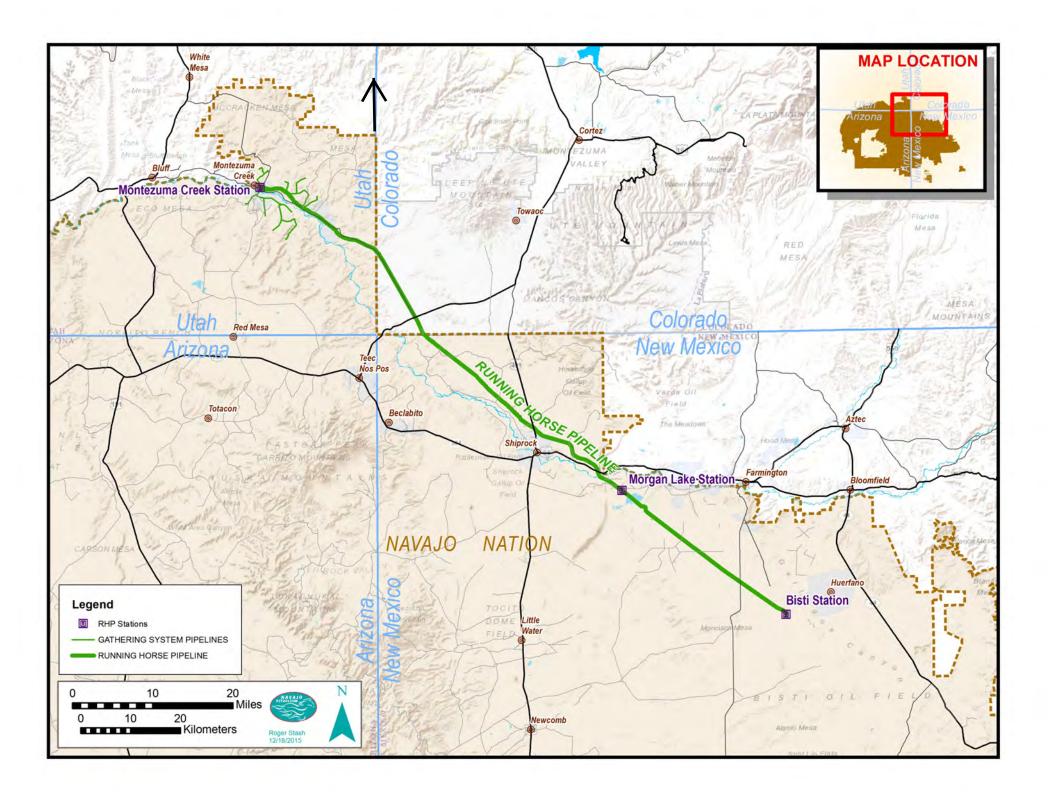
### **Area Offices**

Running Horse Pipeline LLC has several office location along the transmission corridor. If you have questions or desire additional information regarding our operations in your area, please contact our office:

Reporting Location NW Highway 162 & 262 Montezuma Creek, UT 84534	<b>Telephone</b> (435) 651-3475
218 N Auburn Ave Farmington, NM 87401	(505) 599-6060
50 Narbono Circle West St Michaels, AZ 86511	(928) 871-4880

## Pipeline Security

RHPL maintains a high level of attention to security, and we ask that you do the same. You are our eyes and ears along the pipeline. If you witness any act of vandalism, loitering or other unusual situation along the pipeline or at one of our facilities, please report it immediately to our Operations Center at 800-889-7437 and the local authorities, if necessary. It is important that you do not put yourself in danger by entering a suspicious situation. RHPL is committed to the safety of our neighbors and employees. We thank you for your assistance.

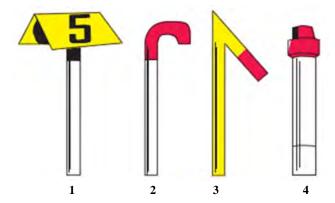


## Identifying Pipeline Releases

### These are the signs of a buried high pressure pipeline



Markers located near roads, railroads and along pipeline right-of-way



Marker Identification: 1) Marker for pipeline patrol plane, 2&3) Pipeline casing vents, 4) Test Station

#### You can identify a release by

#### Sight

Look for: liquids on the ground, unusual ground color, patches of dead vegetation in greenery, frost on the ground, white vapor clouds, mist or heat waves in low-lying areas. Look for a pipeline right-of-way marker.

