# **SOUTHERN CALIFORNIA**



# PIPELINE SAFETY TRAINING



# **PROGRAM GUIDE**

Overview

Pipeline Safety

**Excavation Best Practices Checklist** 

Signs Of A Pipeline Release

What To Do If A Leak Occurs

Pipeline Emergency

Common Ground Alliance Best Practices

Pipelines In Our Community

Damage Prevention Programs

Pipeline Damage Reporting Law

2024

# **EMERGENCY CONTACT LIST**

COMPANY	EMERGENCY NUMBER
Air Products, LLC	1-800-572-6521
California Natural Resources Group (CalNRG)	1-888-664-4435
California Resources Corporation - Central Valley	
or	
California Resources Corporation - Elk Hills, LLC	1-661-763-6363
or	1-661-763-6911
Chevron Pipeline & Power	1-800-762-3404
Crimson Pipeline, LLC	1-866-351-7473
DCOR, LLC	1-888-225-1522
ExxonMobil Pipeline Company	
Freeport - McMoRan Oil & Gas	1-805-739-9111
Kern Energy	
Lodi Gas Storage, L.L.C.	
Martinez Pipeline Company	
Midstream Energy Partners (USA), LLC	
Mojave Pipeline Company, L.L.C.	
NuStar Energy L.P.	
Paramount Pipeline LLC	
Phillips 66 Pipeline LLC	
Plains Pipeline L.P.	
Sable Offshore Corp.	
Shell Pipeline Company LP	
SMUD	
SoCalGas	
SoCal Holding LLC	
THUMS	
Tidelands	
Torrance Logistics Company	
TransMontaigne Product Services Inc	
Valero Refining Company - California	
Valero - Ultramar	
Vopak Terminal Los Angeles Inc	
World Oil Terminals	
Zenith Energy West Coast Terminals LLC	1-866-497-2284

Note: The above numbers are for emergency situations. Additional pipeline operators may exist in your area.

Visit the National Pipeline Mapping System at www.npms.phmsa.dot.gov for companies not listed above.

ONE-CALL SYSTEM	PHONE NUMBER
Underground Service Alert of Southern California (DigAlert)	1-800-422-4133
USA North 811	1-800-642-2444
National One-Call Referral Number	1-888-258-0808
National One-Call Dialing Number	811

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#### Overview

#### **Pipeline Purpose and Reliability**

- · Critical national infrastructure
- Over 2.7 million miles of pipeline provide 65% of our nation's energy
- · 20 million barrels of liquid product used daily
- · 21 trillion cubic feet of natural gas used annually

#### **Safety Initiatives**

- · Pipeline location
  - ° Existing right-of-way (ROW)
- · ROW encroachment prevention
  - No permanent structures, trees or deeply rooted plants
- · Hazard awareness and prevention methods
- Pipeline maintenance activities
  - ° Cleaning and inspection of pipeline system

#### **Leak Recognition and Response**

- · Sight, sound, smell indicators vary depending on product
- · Diesel engines fluctuating RPMs
- · Black, dark brown or clear liquids/dirt blowing into air/peculiar odors/dead insects around gas line/dead vegetation
- Rainbow sheen on the water/mud or water bubbling up/frozen area on ground/frozen area around gas meter
- · Any sign, gut feeling or hunch should be respected and taken seriously
- · Take appropriate safety actions ASAP

#### **High Consequence Area (HCA) Regulation**

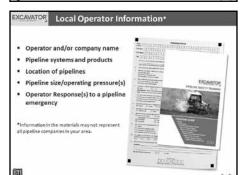
- Defined by pipeline regulations 192 and 195
- Requires specialized communication and planning between responders and pipeline/gas personnel
- · May necessitate detailed information from local response agencies to identify HCAs in area

#### One-Call

- · One-Call centers are not responsible for marking lines
- · Each state has different One-Call laws. Familiarize yourself with the state you are working in
- · Not all states require facility owners to be members of a One-Call
- You may have to contact some facility owners on your own if they are not One-Call members
- · In some states, homeowners must call before they dig just like professional excavators







