

ANNEX E

Hazardous Materials Response

Petrolia Cisd

Revised:
10/26/2020

APPROVAL & IMPLEMENTATION

Annex E

HAZARDOUS MATERIALS RESPONSE

This annex is hereby approved for implementation and supersedes all previous editions.

Approved:___David Hedges, Superintendent___Date: 10/12/2020_____

RECORD OF CHANGES

Annex E

HAZARDOUS MATERIALS RESPONSE

Change #	Date of Change	Entered By	Date Entered

ANNEX E

HAZARDOUS MATERIALS RESPONSE

I. AUTHORITY

1. See the district's basic plan.
2. Texas Health and Safety Code, Chapter 502, Texas Hazard Communication Act.
3. Texas Health and Safety Code, Chapter 505, Manufacturing Facility Community Right-to-Know Act.
4. Texas Health and Safety Code, Chapter 506, Non-manufacturing Facilities Community Right-to-Know Act.

II. PURPOSE

This annex establishes the policies and procedures under which the district will operate in the event of a hazardous material incident or spill. It defines the roles, responsibilities, and organizational relationships of government agencies and private entities in responding to and recovering from an incident or spill involving transport, use, storage, or processing of hazardous materials.

III. SITUATION AND ASSUMPTIONS

A. Situation

1. Hazardous materials are commonly used in the district science labs and janitorial supplies.
2. Hazardous materials are commonly used, transported, and produced in the community.
3. Because of the wide-spread presence of hazardous materials, many facilities in the community are potentially at risk from a hazardous materials release.
4. Information on pipelines, toxic release inventories, facilities risk management plans, and Tier II sites are maintained by local fire departments, Local Emergency Planning Committees (LEPCs), and the Texas Commission on Environmental Quality (TCEQ).
5. The resources of industry, environmental consultants, emergency response companies, local, and state agencies may be required to effectively manage the incident.

B. Assumptions

1. Hazardous materials are commonly used in the district and the community, hence hazardous materials incidents may occur as the result of natural disasters, human error/accident, or intentional acts.
2. Hazardous materials may be present on all major highways and railroads.
3. Municipalities have designated hazardous materials transportation routes.
4. Hazardous materials transportation routes may pose a danger to the district and community.
5. A major transportation hazardous materials incident may require the evacuation of individuals.
6. The existence of fixed hazardous materials facilities (gas stations, hospitals, industrial facilities) provides the potential for a release of hazardous materials that could impact the district or environment.
7. A hazardous materials incident may be caused by or occur during another emergency, such as a flood, a major fire, or a tornado.
8. A major hazardous materials release may require the evacuation of any district facility and the community.
9. Individuals who evacuated may require shelter in a mass care facility.

IV. CONCEPT OF OPERATIONS

A. General

1. The district has the lead in initial response for hazardous materials incidents that occur on district property. The district's response resources are listed in an Appendix to this annex. The district's response resources for a hazardous material incident are very limited and consist primarily of spill kits and basic personal protection equipment. For larger hazardous materials incidents, the district may rely on local emergency responders or contractors to provide assistance.
2. In the event of a hazardous materials incident, the district may be notified by the responsible party or local emergency response agencies who may make recommendations for protecting students, staff, visitors, and facilities.
3. District personnel may not participate in the response to a hazardous materials incident unless they have been properly trained and equipped with appropriate personal protection equipment.
4. The local fire department or response agency has the lead role in the initial response to hazardous materials incidents which happen in the community (off district property). In a hazardous materials event, evacuation routes will be determined by local response agencies and disseminated to the community in the affected area.
5. If the local Emergency Operations Center (EOC) has been activated for a hazardous materials incident that has or has the potential to impact the district,

the district will assign a qualified individual to report to the EOC to serve as the district's liaison.

6. The LEPC is responsible for providing assistance to the district in hazardous materials planning.
7. During a hazardous materials incident, the district will work closely with the Incident Commander to determine appropriate protective actions.
8. Protective actions (Sheltering-In-Place, evacuations, notification of environmental contamination) are determined based on the amount of time available to determine the scope and magnitude of the incident.