#### **Sound**

Listen for: hissing, rumbling or roaring sounds.

#### **Smell**

Notice: odd chemical odors such as gas or other petroleum smells, or the smell of "rotten eggs" if near crude pipelines. Keep in mind, some releases may have little or no odor at certain concentrations

#### Warning

Please call for professional help. Do not investigate further.

## Establishing Control of Release Sites



#### If a release from a pipeline occurs,

gaining control of the situation as quickly as possible is necessary to protect lives, property and the environment.

**Remember:** Fire and explosion hazards are the greatest risk in any petroleum hydrocarbon release. High pressure products are extremely dangerous and should be controlled only by pipeline personnel. Any attempt to operate valves by unauthorized personnel could make the situation worse.

Refer to the U.S. DOT North American Emergency Response Guidebook for information on immediate steps to take in an emergency release.

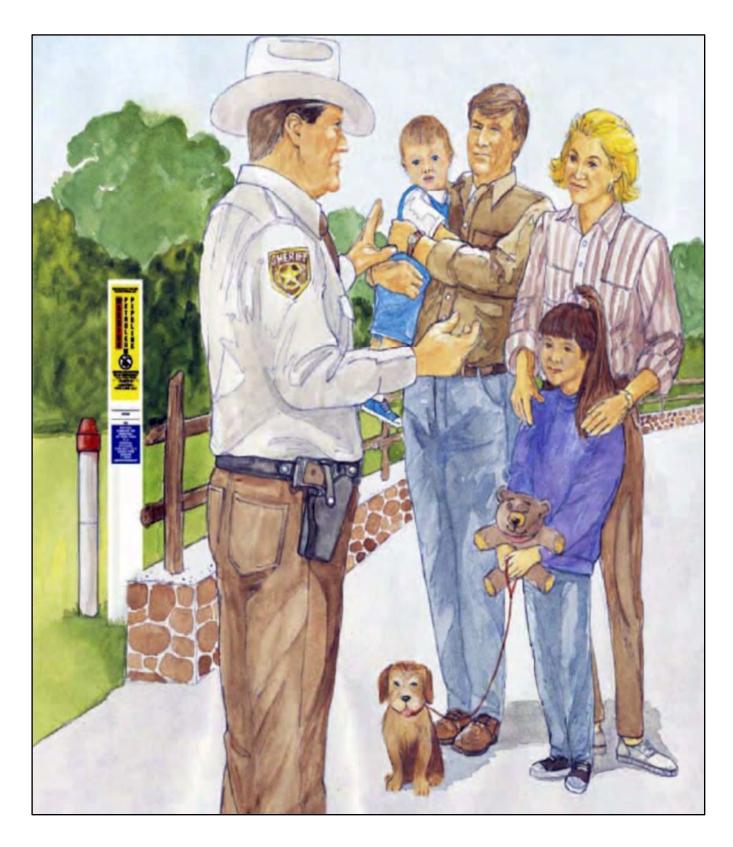
Use Guide #128 for: Petroleum Crude Oil UN1267

#### Control Objectives for a pipeline release include:

- Assess the situation. Determine the hazards and risks
- Only properly trained and equipped personnel should enter a hazardous area. Perform the duties you have been trained to perform.
- Never enter a hazardous area without a properly trained and equipped back-up.

- Rescue any injured persons (if safe to do so).
- Evacuate persons in any endangered area.
- Prohibit the public from entering the area.
- Control ignition sources
- Take steps to minimize the effects of release:
  - \*Confine the released material
  - \*Protect adjacent exposures.
  - \*Minimize environmental impact.
- Call RHPL's emergency number,800-889-7437, and provide the following information: Location of the problem, nature of the problem, and a telephone number at which a responsible person can be contacted.