# - Learn your requirements and responsibilities prior to beginning extavating. - Acquaint you with the operator's ability to respond to a pipeline emergency. And find out what the company responsibilities are once you notify 813 before you can dig. - Identify the types of pipeline emergencies. - Plan how all parties can engage in mutual assistance to minimize hazards to life, property and the environment. Code of Federal Regulations (CFR): 49 CFR Parts 192 and 195 Roll Calls Excavators, Public Officials, Emergency Resconders and Ripstime Constators.







## EXCAVATOR Logging Operator Responsibilities

- · Notify pipeline company before
- No skidding of logs on right of
- Crossing of pipeline must be
- approved · Drop cut trees away from
- . Do not remove existing cover
- · Restore right of way



811



## EXCAVATOR Integrity Management

Pipeline companies are required to have Integrity Management programs to insure safe and efficient operations:

- Internal and external cleaning and inspection, of the pipeline and affected areas
- · Rights-of-Way and valves
- Supervisory Control and Data Acquisition (SCADA)
- Identification of High Consequence Areas (HCA)
- Aerial Rights of Way Patrols
- Public Awareness Outreach to stakeholders
- Operator Qualification (OQ) Training
- Local Distribution Company (LDC)
  - Meter Testing



May also be utilized on transmission pipelines



# **EXCAVATOR** Product Characteristics

**Hazardous Liquids** 

- ER Guide 128 (Pages 192-193)\*
   Crude oil, jet fuel, gasoline and other refined
- . Liquid in and liquid out of the pipeline

#### **Highly Volatile Liquids**

- ER Guide 115 (Pages 166-167)\*

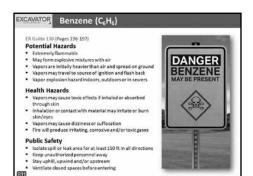
   Propane, Butane, Ethane and natural gas liquids
- . Liquid in and vapor out of the pipeline

#### Natural Gas

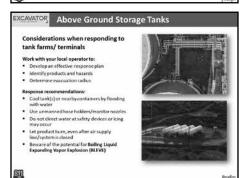
- ER Guide L15 (Pages 166-167)\*

   Gas in and gas out of the pipeline

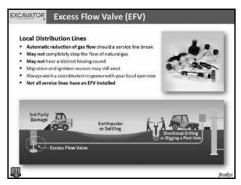


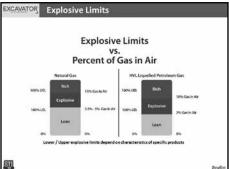














Share with others in your crew, company, or agency unable to attend today's program

- Access to your local pipeline sponsor information

- Download the same documents presented in this program

- Certificate of completion provided upon completion of course training enter-poligim.com

Use Code: 2024EX

Commissioner: Yery informative and increased may awareness of the resources available to our county jeadership in case of an emergency.

Geologist: Conces, pilvormative, appreciate the audio and visual components, and the course Laborer: Grant course, as reminder of what's but there and how to deal with it.

PHEP Coordinator: Excellent course material, explanation and instruction.

Safety Manager: This y a good course to add to our Excavation Safety Program Training and Technician: Very informative and ESSENTIAL to anyone doing or planning to do any kind of excavation work!