B. Actions by Phases of Emergency Management

1. Mitigation:
 - a. The district will maintain an internal and external resource inventory of available equipment and resources.
 - b. Develop awareness of designated hazardous transportation routes.
 - c. The district will annually conduct a chemical hazard analysis to identify the types and quantities of hazardous materials present at district facilities.
2. Prevention:
 - a. Identify local hazardous materials transportation routes.
 - b. Coordinate with the local fire department to perform periodic inspections of district facilities that store hazardous materials.
 - c. Identify community facilities that manufacture, use, or store hazardous materials.
3. Preparedness:
 - a. Train district personnel who respond to a hazardous materials incident on a regular basis.
 - b. Identify emergency response resources for hazardous materials incidents.
 - d. Develop interoperable communication procedures and maintain communication equipment.
 - e. Prepare and execute mutual aid agreements.
4. Response:
 - a. Any district employee discovering an incident involving the potential or actual release of hazardous materials should immediately notify 9-1-1 and district facility administrators.
 - b. Initiate the National Incident Management System (NIMS) and the Incident Command System (ICS).
 - c. Establish an Incident Command Post.
 - d. Determine hazard's potential impacts.
 - e. Initiate protective actions to protect life, property, and the environment.

- f. Contain and control the hazard.
 - g. Extinguish fires as necessary.
 - h. Initiate rescue operations if necessary.
- 5. Recovery:
 - a. Monitor and survey area/facilities to declare it is safe to return.
 - b. Coordinate with the responsible party for the removal of contaminants.
 - c. Coordinate with the local fire department to perform decontamination and or clean-up operations.
 - d. The district will document and maintain records of all costs/expenses associated with the hazardous materials incident in the event reimbursement is possible.

V. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

A. General

1. The district's normal emergency organization and communications will be established to coordinate the response to and recover from the hazardous materials incident.
2. Effective response to a hazardous materials incident may require response assistance from the responsible party. In some situations, assistance may be needed from local, state, and federal agencies having jurisdictional responsibilities for hazardous materials incidents.
3. Technical assistance may be provided by private industry.

B. Assignment of Responsibilities

All personnel assigned responsibilities in this plan are trained on the NIMS concepts, procedures and protocols.

Agency or Position	Functions/Responsibilities	Phase(s) (Mitigation, Prevention, Preparedness, Response, Recovery)
District's Supt.	Liaison with emergency coordinators from local jurisdictions and private industry	Prevention, Preparedness, Response, Recovery
	Maintain an accurate and up-to-date emergency contact roster of district personnel and administrators, and local emergency response agencies.	Preparedness

LEPCs	Provide assistance to the district in hazardous materials planning.	Preparedness
Fire Department	Provide assistance to the district in hazardous materials planning.	Preparedness

I. DIRECTION AND CONTROL

A. General

To provide for the effective direction, control, and coordination of a hazardous material incident impacting the district, this annex will be activated. The district will implement the incident command system (ICS) to manage the emergency.

External agencies providing hazardous material resources during emergencies are expected to support the district.

B. Incident Command System and EOC Interface

If the district activates an Emergency Operations Center (EOP) and an Incident Command Post are operating, the Incident Commander at the command post and the manager of the district's EOC must agree upon a specific division of responsibilities for emergency response activities to avoid duplication of effort as well as conflicting guidance and direction. The district's EOC and the command post must maintain a regular two-way information flow.

C. Line of Succession

1. Superintendent
2. Director of Support Services
3. Elementary Principal
4. JH/HS Principal

II. READINESS LEVELS

A. Readiness Level IV – Normal Conditions

See mitigation, prevention, and preparedness activities.

B. Readiness Level III – Increased Readiness

1. Monitor the situation.
2. Inform first responders of the incident.

C. Readiness Level II – High Readiness

1. Monitor the situation.
2. Alert district personnel for possible emergency duty/assignment.
3. Deploy district personnel and equipment to the scene.

D. Readiness Level I – Maximum Readiness

1. Recall all district personnel with roles and responsibilities related to the hazardous material incident.
2. Review situation and current status with district management.
3. Issue assignments to district personnel.
4. Coordinate and communicate with response partners and agencies.

III. ADMINISTRATION AND SUPPORT

A. Reporting

A complete listing of the hazardous materials resources and capabilities should be maintained by the district.

B. Maintenance and Preservation of Records

All records generated during an emergency will be collected and filled in an orderly manner, so a record of events is preserved for use in determining response costs, settling claims, and updating emergency plans and procedures.