## **Evacuating the Public**





## Beware of Hot Spots-

A pipeline leak can cause lifethreatening hazards such as toxic gases or the danger of explosion and fire.

Be alert to the fact that petroleum products often produce vapors that are heavier than air. These vapors move with air currents and often seek low-lying areas in the terrain where they concentrate. They don't always move in concentric circles out from the point of the release. Sloping

hillsides, running water, and forested areas collect vapors – often a long distance from the actual site of the release.

Think about how vapors might follow the topography, the influence of wind, trees, etc.



## They May Be Moving Around-

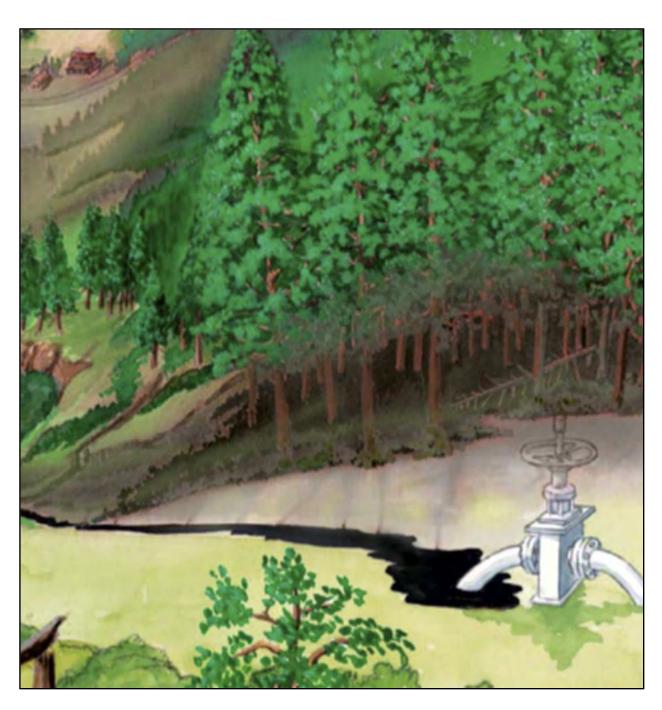
In short, be alert to the hazards. Don't go into a "hot" zone without proper equipment and training.

Remember, your nose and other senses may not warn you in time. Wait for trained personnel. Wait for monitoring equipment to accurately define the "hot zone."

Evacuate any area which is, or could be, affected. Stay out until an expert has sampled the area. Do not extinguish fires unless vapors

and liquids can be controlled. Do not open or close pipeline valves.

Wait for the "<u>Plan</u>." Define the "hot zone" and remember these zones can move. Do not guess about safety.



## Confining and Containment Techniques-



Do Not enter the hot zones unless properly trained and equipped. Remember, vapors move with air currents and often seek low-lying areas. Do Not extinguish fires unless vapors and liquids can be controlled. Do Not open or close pipeline valves.

Many hydrocarbon fires can safely be left to burn themselves out, thereby reducing the risk of a dangerous vapor cloud and reignition. Before the decision is made to extinguish a flammable liquid fire, the following questions should be evaluated:

- Can the fire continue to burn safely?
- Will there be uncontrollable vapors after extinguishment?
- What is the potential for re-ignition?
- Are there structures that can be saved?



#### **Extinguish Fires:**

- To aid in rescue or evacuation.
- To protect exposures.
- When controllable amounts of vapor or liquid are present.

#### **Control Ignition Sources**

Such as:

- Work that produces sparks
- Static electricity
- Smoking or open flames
- Non-intrinsically safe equipment
- Electrical switches
- Home utilities

#### **Starting or restarting vehicles**

If a car or truck stops or chokes out in a high vapor area, do not attempt to restart the vehicle. Starting an engine provides a dangerous ignition source, and could result in an explosion.



# Remember the Hazards

The hazards usually associated with petroleum hydrocarbons are:

FIRES OR EXPLOSIONS are possible whenever flammable or combustible liquids are present.

ASPHYXIATION: Petroleum vapors are often heavier than air which can displace breathable air and act as an ASPHYXIANT.

