NORTHERN CALIFORNIA

EXCAVATOR®
PIPELINE SAFETY PROGRAM

PIPELINE SAFETY TRAINING

PROGRAM GUIDE

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	**1-661-763-6363**
or	**1-661-763-6911**
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	**1-800-537-5200**
Freeport - McMoRan Oil & Gas	**1-805-739-9111**
Kern Energy	**1-661-845-0761**
Lodi Gas Storage, L.L.C.	**1-800-307-1107**
Martinez Pipeline Company	**1-877-662-4575**
Midstream Energy Partners (USA), LLC	**1-866-295-2176**
Mojave Pipeline Company, L.L.C.	**1-800-334-8047**
NuStar Energy L.P.	**1-800-433-4250**
Paramount Pipeline LLC	**1-562-244-4508**
Phillips 66 Pipeline LLC	**1-877-267-2290**
Plains Pipeline L.P.	**1-800-708-5071**
Sable Offshore Corp.	**1-800-708-5071**
Shell Pipeline Company LP	**1-800-922-3459**
SMUD	**1-855-525-7142**
SoCalGas	**1-800-427-2200**
SoCal Holding LLC	**1-562-624-3452**
THUMS	**1-562-624-3452**
Tidelands	**1-562-624-3452**
Torrance Logistics Company	**1-877-662-4575**
TransMontaigne Product Services Inc.	**1-800-732-8140**
Valero Refining Company - California	**1-707-745-7562**
Valero - Ultramar	**1-562-491-6803**
Vopak Terminal Los Angeles Inc.	**1-310-549-2221**
World Oil Terminals	**1-562-432-1737**
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**

Table of Contents

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

811®
Know what's **below.**
Call before you dig.

Pipeline Emergency Response Training

Contractor and Excavator Personnel

EXCAVATOR
PIPELINE SAFETY PROGRAM

Instructor:

Pipeline Operator Challenges

- Timely notification of the incident
- Denied entry at scene of incident
- Quick access to remote valves/ICP
- Getting equipment into the area
- Communications with incident command
- Clear lines of communication (both ways)
- Face to face meetings with local officials
- Pre-planning with emergency services

Do contractors and excavators face some of these same challenges?

811

Local Operator Information*

- **Operator and/or company name**
- **Pipeline systems and products**
- **Location of pipelines**
- **Pipeline size/operating pressure(s)**
- **Operator Response(s) to a pipeline emergency**

*Information in the materials may not represent all pipeline companies in your area.

811

Coordinated Response Exercise®

- **Learn** your requirements and responsibilities prior to beginning excavating.
- **Acquaint** you with the operator's ability to respond to a pipeline emergency. And find out what the company responsibilities are once you notify 811 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.

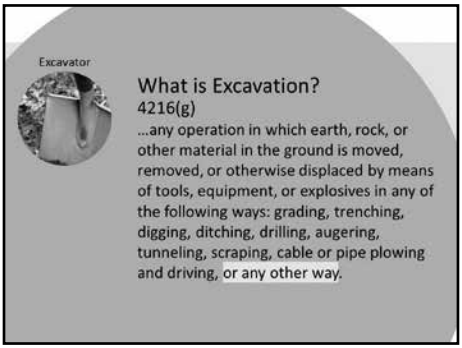
Code of Federal Regulations (CFR): 49 CFR Parts 192 and 195

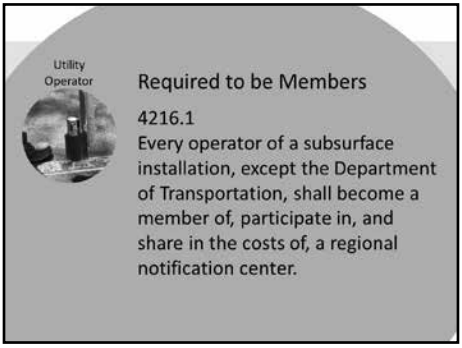
Roll Call: Excavators, Public Officials, Emergency Responders, and Pipeline Operators

811


EXCAVATOR
Program Resources
ca.pipeline-awareness.com
Paradigm
CALIFORNIA
PIPELINE AWARENESS
Meeting Materials:
TC
TRAINING CENTER
811
Paradigm


EXCAVATOR
Safe Digging Practices and Resources
https://commongroundalliance.com/
2022 DIRT Report
Best Practices Case Study
BEST Version 15.0
CGA
811
Paradigm


Excavator
What is Excavation?
4216(g)
...any operation in which earth, rock, or other material in the ground is moved, removed, or otherwise displaced by means of tools, equipment, or explosives in any of the following ways: grading, trenching, digging, ditching, drilling, augering, tunneling, scraping, cable or pipe plowing and driving, or any other way.