Vital records should be protected from the effects of a disaster to the maximum extent feasible. Should records be damaged during an emergency, professional assistance in preserving and restoring the records should be obtained as soon as possible.

C. Post Incident Review

The district will organize and conduct a review of emergency operations. The purpose of this review is to identify needed improvements to this annex, procedures, facilities, and equipment.

D.

D. Training

All support personnel, including substitute teachers, will be trained over this annex and trained on medical equipment as needed.

E. Exercises

Local drills, tabletop exercises, functional exercises, and full-scale exercises based on the hazards faced by the district will periodically include hazardous material incidents. All support personnel, including substitute teachers, should be included in these exercises.

IV. ANNEX DEVELOPMENT AND MAINTENANCE

The superintendent will be responsible for the development and maintenance of this annex. Annual reviews and updates will be conducted as needed. All departments included in this annex will develop and maintain separate guidelines, procedures, and manuals for the communication assets available to the district.

V. REFERENCES

- A.** FEMA, Comprehensive Preparedness Guide (CPG) 101 Version 2.0 November 2010
- B.** Texas Division of Emergency Management Plan Template

VI. APPENDICES

Hazardous Materials Resource List
Pipeline Emergencies Procedures
Train Derailment Procedures

Appendix 1: Hazardous Materials in the District

The following hazardous materials could be on the premises:

Custodial Supplies (All Campuses)

MSDS stored in each custodial storage area

- Brulin TerraGreen Kick Plus Bowl & Urinal Cleaner
- Carroll Clean Winda Shine RTU Glass & Surface Cleaner
- Champion Sprayon Oil Based Stainless Steel Cleaner
- Carroll PCL All Purpose Pine Floor Cleaner

Agricultural Sciences (High School and Middle School)

MSDS stored in Ag Office

MSDS searchable at <https://www.airgas.com/sds-search>

- Oxygen
- Acetylene
- Cover Gas (Argon/CO₂)
- Compressed Air
- Activator/Reducer (Nason Select Prime)
- Primer (Nason Select Prime 421-19)
- Paint (Nason Ful-Cryl II 418-01)

Art - (High School)

MSDS stored in the Art Classroom

MSDS searchable at <https://www.dickblick.com/msds/>

- Low Odor Mineral Spirits
- Blick Gesso
- Glazes for Clay
- Elmers glue sticks
- Mod Podge
- White Clay
- Blick Acrylic Medium
- Blick Pastels
- Sharpie Pens
- Blick Tempera Paint
- Liquin
- Krylon Coatings
- Blick Oil Paints
- Aquarelle Suminagashi

Science Labs (High School)-

MSDS stored in Chemical storage room (302)