IRRITANT: Petroleum products which contact the skin or mucous membranes can act as an IRRITANT causing dermatitis and inflammation.

TOXIC MATERIALS: Petroleum products can contain toxic materials

FROSTBITE: Skin contact with LPG's (propane, butane) can cause FROSTBITE.

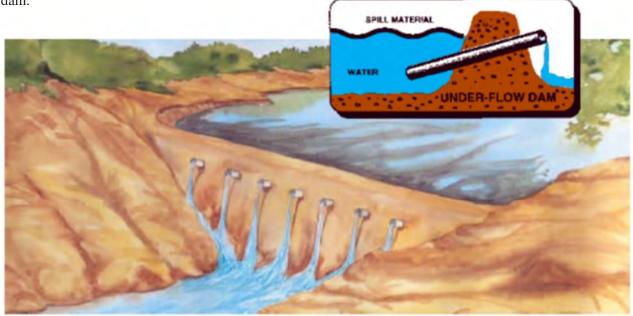
A BLEVE: (Boiling Liquid, Expanding Vapor Explosion) potential exists any time you have a flammable liquid in a sealed vessel (including a closed in pipeline) with an impinging fire.

## Confining & Containment Techniques

#### **Dams, Dikes and Booms**

Underflow dams are very effective in confining materials which float on water. The design consists of a length of pipe or culvert placed parallel with the direction of the flow, with the upstream end lower than the downstream end. The objective is to pass water through the pipe but retain the floating product.

The number and size of pipe(s) required to be installed is determined by allowing water to pass without backing up to a depth greater than the dam.



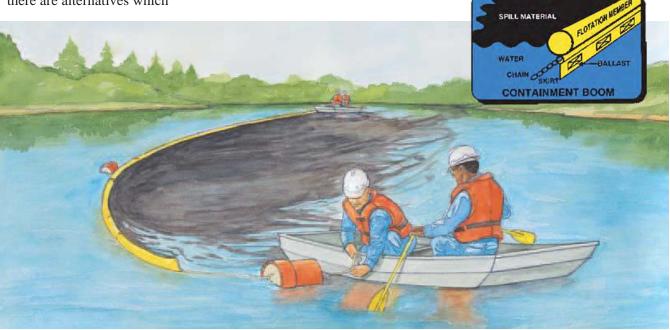
### **Board Weir**

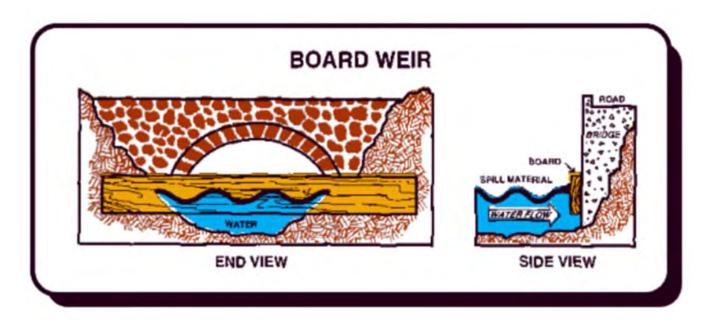
A simple device which can often be used along small streams and road ditches is the board weir. The board weir is constructed by placing a sheet of material across a culvert, allowing the floating product to be collected behind the board. The water is permitted to pass under the edge of the board.



#### **Containment Booms**

A containment boom is a floating barrier designed with sufficient freeboard and draft to confine or deflect material floating on the surface of water. A commercially made boom can be expensive, but there are alternatives which include improvising with field fabricated containment devices. An improvised boom can be constructed with fiberglass, plywood or metal sheeting, straw and even fire hose. A boom can be deployed in three modes: to confine or contain a material, to divert the flow of the material, and to exclude it from entering an area.





## Explanation of MSDS Terminology-

This sheet accompanies the company's Safety Data Sheet (SDS) and is designed to provide more detailed information on the terms commonly used. Frequently used abbreviations include:

< = less than, > = greater than, C.A. = approximately, F = temperature given in ° Fahrenheit. Specific terms and abbreviations are explained below.