Utility Operator
Required to be Members
4216.1
Every operator of a subsurface installation, except the Department of Transportation, shall become a member of, participate in, and share in the costs of, a regional notification center.

Regulator

Responsible for:

4216.12(b)

1. Coordinate education and outreach activities that encourage safe excavation practices
2. Develop standards
3. Investigate possible violations of this article
4. Enforce this article to the extent authorized by subdivision (e) of Section 4216.6

Why Use 811?

- Protects you and the community from dangers of damaged utilities
- Avoid expensive utility repairs
- Conserve resources
- Avoid excavation downtime
- Required by law

Do we have to?

4216.2(b)

Except in an emergency, an excavator planning to conduct an excavation shall notify the appropriate regional notification center of the excavator's intent to excavate...

The 811 Process

Step 1	Step 2	Step 3	Step 4	Step 5
Survey and Pre-mark	Contact 811	Wait the Required Time	Confirm Responses	Dig Safe and Respect Marks

Step 1 Survey and Pre-mark

4216.2(a)

Before notifying the appropriate regional notification center, an excavator planning to conduct an excavation shall delineate the area to be excavated.

Step 1 Survey and Pre-mark

4216.2(a)

If the area is not delineated, an operator may, at the operator's discretion, choose not to locate and field mark until the area to be excavated has been delineated.

Step 1 Survey and Pre-mark

Delineation Requirements

- Marked in white
- Encompass entire excavation area
- Include Company Identifier
- Marked with Paint, Flags, Stakes, Whiskers or combination of these methods

Step 2 Contact 811

4216.2(a)

Except in an emergency, an excavator planning to conduct an excavation shall notify the appropriate regional notification center of the excavator's intent to excavate at least two working days, and *not more than 14 calendar days,* before beginning that excavation.

Step 2 Contact 811

4216(f)(1)

"Emergency" means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services.

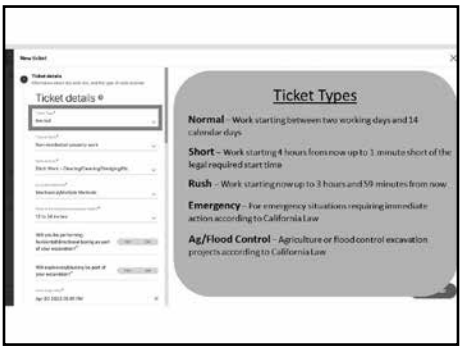
Step 2 Contact 811

Design Ticket (in development)

Step 2 Contact 811

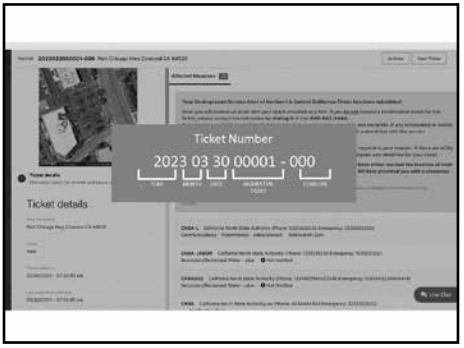
3 Ways to Contact 811

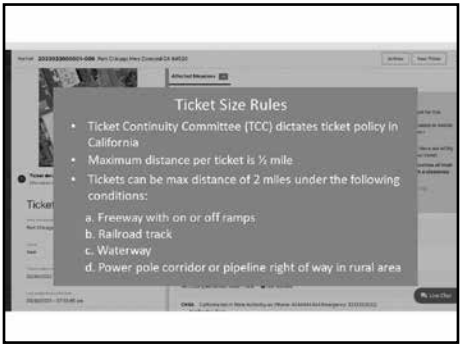
Calling 811	Desktop	Mobile App
3 actions per call Spanish speaking reps	OneCallAccess	USA North – CA iOS & Android


Ticket details
Ticket Types
Normal – Work starting between two working days and 14 calendar days
Short – Work starting 4 hours from now up to 1 minute short of the legal required start time
Rush – Work starting now up to 3 hours and 59 minutes from now
Emergency – For emergency situations requiring immediate action according to California Law
Ag/Flood Control – Agriculture or flood control excavation projects according to California Law