MSDS searchable at <https://www.flinnsci.com/sds/>

1. MSDS Chemical Name Index (next 20 pages)

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ABSCISIC ACID, (ABA, DORMIN)	50
ACACIA	1
ACETALDEHYDE	2
ACETAMIDE	3
ACETANILIDE	4
ACETIC ACID AMIDE	3
ACETIC ACID ANILIDE	4
ACETIC ACID, GLACIAL	5
ACETIC ALDEHYDE	2
ACETIC ANHYDRIDE	6
ACETIC OXIDE	6
ACETO-ORCEIN 2% SOLUTION	9
ACETONE	7
ACETONITRILE	8
ACETYL CHLORIDE	10
ACETYL SALICYLIC ACID	15, 85
ACETYLCHOLINE BROMIDE	11-12
ACETYLCHOLINE CHLORIDE	13-14
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ACID BLUE 74	402
ACID GREEN 5	447
ACID ORANGE 5	566
ACID RED 51	321
ACID RED 87	318
ACID RED 91	317
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ACRYLAMIDE	16.50
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ADENOSINE TRI PHOSPHATE DISODIUM SALT	18
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AGAROSE, LOW EEO	24.50
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SODIUM TRINITRIDE	705
SODIUM TUNGSTATE	771
SOLVENT BLACK 3	794
SOLVENT RED23	790
SOLVENT RED 24	792
SORBIC ACID	772
STANNIC CHLORIDE (AND SOLUTIONS)	774-774.10
STANNIC OXIDE	775
STANNOUS CHLORIDE	776-777
STARCH	778-780
STARCH GUM	294
STARCH, SPRAY	780.10
STARCH, MALONIC	780.50
STEARIC ACID	781
STEARYL ALCOHOL	559
STEEL SHOT	782
STEEL WOOL	782
STREPTOMYCIN SULFATE	783
STRONTIUM ACETATE	783.10
STRONTIUM BROMIDE (AND SOLUTIONS)	783.20-783.30
STRONTIUM CHLORIDE	784-785
STRONTIUM HYDROXIDE (AND SOLUTIONS)	785.10-785.20
STRONTIUM NITRATE	786-787
STYRENE	787.10
SUCCINIC ACID	788
SUCROSE	789
SUDAN BLACK B	794
SUDAN III	790-791
SUDAN IV	792-793
SUGAR	789
SUGAR OF LEAD	433
SULFAMIC ACID	794.10
SULFANILAMIDE	795-796
SULFANILIC ACID	797
5-SULFOSALICYLIC ACID	798-799
SULFUR	800
SULFUR HEXAFLUORIDE	800.10
SULFURIC ACID	801
SUPER-SORB	801.10
SYRUP	268
TABLE SUGAR	789
TALC	802
TALLOW	802.50
TANNIC ACID	803
TANNIC ACID SOLUTION	803.10
TARTAR EMETIC	77
I-TARTARIC ACID	804-804.50
TCA	828
a-TERPINEOL	805
TES-TAPE	806
TESTOSTERONE	807
TESTOSTERONE PROPIONATE	808
TETRACYCLINE HYDROCHLORIDE	809
TETRAHYDROFURAN	810
N,N,N',N'-TETRAMETHYL-ETHYLENEDIAMINE (TEMED)	810.50
THAM	835
THERMIT, BLACK	811
THERMIT, IGNITING MIXTURE	812

THIAMINE HYDROCHLORIDE	813
THIAZOL YELLOW 6	245
THIOACETAMIDE (AND SOLUTIONS)	814-814.10
THIOCARBAMIDE	817
THIONIN	815-816
THIOUREA	817
THYMOL	818
THYMOL BLUE	819-820
THYMOLPHTHALEIN	820.09
THYMOLPHTHALEIN SOLUTION	820.10
d-THYROXINE	821
l-THYROXINE	821
TIN	822
TIN (II) CHLORIDE	776-777
TIN (IV) CHLORIDE	774
TIN (IV) OXIDE	775
TITAN YELLOW	245
TITANIUM (IV) OXIDE	823
TITANIUM DIOXIDE	823
TOLUENE	824
TOLUIDINE BLUE O	825-826.10
TOLUYLENE RED	537
TRICANE METHANE SULFONATE	827
1,1,2 TRICHLORO-1,2,2-TRIFLUOROETHANE	831
1,1,1 TRICHLORO-2-METHYL-2-PROPANOL	229
TRICHLOROACETIC ACID	828
1,1,1 TRICHLOROETHANE	829
TRICHLOROETHYLENE	830
TRICHLOROMETHANE	232
TRICKY FUN STRING	831.10
TRIETHANOLAMINE	832
3,3',5-TRIIODO-L-THYRONINE	833
TRIPHENYL TETRAZOLIUM CHLORIDE	834
TRIS-(HYDROXYMETHYL) AMINOMETHANE	835
TRYPSIN	836
TRYPTIC SOY AGAR	836.50
TRYPTONE	837
TTE	831
TURPENTINE	838
UNIVERSAL INDICATOR SOLUTION	839
URANYL NITRATE	839.10
UREA	840
UREASE	841
URETHANE	842
VEGETABLE DYES	843
VEGETABLE SULFUR	464
VINEGAR	844
VINEGAR ACID	5
VITAMIN B1	813
VITAMIN B2	670
VITAMIN B3	546
VITAMIN C	82
VITAMIN H	114
WATER	845
WHITE VITRIOL	866
WINKLER'S SOLUTION #1	846
WINKLER'S SOLUTION #2	847
WINTERGREEN OIL	520
WOOD ALCOHOL	509
WOOD SUGAR	853
WOODS METAL	848