#### Excavation Best Practices Jobsite Checklist

#### **EXCAVATOR RESPONSIBILITIES:** ■ White Lining (Pre-marking) Call Before You Dig - It's the Law! One Call Facility Request Wait the required time for the markings! □ One Call Access (state specific time - check your local One Call Locate Reference Number Law) □ Tolerance Zones – May vary by state and/or company! □ Separate Locate Request □ Respect the marks! Pre-excavation Meeting Dig with care! ☐ Facility Relocations One Call Reference Number at Site RISK CONSIDERATIONS Contact Names and Numbers □ Type/volume/pressure/location/geography of ¬ Positive Response product Facility Owner/Operator Failure to Respond ■ Environmental factors – wind, fog, temperature, humidity □ Locate Verification ☐ Sight, sound, smell – indicators vary depending on ☐ Work Site Review with Company Personnel Documentation of Marks □ Black, dark brown or clear liquids/dirt blowing into □ Facility Avoidance air/peculiar odors/dead insects around gas line/ Marking Preservation dead vegetation Excavation Observer □ Rainbow sheen on the water/mud or water bubbling up/frozen area on ground/frozen area around gas □ Excavation Tolerance Zone □ Excavation within the Tolerance Zone Other utility emergencies ¬ Vacuum Excavation ☐ Mismarked Facilities PIPELINE MARKERS Exposed Facility Protection The U.S. Department of Transportation (DOT) requires the use of signs to indicate the location of underground Locate Request Updates pipelines. Markers like these are located on road, ☐ Facility Damage Notification railroad, and navigable waterway crossings. Markers ■ Notification of Emergency Personnel are also posted along the pipeline right-of-way. Markers may not be located directly over the pipeline it marks. Emergency Coordination with Adjacent Facilities ■ Emergency Excavation The markers display: □ Backfilling ■ The product transported □ As-built Documentation □ The name of the pipeline operator ☐ The operator's emergency number □ Trenchless Excavation ■ No Charge for Providing Underground Facility Locations Federal and State Regulations





## Signs Of A Pipeline Release

#### SIGHT\*

- · Liquid on the ground
- · Rainbow sheen on water
- · Dead vegetation in an otherwise green area
- · Dirt blowing into the air
- White vapor cloud
- · Frozen area on ground
- \*Signs vary based upon product

#### SMELL

- · Odors such as gas or oil
- Natural gas is colorless and odorless
  - · Unless Mercaptan has been added (rotten egg odor)

#### OTHER - NEAR PIPELINE OPERATIONS

- Nausea
- · Burning eyes, nose or throat

#### What To Do If A Leak Occurs

- Evacuate immediately upwind
- Eliminate ignition sources
- Advise others to stay away
- CALL 911 and the pipeline company number on warning marker
  - · Call collect if necessary
- Make calls from safe distance not "hot zone"
- Give details to pipeline operator:
  - Your name
  - Your phone number
  - Leak location
  - Product activity
  - · Extent of damage
- · DO NOT drive into leak or vapor cloud
- DO NOT make contact with liquid or vapor
- DO NOT operate pipeline valves (unless directed by pipeline operator):
  - · Valve may be automatically shut by control center
  - Valve may have integrated shut-down device
  - Valve may be operated by qualified pipeline personnel only, unless specified otherwise

Ignition sources may vary - a partial list includes:

SOUND

· A hissing or roaring sound

- Static electricity
- Metal-to-metal contact
- · Pilot lights
- Matches/smoking
- · Sparks from telephone
- Electric switches
- Electric motors
- Overhead wires
- Internal combustion engines
- · Garage door openers
- Firearms
- · Photo equipment
- · Remote car alarms/door locks
- High torque starters diesel engines
- · Communication devices

## Pipeline Emergency

#### Call Gas Control Or Pipeline Control Center Use Pipeline Emergency Response Planning

Information Manual for contact information Phone number on warning markers Use state One-Call System, if applicable

#### **Control Center Needs To Know**

Your name & title in your organization Call back phone number - primary, alternate Establish a meeting place Be very specific on the location (use GPS) Provide City, County and State

#### Injuries, Deaths, Or Property Damage

Have any known injuries occurred? Have any known deaths occurred? Has any severe property damage occurred?

#### Traffic & Crowd Control

Secure leak site for reasonable distance Work with company to determine safety zone No traffic allowed through any hot zone Move sightseers and media away Eliminate ignition sources

#### Fire

Is the leak area on fire? Has anything else caught on fire besides the leak?