Ticket details
Information about the work site, and the type of work involved
Dig site location
Find and draw your dig site on the map
Dig site location
Search Type
Street
Street (Address)*
Search
Reset
Tip: You can search again another location to add a new map marker. Click the Reset button to start your drawing over.
Next
Back
Confirm dig site
Based on the dig site drawn on the map
Search Types
Street – Used to search for addresses, single streets, or landmarks
Intersection – Used to search for intersecting streets
XY – Used to search for GPS coordinates. Must be in NAD83 (decimal degree) format

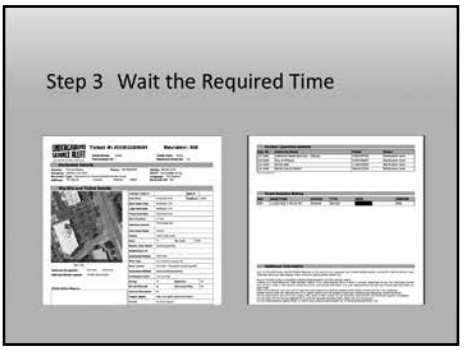

Ticket details
Information about the work site, and the type of work involved
Dig site location
Find and draw your dig site on the map
Dig site location
Search Type
XY
-121.863419
38.007837
Longitude / Latitude (WGS 84)
Search
Reset
Cleveland Rd
Commerce Dr


Ticket Number
2023 03 30 00001 - 000
Ticket details


Ticket Size Rules
• Ticket Continuity Committee (TCC) dictates ticket policy in California
• Maximum distance per ticket is ½ mile
• Tickets can be max distance of 2 miles under the following conditions:
a. Freeway with on or off ramps
b. Railroad track
c. Waterway
d. Power pole corridor or pipeline right of way in rural area


Ticket details


Ticket details


Step 3 Wait the Required Time

Step 3 Wait the Required Time

When will the operator respond?

4216.3(a)(1)(A)

Unless the excavator and operator mutually agree to a later start date and time, or otherwise agree to the sequence and timeframe in which the operator will locate and field mark, an operator shall do one of the following *before the legal excavation start date and time*:

Step 3 Wait the Required Time

How will the operator respond?

4216.3(a)(1)(A)

1. Locate and field mark within the area delineated…

2. …provide information to an excavator where the operator's active or inactive subsurface installations are located

3. Advise the excavator it operates no subsurface installations in the area delineated for excavation

Step 3 Wait the Required Time

Digging around high priority lines

4216(j)

means high-pressure natural gas pipelines with normal operating pressures greater than 415kPA gauge (60psig), petroleum pipelines, pressurized sewage pipelines, high-voltage electric supply lines, conductors, or cables that have a potential to ground of greater than or equal to 60kv, or hazardous materials pipelines that are potentially hazardous to workers or the public if damaged.

Step 3 Wait the Required Time

Digging around high priority lines

4216.2(c)

When the excavation is proposed within 10 feet of a high priority subsurface installation, the operator of the high priority subsurface installation shall notify the excavator of the existence of the high priority subsurface installation to set up an onsite meeting prior to the legal excavation start date and time or at a mutually agreed upon time.

Step 3 Wait the Required Time

Digging around high priority lines

4216.2(c)

Purpose of the meeting is to:

- Discuss methods and tools of excavation
- Gather information from the operator to assist in verifying the location of the subsurface installation

Cannot begin digging until onsite meeting has taken place.

Step 3 Wait the Required Time

Electronic Positive Response (EPR)

4216.3(c)(1)(A)

every operator shall supply an electronic positive response through the regional notification center before the legal excavation start date and time.

Step 4 Confirm Responses

4216.2(g)

Unless an emergency exists, an excavator shall not begin excavation until the excavator receives a response from all known operators of subsurface installations within the delineated boundaries of the proposed area of excavation

Step 4 Confirm Responses

No Response?

4216.3(e)

The excavator shall notify the appropriate regional notification center of the failure of an operator to identify subsurface installations…

Step 5 Dig Safe and Respect Marks

Utility Markings must include:

- The appropriate color for their facility type
- Their company name identifier when other companies are using the same color
- Total number of subsurface installations and the width of each facility
- A description of the facility

Conduit Marking

Any locatable facility being carried inside conduits or ducts. Marks indicate the outer extremities denote the actual located edges of the subsurface installations...

Staked Offset

Used when physical barriers impede locator's ability to mark over the facility.