WOOL FAT	429
WRIGHT'S STAIN	849-850
XANTHOPHYLL	851
XYLENES	852
d+ XYLOSE	853
YEAST	855
YEAST EXTRACT	854
YTTRIUM OXIDE	856
ZENKER'S FLUID	857
ZEOLITE	858
ZINC	859
ZINC ACETATE	860
ZINC CARBONATE	860.50
ZINC CHLORIDE (AND SOLUTIONS)	861-861.10
ZINC MERCURY AMALGAM	861.50
ZINC NITRATE	862-863
ZINC OXIDE	864
ZINC STEARATE	865
ZINC SULFATE	866-867
ZINC SULFIDE	868

Procedures for a Hazardous Materials Release or Chemical Spill

The Principal will determine the need to activate the campus EOP and designate a School Incident Commander until another qualified Incident Commander arrives at the scene with jurisdiction over the incident. Once an emergency Incident Commander arrives, it is critical to follow the instructions of, and cooperate with, that Incident Commander.

If a hazardous material release or chemical spill has occurred due to a pipeline emergency, the following steps will be taken by the school.

School Incident Commander/Principal

-  Call 911 and your local pipeline company emergency numbers and notify local law enforcement and emergency responders. 811 can be called if the pipeline company is unknown.
-  Determine what procedures should be activated, such as a REVERSE EVACUATION, SHELTER-IN-PLACE, EVACUATION BY FOOT OR EVACUATION BY VEHICLE. **Vehicle evacuations may require incident specific directives.**
-  Notify maintenance/building, custodial, and grounds staff to shut off mechanical ventilating systems, only if sheltering-in-place.
-  Take appropriate action to safeguard school property.
-  Notify appropriate school personnel (Superintendent/Public Information staff) of the status and actions taken and keep them updated of any significant changes.
-  Activate internal and external communications plan.
-  If it is determined that conditions warrant an EVACUATION, issue instructions for relocating to a safer location by means of walking or, if deemed appropriate by emergency officials, by vehicle.
-  Notify relocation centers that are outside of the impact zone of the pipeline and determine an alternate relocation center if necessary.
-  Disseminate information about the incident and follow-up actions such as where students/school have relocated and institute REUNIFICATION procedures, if needed.
-  Do not allow staff and students to return to the building until proper authorities have determined that it is safe to do so and given the "All Clear" signal after the threat has passed.
-  Determine whether school will be closed or remain open.
-  Implement additional procedures as instructed by the School and/or Emergency Incident Commander.
-  Document all actions taken.

Teachers and Staff

-  Move students away from immediate vicinity of danger, by foot, unless otherwise directed.
-  Implement REVERSE EVACUATION if students are outside; observe wind direction by observing flags or leaves and move students appropriately.
-  Execute SHELTER-IN-PLACE when instructed by the Incident Commander.
-  Remain with students throughout the incident.
-  Report any missing or injured students to the Incident Commander.
-  Remain in a safe area until the "All Clear" signal has been issued.
-  In the event of building damage, evacuate students to safer areas of the building or from the building. If evacuation does occur, do not re-enter the building until an "All Clear" signal is issued.
-  Document all actions taken.

Appendix 2: Pipeline Emergency Procedures

Texas has the largest pipeline infrastructure in the nation, with more than 439,771 miles of pipeline representing about 1/6 of the total pipeline mileage of the entire United States. Texas' pipelines are divided into the categories of natural gas and LP-gas distribution lines (more than 148,167 miles), hazardous liquid and natural gas transmission lines (more than 66,382 miles), intrastate production and gathering lines leaving a lease lines (more than 175,928 miles), and interstate lines (45,173 miles).

-Railroad Commission of Texas

This means that every affected campus and their staff must be prepared to respond appropriately in the event of a pipeline emergency. Jacksboro ISD recognizes that the success of its emergency operations plan is contingent upon collaboration with and support from local, regional, state, and federal partners as well as the news media.

Pipeline emergencies can occur due to improper or unauthorized digging near a pipeline, mechanical failure, human error, corrosion or terrorism. The greatest concern during a pipeline emergency is the release of hazardous materials as well as the potential for fire and explosions that could result in injury, fatality, environmental harm or other loss.

A pipeline emergency in close proximity to a school can necessitate either sheltering in place or evacuation of students and staff from the site.

The District has identified the following schools whose operations are most likely to be affected either directly or indirectly by a pipeline emergency due to their proximity (typically 1,000 feet or less) to a pipeline.