#### **Section 1 Product Identification**

**Product Name** – Most common name or name under which the product is marketed.

**Synonyms** – Other common chemical or commercial names (aliases) that may be used to identify the product. **Chemical Family** – Generic classification or family in which the product belongs.

**Chemical Formula** – Empirical chemical formula of the product.

MSDS Revision Date - Last date that any information on the MSDS was significantly changed.

Emergency Phone Numbers – 24-hour emergency assistance numbers for use in event of accident or spill.

#### **Section 2 Composition/Information on Ingredients**

**Product Information** - Provides general information on the product. The product's Chemical Abstract Service Number is given if one is available. (Most mixtures will not have product CAS Numbers.)

Components - Major components and/or general composition description of the product. Minor components having potential toxicity, which were considered when evaluating the product, are given. Chemical Abstract Service Numbers (CAS Numbers) by which the components are uniquely identified are provided. Inclusion of a component is not necessarily based on hazard criteria. Exposure Guidelines - The established occupational health exposure limits for airborne concentrations of the product or components are indicated in parts per million parts air (ppm) or milligrams per cubic meter air (mg/M3). When applicable, the TWA, Ceiling Limit or STEL of the product and the individual components are listed. The term TLV refers to Threshold Limit Value of which there are three categories. TWA is the time-weighted average concentration for a normal 8 hour workday and a 40 hour workweek to which nearly all workers may be repeatedly exposed without adverse effect. STEL is a 15 minute timeweighted average short term exposure limit which should not be exceeded at any time during a workday and not repeated more than four times a day. A Ceiling Limit is a concentration that should not be exceeded at any time during the work period.

Source of Exposure Limits - Agencies or organizations responsible for the established exposure limits include: American Conference of Governmental Industrial Hygienists (ACGIH), the Occupational Safety and Health Administration (OSHA) or St. Paul Park Refining Co.'s Corporate Limit.

#### **Section 3 Hazards Identification**

Emergency Overview - Describes the material's appearance and most significant immediate concerns for emergency response personnel. Also contains warning statements that are required to be present on product labels as defined by the OSHA Federal Hazard Communications Standard

Potential Health Effects - Possible changes in health, usually adverse, either confirmed or suspected, based on observations in humans, animal studies or by corollary with a similar substance. Other terms commonly encountered in this section include:

**Acute Effects:** Abrupt, rapidly evident health effects due to single or short-term exposures usually at high levels or concentrations

**Chronic Effects:** Insidious, slowly evident health effects due to repeated or long-term exposures usually to lower levels or concentrations that produce acute effects.

Carcinogen Listing: Refers to substances that have been evaluated by either the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the Occupational Safety & Health Administration (OSHA) and have been determined to produce cancer in humans or suspected of producing cancer based on limited human observations or results from animal studies.

Section 4 Emergency First Aid Procedure - Immediate care or treatment given to an exposed, ill or injured person, usually at the scene of the incident, possibly by non-medically trained persons in an attempt to save lives, to prevent and/or retard further illness or injury.

#### **Section 5 Fire Fighting Measures**

**Flash Point** – Minimum temperature at which a liquid will give off enough flammable vapor to form an ignitable mixture with air.

**Autoignition Temperature** – Lowest temperature at which the product will initiate self-sustained combustion in the absence of a spark or flame.

**Explosive Limits** – Lower and upper range of the gas or vapor concentration which will burn or explode if an ignition source is present.

**Extinguishing Media** – Fire fighting agents that can be used to extinguish fires.

**Special Fire Fighting Instructions** – Special procedures or unusual fire hazards that have been identified with this product.

#### **Section 6 Accidental Release Measures**

Precautions that should be taken to contain the spill, cleanup procedures, and if appropriate, emergency services agencies that need be notified.

#### Section 7 Handling and Storage

Special precautions or conditions to avoid in handling and storage of the material.