Step 5 Dig Safe and Respect Marks

Tolerance Zone

4216.4(a)(1)

...if an excavation is within the tolerance zone of a subsurface installation, the excavator shall determine the exact location of the subsurface installations in conflict with the excavation using hand tools...

Step 5 Dig Safe and Respect Marks

Tolerance Zone

4216(u)

"Tolerance zone" means 24 inches on each side of the field marking placed by the operator…

Step 5 Dig Safe and Respect Marks

Remarks

4216.3(b)

If the field marks are no longer reasonably visible, an excavator shall renotify the regional notification center with a request for remarks that can be for all or a portion of the excavation. Excavation shall cease in the area to be remarked.

Step 5 Dig Safe and Respect Marks

Remarks

4216.3(b)

If the delineation markings are no longer reasonably visible, the excavator shall redelineate the area to be remarked.

Step 5 Dig Safe and Respect Marks

Damages

4216.4(c)(1)

An excavator discovering or causing damage to a subsurface installation, including all breaks, leaks, nicks, dents, gouges, grooves, or other damage to subsurface installation lines, conduits, coatings, or cathodic protection, shall immediately notify the subsurface installation operator.

Online Ticket Support

Contact Us

Chris Botting
Education Coordinator
Chris.Botting@usan.org

UNDERGROUND DAMAGE ALERT

EXCAVATOR — Dredging Operations

If your company conducts dredging operations, shoreline stabilization or pile driving activities, please be aware of the following:

- Underground hazardous liquids and natural gas pipelines do traverse lakes and navigable waterways
- 811 requirements to submit a one-call ticket prior operations commencing, to include a sub-aqueous ticket option
- Identify all pipeline warning markers near the shorelines where you will be working
- Contact the pipeline company as part of your pre-planning before work begins

EXCAVATOR Logging Operator Responsibilities

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

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
- Participation as a member of 811
- Operator Qualification (OQ) Training
- Local Distribution Company (LDC)
  - Meter Testing
  - Leak Surveys
  - 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 products
- **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 115 (Pages 166-167)*
- Gas in and gas out of the pipeline
- **Odorant Mercaptan added where required**

*These ER Guides and page numbers come from the 2020 version of the Emergency Response Guidebook

EXCAVATOR Above Ground Storage Tanks

Considerations when responding to tank farms/ terminals

Work with your local operator to:
- Develop an effective response plan
- Identify products and hazards
- Determine evacuation radius

Response recommendations:
- Cool tank(s) or nearby containers by flooding with water
- Use unmanned hose holders/monitor nozzles
- Do not direct water at safety devices or icing may occur
- Let product burn, even after air supply line/system is closed
- Beware of the potential for **Boiling Liquid Expanding Vapor Explosion (BLEVE)**

EXCAVATOR Local Distribution Systems

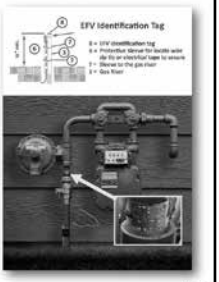
Caution

- Be aware, not all natural gas leaks are from excavation; unintended leaks from stoves, water, heaters, furnaces, etc. can occur
- When called out on natural gas leak events, use combustible gas indicators
- Mercaptan can be stripped as it travels through soil
- Frost heaves, breaking pipes
- Gas meter breaks due to snow buildup from melting snow falling from roofs

Excess flow valve meter tags

Identification tags [192.381(c)]

- The presence of an excess flow valve on the service lines must be marked with an identification tag. The identification tag will typically be located at the top of the service riser below the meter stop valve



811

Paradigm

EXCAVATOR Excess Flow Valve (EFV)

Local Distribution Lines

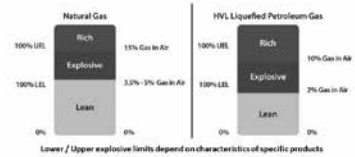
- **Automatic reduction of gas flow** should a service line break
- **May not** completely stop the flow of natural gas
- **May not** hear a distinct hissing sound
- Migration and ignition sources may still exist
- Always work a coordinated response with your local operator
- **Not all service lines have an EFV installed**

811

Paradigm

EXCAVATOR Explosive Limits

Explosive Limits vs. Percent of Gas in Air



Lower / Upper explosive limits depend on characteristics of specific products

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Paradigm

EXCAVATOR Farm Taps

- Mainly in rural areas, some natural gas pipeline companies may have facilities commonly referred to as "farm tap"
- These natural gas settings are made up of valves, pipes, regulators, relief valves and a meter. It may be located near the home or within the general vicinity
- To report the smell of gas near a farm tap, call 911 and the local gas distribution company from a safe distance
- The lines after a farm tap or residential meter are PRIVATE LINES. Be mindful of these.