Petrolia ES	501 S Prairie Ave.
Petrolia JH/HS	8307 FM 810
Petrolia Administration	701 S Prairie Ave

School Specific Situation Overview

All Petrolia CISD facilities are served by natural gas. The pipelines connect to district infrastructure to supply the kitchen equipment in each facility as well as the HVAC units and water heaters.

Atmos Gas Company is the service provider.

Emergency Service Only:

To report a natural gas odor or emergency, leave the area immediately and call 911 and 800-959-5325.

24 hours a day, including holidays and weekends, or call 911

To Reach Our Customer Service Line:

Toll-free 800-700-2443

Customer Service Center Hours:

Monday - Friday, 7:00 a.m. to 7:00 p.m. CT (closed Saturday and Sunday)

Automated Customer Service available 24 hours a day, 365 days a year

Email:

<https://www.texasgasservice.com/showmodal?action=contactus>

Mail payment or correspondence to:

Texas Gas Service

P.O. Box 219913

Kansas City, MO 64121-9913

Attachment 2: Pipeline Emergency Considerations

Pipeline Products & Facilities

NATURAL GAS is a naturally occurring resource formed millions of years ago as a result of heat and pressure acting on decayed organic material. It is extracted from wells and transported through gathering pipelines to processing facilities. From these facilities, it is transported through transmission pipelines to distribution pipeline systems. The main ingredient in natural gas is methane (approximately 94 percent). Natural gas is odorless, colorless, tasteless and nontoxic in its natural state. An odorant (called mercaptan) is normally added when it is delivered to a distribution system. At ambient temperatures, natural gas remains lighter than air. However, it can be compressed (CNG) under high pressure to make it convenient for use in other applications or liquefied (LNG) under extremely cold temperatures (-260° F) to facilitate transportation.

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PETROLEUM GAS is a mixture of gaseous hydrocarbons, primarily propane, butane and ethane. These products are easily liquefied under pressure and are used for residential or commercial heating and other industrial applications. Propane and butane are often stored and transported under pressure as liquid (LPG) in portable containers for use as fuel for heating and cooking applications. LPG is usually transported through hazardous liquid transmission pipelines and may also be identified as Highly Volatile Liquids (HVLs) or Natural Gas Liquids (NGLs). Vaporized LPG may also be found in small distribution systems. LPG is a tasteless, colorless and odorless gas. When transported via transmission pipelines it typically will not have odorant added. Odorant is added when LPG is offloaded to a distribution pipeline system or transport tanks to facilitate leak detection.

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PETROLEUM LIQUIDS is a broad term covering many products, including crude oil, gasoline, diesel fuel, aviation gasoline, jet fuel, fuel oil, kerosene, natural gas liquids, naphtha, xylene and other refined products. Crude oil is unrefined petroleum that is extracted from beneath the Earth's surface through wells. As it comes from the well, crude oil contains a mixture of oil, gas, water and other impurities, such as metallic compounds and sulfur. Refinement of crude oil produces petroleum products that we use every day, such as motor oils and gasoline. Crude oil is transported from wells to refineries through gathering pipelines. Refined petroleum products are transported in transmission pipelines to rail or truck terminals for distribution to consumers. Odorant is not added to these products because they have a natural odor.

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ANHYDROUS AMMONIA is the liquefied form of pure ammonia gas. It is a colorless gas or liquid with an extremely pungent odor. It is normally transported through transmission pipelines located in the Midwest and is used primarily as an agricultural fertilizer or industrial refrigerant.

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CARBON DIOXIDE is a heavy gas that is normally transported in transmission pipelines as a compressed fluid. It is a naturally occurring, colorless, odorless and tasteless gas used in the petroleum industry. Under normal conditions, carbon dioxide is stable, inert and nontoxic.

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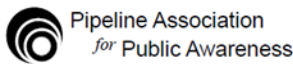
ETHANOL (also called ethyl alcohol) is a colorless liquid that is widely used as an additive to automotive gasoline. It may be transported in buried transmission pipelines.

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HYDROGEN GAS is commonly produced from the steam reformation of natural gas. It is frequently used near its production site, with the two main uses being petrochemical processing and ammonia production. Hydrogen is a flammable gas that is colorless, odorless and lighter than air. It is nontoxic, but can act as a simple asphyxiant.