#### **Evacuations**

Primary responsibility of emergency agency Consult with pipeline/gas company

#### Fire Management

Natural Gas - DO NOT put out until supply stopped **Liquid Petroleum –** water is NOT recommended; foam IS recommended

Use dry chemical, vaporizing liquids, carbon dioxide

#### **Ignition Sources**

Static electricity (nylon windbreaker)

Metal-to-metal contact

Pilot lights, matches & smoking, sparks from phone Electric switches & motors

Overhead wires

Internal combustion engines

Garage door openers, car alarms & door locks Firearms

Photo equipment

High torque starters - diesel engines

Communication devices - not intrinsically safe

### Common Ground Alliance Best Practices

In 1999, the Department of Transportation sponsored the Common Ground Study. The purpose of the Common Ground Study was to identify and validate existing best practices performed in connection with preventing damage to underground facilities. The collected best practices are intended to be shared among stakeholders involved with and dependent upon the safe and reliable operation, maintenance, construction, and protection of underground facilities. The best practices contain validated experiences gained that can be further examined and evaluated for possible consideration and incorporation into state and private stakeholder underground facility damage prevention programs.

The current Best Practices Field Manual is divided into nine chapters that provide a collection of current damage prevention best practices. The nine chapters include:

- 1. Planning & Design Best Practices
- 2. One Call Center Best Practices
- 3. Location & Marking Best Practices
- 4. Excavation Best Practices
- 5. Mapping Best Practices
- 6. Compliance Best Practices
- 7. Public Education Best Practices
- Reporting & Evaluation Best Practices
- 9. Miscellaneous Practices

To view the latest version of the Best Practices please visit www.commongroundalliance.com



#### Pipelines In Our Community

According to National Transportation Safety Board statistics pipelines are the safest and most efficient means of transporting natural gas and petroleum products, which are used to supply roughly two-thirds of the energy we use. These pipelines transport trillions of cubic feet of natural gas and hundreds of billions of ton/miles of liquid petroleum products in the United States each year.

This system is comprised of three types of pipelines: transmission, distribution and gathering. The approximately 519,000 miles of transmission pipeline\* transport products, including natural gas and petroleum products, across the country and to storage facilities. Compressor stations and pumping stations are located along transmission and gathering pipeline routes and help push these products through the line.

Approximately 2.2 million miles of distribution pipeline\* is used to deliver natural gas to most homes and businesses through underground main and utility service lines. Onshore gathering lines are pipelines that transport gas from a current production operation facility to a transmission line or main. Production operations are piping and equipment used in production and preparation for transportation or delivery of hydrocarbon gas and/or liquids.



\*mileage according to the Pipeline Hazardous Materials Safety Administration (PHMSA).

#### Training Center

Supplemental training available for agencies and personnel that are unable to attend:

- · Train as your schedule allows
- · Download resources including pipeline operator specific information
  - Sponsoring pipeline operator contact information
  - · Product(s) transported
- · Receive Certificate of Completion

Visit https://trainingcenter.pdigm.com/ to register for training





#### Damage Prevention Programs

Pursuant to 49 CFR Parts 192.614 (c)(2)(i) and 195.442 (c)(2)(i) pipeline operators must communicate their Damage Prevention Program's "existence and purpose" to the public in the vicinity of the pipeline and persons who normally engage in excavation activities in the area in which the pipeline is located.

State and federally regulated pipeline companies maintain Damage Prevention Programs. The purpose of which is to prevent damage to pipelines and facilities from excavation activities, such as digging, trenching, blasting, boring, tunneling, backfilling, or by any other digging activity.

#### Pipeline Markers

The U.S. Department of Transportation (DOT) requires the use of signs to indicate the location of underground pipelines. Markers like these are located on road, railroad, and navigable waterway crossings. Markers are also posted along the pipeline right-of-way.