811

Paradigm

EXCAVATOR RESPONSIBILITIES:

- ❑ Call Before You Dig - It's the Law!
- ❑ Wait the required time for the markings! (state specific time – check your local One Call Law)
- ❑ Tolerance Zones – May vary by state and/or company!
- ❑ Respect the marks!
- ❑ Dig with care!

RISK CONSIDERATIONS

- ❑ Type/volume/pressure/location/geography of product
- ❑ Environmental factors – wind, fog, temperature, humidity
- ❑ Sight, sound, smell – indicators vary depending on product
- ❑ 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
- ❑ Other utility emergencies

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. Markers may not be located directly over the pipeline it marks.

The markers display:

- ❑ The product transported
- ❑ The name of the pipeline operator
- ❑ The operator's emergency number

- ❑ White Lining (Pre-marking)
- ❑ One Call Facility Request
- ❑ One Call Access
- ❑ Locate Reference Number

- ❑ Separate Locate Request
- ❑ Pre-excavation Meeting
- ❑ Facility Relocations
- ❑ One Call Reference Number at Site
- ❑ Contact Names and Numbers
- ❑ Positive Response
- ❑ Facility Owner/Operator Failure to Respond
- ❑ Locate Verification
- ❑ Work Site Review with Company Personnel
- ❑ Documentation of Marks
- ❑ Facility Avoidance
- ❑ Marking Preservation
- ❑ Excavation Observer
- ❑ Excavation Tolerance Zone
- ❑ Excavation within the Tolerance Zone
- ❑ Vacuum Excavation
- ❑ Mismarked Facilities
- ❑ Exposed Facility Protection
- ❑ Locate Request Updates
- ❑ Facility Damage Notification
- ❑ Notification of Emergency Personnel
- ❑ Emergency Coordination with Adjacent Facilities
- ❑ Emergency Excavation
- ❑ Backfilling
- ❑ As-built Documentation
- ❑ Trenchless Excavation
- ❑ No Charge for Providing Underground Facility Locations
- ❑ Federal and State Regulations

811 Know what's **below.** **Call** before you dig.

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
- Burning eyes, nose or throat
- Nausea

SOUND
- A hissing or roaring sound

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:
  - 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
8. Reporting & Evaluation Best Practices
9. Miscellaneous Practices

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

CGA Common Ground Alliance℠

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).

811 Know what's **below.** **Call** before you dig.

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

TC TRAINING CENTER

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:

811 Know what's **below.** **Call** before you dig.

For More Details Visit: www.call811.com

American Public Works Association (APWA) Uniform Color Code

	WHITE - Proposed Excavation
	PINK - Temporary Survey Markings
	RED - Electric Power Lines, Cables, Conduit and Lighting Cables
	YELLOW - Gas, Oil, Steam, Petroleum or Gaseous Materials
	ORANGE - Communication, Alarm or Signal Lines, Cables or Conduit
	BLUE - Potable Water
	PURPLE - Reclaimed Water, Irrigation and Slurry Lines
	GREEN - Sewers and Drain Lines

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	*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.
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. Fire may produce irritating and/or toxic gases.	

PRODUCT	*LEAK TYPE*	*VAPORS*
NATURAL GAS	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	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*
HAZARDOUS LIQUIDS [SUCH AS: CRUDE OIL, DIESEL FUEL, JET FUEL, GASOLINE, AND OTHER REFINED PRODUCTS]	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 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/

TC
TRAINING CENTER

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

UNDERGROUND SERVICE ALERT

NORTHERN CALIFORNIA & NEVADA

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.

DIGALERT®

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

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*

TICKETS			STATE LAWS & PROVISIONS								NOTIFICATION EXEMPTIONS					NOTIFICATIONS ACCEPTED					
FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead	Large Projects	Tolerance Zone
N	Y	Y	N	Y	Y	Y*	Y	Y	Y	Y	Y	N	Y	N	N	N	Y	N	Y	N	N	24"
N	Y	Y	N	Y	Y	Y*	Y	Y	Y	Y	Y	N	Y	N	N	N	Y	N	Y	N	N	24"

Chart Reference: https://pipelineawareness.org/media/1507/2019-excavation-safety-guide-pipeline-edition.pdf

Paradigm®

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