#### **Section 8 Exposure Control/Personal Protection**

This section provides additional industrial hygiene and other safe handling requirements that may be required under certain conditions and/or uses of the product. These procedures should be used in addition to good personal hygiene practices that should already be common practice in the workplace. Some of these practices include, but are not limited to:

- 1. No smoking, eating or drinking in work areas.
- 2. Always wash before eating, smoking or using toilet facilities.
- 3. Wash hands thoroughly with soap and water after handling any chemicals or containers of chemicals.
- 4. Keep yourself and work area clean. Remove and launder soiled clothing before reuse.
- 5. Read and follow all safety precautions as outlined in the MSDS.

**Ventilation** – Type of exhaust ventilation equipment required.

**Respiratory, Eye & Skin Protection** – Type of protective equipment that is necessary for safe handling and use of the product.

#### **Section 9 Physical & Chemical Properties**

**Boiling Point** - Temperature (or range) at a pressure of 760 mm Hg, at which the liquid changes to a vapor.

**Melting Point** - Temperature (or range) at a pressure of 760 mm Hg, at which the solid changes to a liquid. **Specific Gravity** - Ratio of the weight of a volume of product to the weight of an equal volume of water at  $39.2^{\circ}$  F. **Solubility in Water** - Solubility of the product by weight in water at  $50^{\circ}$  F. Categories include: Negligible  $\leq$  0.1%, Slight = 0.1-1.0%, Moderate = 1-10%, Appreciable  $\geq$  10%, Complete.

**Vapor Density** - Relative density or weight of a vapor or gas compared with an equal volume of air at ambient temperatures.

**Vapor Pressure** - Pressure of saturated vapor above a liquid product in mm Hg.

**pH** - Value given to represent the acidity or alkalinity of the product at the concentration specified. Strong acids give pH's of 1-3, while strong bases give pH's of 12-13. Water has a pH of 7.

**Appearance** - Physical description of the product. **Odor** - Sensory characteristic of the product.

#### Section 10 Stability & Reactivity

**Stability** – Indication if the product is stable or not stable under reasonable foreseeable conditions of storage or use. Conditions that could cause a dangerous reaction are listed. **Hazardous Decomposition Products** – Breakdown products that may be evolved when this material is subjected to heat or combustion.

**Incompatible Materials** – Those materials or conditions that may cause the product to react violently, releasing large amounts of energy or toxic vapors.

**Hazardous Polymerization** – Indication if the product has the potential to cause a reaction at a rate that releases large amounts of energy. Conditions that could cause a polymerization reaction are listed.

#### Section 11 Toxicological Information

Other significant positive toxicologic findings discovered by research and/or animal testing. The biological significance of these tests as it relates to potential human health effects may not be known. However, these positive results are reported as required by the OSHA Federal Hazard Communication Standard.

Lethal Dose (LD50) – Single acute dose of the product which produces death in 50% of the animals tested.

Draize Irritation Index – Empirical score used for grading the severity of eye and skin irritation in animal tests.

Sensitizer – Substance which can produce an adverse reaction due to an allergy induced by prior exposure to the substance, mediated by antibodies and not dose related.

#### Section 12 Ecological Information

Known toxic effects to plants, animals and the environment if the product is spilled.

#### Section 13 Disposal Considerations

Methods used for proper disposal of the product. These methods vary according to local, state and federal regulations.

#### **Section 14 Transportation Information**

This section provides basic Department of Transportation classification and/or description information to help a knowledgeable user ship a material within the United States.

#### **Section 15 Regulatory Information**

This section provides information on federal regulations that may affect the product's manufacture, use or distribution in commerce. Major regulations and/or laws that are covered include the OSHA Federal Hazard Communications Standard, Superfund Amendments and Reauthorization Act (SARA Title III). This section does not cover environmental regulations, i.e., RCRA and CERCLA or OSHA substance specific health standards.

#### Section 16 Other Information

National Fire Protection Association (NFPA)/Hazardous Material Identification System (HMIS) classifications are provided in this section along with any additional product information.

## America's Pipelines... Delivering the Energy You Need for the Life You Want.

The security and economic progress of our communities and nation depend upon reliable pipeline systems that supply military installations, communities in every state, and major airports, while fueling economic output and jobs critical to our nation's growth

and prosperity.