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“SOUR” CRUDE OIL AND “SOUR” GAS refer to products containing high concentrations of sulfur and hydrogen sulfide. Products containing little or no sulfur are often referred to as “sweet”. Hydrogen sulfide (H₂S) is a toxic, corrosive contaminant found in natural gas and crude oil. It has an odor like the smell of rotten eggs or a burnt match. Exposure to relatively low levels of hydrogen sulfide (500 ppm) can be fatal.



Hazard Information

	Natural Gas	Petroleum Gas	Petroleum Liquids	Anhydrous Ammonia	Carbon Dioxide	Ethanol	Hydrogen Gas	Sour Gas (H ₂ S)	Sour Crude Oil (H ₂ S)	Liquids & Natural Gas
INDICATIONS OF A LEAK										
An odor like rotten eggs or a burnt match	(1)	(1)						X	X	(1)
A loud roaring sound like a jet engine	X							X		X
A white vapor cloud that may look like smoke		X		X						
A hissing or whistling noise	X	X		X	X		X	X		X
The pooling of liquid on the ground			X			X			X	X
An odor like petroleum liquids or gasoline		X	X			X			X	X
Fire coming out of or on top of the ground	X	X					X	X		X
Dirt blowing from a hole in the ground	X	X		X	X		X	X		X
A sheen on the surface of water		X	X						X	X
An area of frozen ground in the summer	X	X			X	X	X	X		X
An unusual area of melted snow in the winter	X	X			X		X	X		X
An area of dead vegetation	X	X	X				X	X	X	X
Bubbling in pools of water	X	X			X		X	X		X
An irritating and pungent odor				X				X	X	
HAZARDS OF A RELEASE										
Highly flammable and easily ignited by heat or sparks	X	X	X			X	X	X	X	X
Will displace oxygen and can cause asphyxiation	X	X		X	X		X	X		X
Vapors are heavier than air and will collect in low areas		X	X	X	X	X		X	X	X
Contact with skin may cause burns, injury or frostbite		X	X	X	X	X	X	X		X
Initial odor may be irritating and deaden the sense of smell								X	X	
Toxic and may be fatal if inhaled or absorbed through skin				X				X	X	
Vapors are extremely irritating and corrosive				X				X	X	
Fire may produce irritating and/or toxic gases	X	X	X	X		X	X	X	X	X
Runoff may cause pollution			X	X		X			X	X
Vapors may form an explosive mixture with air	X	X	X			X	X	X	X	X
Vapors may cause dizziness or asphyxiation without warning	(1)	(1)			X		X	X	X	(1)
Is lighter than air and can migrate into enclosed spaces	X						X			X
EMERGENCY RESPONSE										
Avoid any action that may create a spark	X	X	X	X			X	X	X	X
Do NOT start vehicles, switch lights or hang up phones	X	X	X	X			X	X	X	X
Evacuate the area on foot in an upwind and/or uphill direction	X	X	X	X	X	X	X	X	X	X
Alert others to evacuate the area and keep people away	X	X	X	X	X	X	X	X	X	X
From a safe location, call 911 to report the emergency	X	X	X	X	X	X	X	X	X	X
Call the pipeline operator and report the event	X	X	X	X	X	X	X	X	X	X
Wait for emergency responders to arrive	X	X	X	X	X	X	X	X	X	X
Do NOT attempt to close any pipeline valves	X	X	X	X	X	X	X	X	X	X
Take shelter inside a building and close all windows				X	X			X	X	

(1) These products are naturally odorless and only certain pipeline systems may be odorized.

www.pipelineawareness.org

Appendix 3: Train Derailment Procedures

Petrolia CISD and its stakeholders expect that schools are safe and secure environments; however, schools cannot predict exactly when and where an incident is going to happen. Railways are common in Texas, which means that every campus, each facility, and all staff must be prepared to respond appropriately in the event of train derailment. The district recognizes that the success of its emergency operations plan is contingent upon collaboration with and support from local, regional, state, and federal partners as well as the news media.

Train derailments can occur due to track failure caused by defective or worn rails or equipment, human error, collision with an object on the track such as vehicle, collision with another train and severe weather events such as tornadoes or flooding that washes away portions of the track. The greatest concern during a train derailment is the release of hazardous materials as well as the potential for fire and explosions.

A train derailment in close proximity to a school can necessitate either sheltering in place or evacuation of students and staff from the site.