#### The markers display:

- · The material transported
- The name of the pipeline operator
- · The operator's emergency number

#### MARKER INFORMATION

- · Indicates area of pipeline operations
- · May have multiple markers in single right-of-way
- May have multiple pipelines in single right-of-way
- DOES NOT show exact location
- DOES NOT indicate depth (never assume pipeline depth)
- · DOES NOT indicate pipeline pressure



#### Call Before You Dig

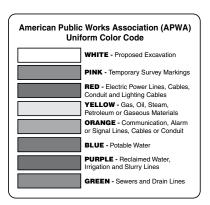
Statistics indicate that damage from excavation related activities is a leading cause of pipeline accidents. If you are a homeowner, farmer, excavator, or developer, we need your help in preventing pipeline emergencies.

- 1. Call your state's One-Call center before excavation begins regulatory mandate as state law requires.
- 2. Wait the required amount of time.
- 3. A trained technician will mark the location of the pipeline and other utilities (private lines are not marked).
- 4. Respect the marks.
- 5. Dig with care.

National One-Call Dialing Number:



For More Details Visit: www.call811.com



#### OSHA General Duty Clause

Section 5(a)(1) of the Occupational Safety and Health Act (OSHA) of 1970, employers are required to provide their employees with a place of employment that "is free from recognizable hazards that are causing or likely to cause death or serious harm to employees."

https://www.osha.gov/laws-regs/oshact/section5-duties

### **Product Characteristics**

PRODUCT	LEAK TYPE	VAPORS
HIGHLY VOLATILE LIQUIDS [SUCH AS: BUTANE, PROPANE, ETHANE, PROPYLENE, AND NATURAL GAS LIQUIDS (NGL)]	Gas	Initially heavier than air, spread along ground and may travel to source of ignition and flash back. Product is colorless, tasteless and odorless.
Will be easily ignited by heat, sparks or flames and will form explosive mixtures with air. Vapors		

**HEALTH** may cause dizziness or asphyxiation without warning and may be toxic if inhaled at high concen-**HAZARDS** trations. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. Fire may produce irritating and/or toxic gases.

PRODUCT		LEAK TYPE	VAPORS
NATURAL G		Gas	Lighter than air and will generally rise and dissipate. May gather in a confined space and travel to a source of ignition.
HEALTH HAZARDS	HEALTH HAZARDS Will be easily ignited by heat, sparks or flames and will form explosive mixtures with air. Vapors may cause dizziness or asphyxiation without warning and may be toxic if inhaled at high concentrations. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.		

PRODUCT		LEAK TYPE	VAPORS
AS: CRUDE	UEL, GASOLINE, REFINED	Liquid	Initially heavier than air and spread along ground and collect in low or confined areas. Vapors may travel to source of ignition and flash back. Explosion hazards indoors, outdoors or in sewers.
HEALTH HAZARDS Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution.			

### Pipeline Damage Reporting Law / Websites

#### Pipeline Damage Reporting Law As Of 2007

#### **H.R. 2958 Emergency Alert Requirements**

Any person, including a government employee or contractor, who while engaged in the demolition, excavation, tunneling, or construction in the vicinity of a pipeline facility;

- A. Becomes aware of damage to the pipeline facility that may endanger life or cause serious bodily harm or damage to property; or
- **B.** Damages the pipeline facility in a manner that may endanger life or cause serious bodily harm or damage to property, shall promptly report the damage to the operator of the facility and to other appropriate authorities.

#### Websites:

Call Before You Clear www.callbeforeyouclear.com

Common Ground Alliance www.commongroundalliance.com

Federal Office of Pipeline Safety www.phmsa.dot.gov

National One-Call Dialing Number: 811 www.call811.com

National Pipeline Mapping System www.npms.phmsa.dot.gov

National Response Center

https://www.epa.gov/emergency-response/national-response-center or 800-424-8802

Occupational Safety & Health Administration (OSHA)
www.osha.gov

Paradigm Liaison Services, LLC www.pdigm.com

United States Environmental Protection Agency (EPA)
www.epa.gov/cameo

Wireless Information System for Emergency Responders (WISER) https://wiser.nlm.nih.gov/



Register for access to Training Center Code: 2024EX



# Operator Information

Operator Name(s) / Contact Information	Type(s) of Pipeline Systems Operating	Location within County	Pipe Size and Operating Pressure Range(s)	Average Emergency Response Time(s)

#### About Paradigm

Paradigm is public awareness. We provide public awareness and damage prevention compliance services to assist with the regulatory requirements of 49 CFR 192 and 195, as well as API RP 1162. Since 2001, the oil and gas industry has worked with Paradigm to fulfill public education and community awareness requirements.