There are over 200,000 miles of petroleum pipeline in the United States. According to National **Transportation Safety Board** statistics, pipelines are the safest method of transporting petroleum products. Pipelines transport twothirds of all the crude oil and refined products in the United States. Pipelines are made of steel, covered with a protective coating and buried underground. They are tested and maintained through the use of cleaning devices, diagnostic tools, and cathodic protection. For more information about pipelines, visit www.pipeline101.com. To view a list of pipeline operators in your area, visit www.npms.phmsa.dot.gov.





## Petroleum Pipeline — Terminology —

#### **Barrel**

42 U.S. Gallons.

#### Batch

A quantity of petroleum product of like specifications moved through the pipeline as an identifiable unit.

#### **Booster Station**

A pump station used to increase the pressure of oil received through a main pipeline to transmit it to the next station or terminal.

#### **Cold Zone**

Area safe for necessary personnel.

#### **Common Carrier**

Any transportation system available for use by the public for transporting cargo; almost all interstate pipelines are common carriers.

#### Crude Oil

The basic raw mineral pumped from the earth. There are many different grades of crude, each containing various vapors, liquids and solids. This crude is changed at a refinery into products.

#### **Gathering Lines**

A small diameter pipeline used in gathering crude oil from the oil field to a common point for further movement to a trunk line.

#### Interface

The mixture which occurs in normal pipeline operations between batches of petroleum products or crude having different specifications. Also called "slop" or "transmix."

#### **High Pressure Pipelines**

Pipe systems which operate at 600psi to 2000 psi and higher.

#### **Hot Zone**

Area where hazardous vapors and liquids are present.

#### **Line Section**

A continuous run of pipe between locations.

#### Manifold

An arrangement of piping valves to provide interconnecting links between a number of pumps, tanks, and lines at a pump station.

#### Pig

A device placed inside a pipeline that is used to clean or scrape residues from the inner wall of the pipe.

#### **Pipeline System**

All parts of the physical facilities through which commodities move, including line pipe, valves, pumping units, metering stations and tankage.

#### **Products**

Refined substances made from crude oil. Gasoline, fuel oil, butane and a host of various other petroleum products ransported in pipelines.

#### **Smart Pig**

A device placed inside the pipeline to provide data about the pipeline, such as measuring dents or locating corrosion.

#### **Tank Farm**

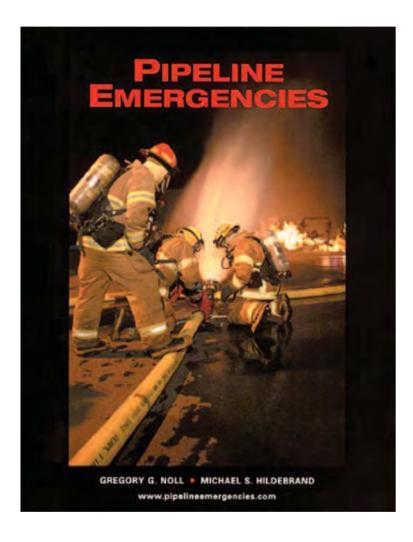
A group of tanks connected to a pipeline through which oil is moved.

#### **Trunk Line**

A main pipeline.

Important —— Phone Numbers ———	

## **Emergency Response Training Materials**



The National Association of State Fire Marshals in conjunction with the Office of Pipeline Safety has developed pipeline emergency training materials. The package includes a textbook, video, instructor program disk, and a resource web site. The first several chapters of the textbook provide basic pipeline information. The latter chapters focus on emergency response planning and include ten scenarios involving gas or liquid release or trench collapse. The instructor program disk includes interactive slides for the scenarios, allowing the class to participate in the simulated emergency response.

Materials can be ordered at http://www.pipelineemergencies.com.

## IN CASE OF A PIPELINE EMERGENCY CALL

Running Horse Pipeline LLC at 800-889-7437



www.nnogc.com

NW Highway 162 & 262 Montezuma Creek, UT 84534 (435) 651-3475