Our history of implementing public awareness programs and compliance services pre-dates API RP 1162. Most of the pipeline industry's large, mid-sized and small operators, as well as many local distribution companies utilize Paradigm's compliance services.

In serving our clients, Paradigm performs full-scope compliance programs from audience identification through effectiveness measurement. In addition, we offer consulting services for plan evaluation and continuous improvement. At the completion of each compliance program, we provide structured documentation which precisely records all elements of the program's implementation to assist with audits.

Paradigm leads the way in industry service. Pipeline operators and local distribution companies trust in Paradigm to implement their public awareness and damage prevention programs. Each year we:

- · Distribute 25 million pipeline safety communications
- · Compile and analyze roughly 250,000 stakeholder response surveys
- Facilitate over 1,200 liaison programs
- Implement approximately 1,000 public awareness compliance programs
- Provide audit support and assistance with over 50 public awareness audits

Contact Paradigm for more information regarding custom public awareness solutions.

#### Contact us:

Paradigm Liaison Services, LLC PO Box 9123 Wichita, KS 67277 (877) 477-1162 Fax: (888) 417-0818 www.pdigm.com





Notes



#### UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA AND NEVADA

USA North 811 provides a free and effective Damage Prevention service that protects the communities and underground facilities in Central and Northern California, as well as the entire state of Nevada.

USA North 811 began operation in May of 1975 and incorporated as a Non-Profit Mutual Benefit Corporation in 1986. Our objective is to receive planned excavation reports from public or private excavators and to transmit those planned excavation reports to all participating members of USA North who may have facilities at that excavation site. Our members will:

- 1. Mark or stake the horizontal path of their facility, or
- 2. Provide information about the location of their facility, or
- 3. Advise the excavator of clearance for facilities that they own.

For more information visit our website at www.usanorth811.org.



#### UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

Underground Service Alert of Southern California, aka DigAlert, is the Free Notification Center for anyone digging in the following nine Southern California counties – Inyo, Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara and Ventura. For more information visit our website at www.digalert.org.

## CALIFORNIA

Underground Service Alert of Northern California and Nevada: 811 or 800-642-2444

Website: www.usanorth811.org

Hours: Open 24 hours a day, seven days a week

Advance Notice: 2 working days, not counting the date of notification, up to 14 calendar days

up to 14 calendar days

Marks Valid: 28 days (1 year for ACE tickets)

Law Link: https://usanorth811.org/services/law-update

\*DOT exempt

Underground Service Alert of Southern California: 811 or

800-422-4133

Website: www.digalert.org Hours: 6:00 AM - 7:00 PM, M-F

Advance Notice: 2 working days, not counting the date of notification,

up to 14 calendar days

Marks Valid: 28 days (1 year for ACE tickets)
Law Link: https://www.digalert.org/calaw

\*DOT exempt

N	₽AX
Υ	Online
Υ	Mobile
N	Statewide Coverage
Υ	Civil Penalties
Υ	Emergency Clause
Υ*	Mandatory Membership
Υ	Excavator Permits Issued
Υ	Mandatory Premarks
Υ	Positive Response
Υ	Hand Dig Clause
Υ	Damage Reporting
N	DOT
Υ	
N	Railroad
N	
N	Depth
Υ	Damage
N	Design
Υ	Emergency Emergency
N	
N	Large Projects
24'	Tolerance Zone

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