

Upshur County Emergency Operations Plan Functional Annex

Natural Gas Pipeline Emergency Response

Approval Signatures



Brian Shreves, Director
Upshur County Office of Emergency Management

8/1/17

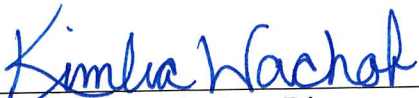
Date



Doyle Cutright, Director
Upshur County E 911 Communications Center

8/1/17

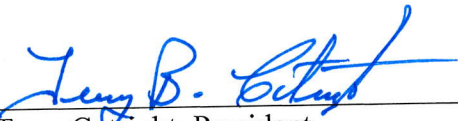
Date



Kimbra Wachob, Asst. Director
Upshur County E 911 Communications Center

8/1/17

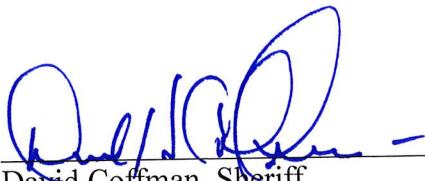
Date



Terry Cutright, President
Upshur County Commission

8/17/17

Date

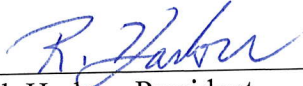


David Coffman, Sheriff
Upshur County

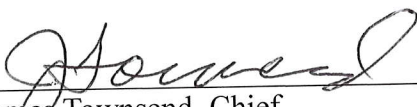
8/8/2017

Date

Approval Signatures


Rick Harlow, President
Upshur county FF Association

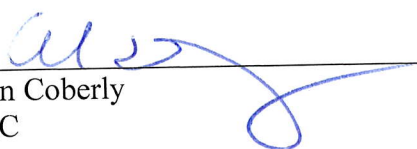
7/31/17
Date


James Townsend, Chief
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7/31/2017
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Gloria Burr, Director
Upshur County EMS

7/31/17
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ARC

9/13/17
Date

**Upshur County Emergency Operations Plan
Functional Annex**

**Natural Gas Pipeline Emergency
Response**

Created June 2017

Upshur County Emergency Operations Plan

Functional Annex

Natural Gas Pipeline Emergency Response

Local Coordination:	Upshur County Office of Emergency Management Upshur County E 911 Upshur County Emergency Operations Center
Local Primary Response Agencies and Corporations:	Pipeline Owner and Operator Upshur County Sheriff's Office Buckhannon Police Upshur County Volunteer Fire Departments Buckhannon Fire Department Upshur County Emergency Medical Services Emergency Site Protection Ambulance Service
Stake Holders:	Upshur County Government City of Buckhannon Government Upshur County Department of Health Local Gas Customers Foreign Gas Customers Interconnected Midstream Services
Support Agencies:	WV Division of Homeland Security and Emergency Management National Weather Service, Charleston WV WV Region of the American Red Cross WV State Police and Other State Law Enforcement WV Department of Environmental Protection WV Division of Highways WV Fusion Center Pipeline and Hazardous Material Safety Administration (PHMSHA)

I. Introduction

Effective emergency response is dependent upon the coordination and cooperation of emergency management, emergency communications, police, fire, emergency medical services and various other public, private, and non-profit organizations that may be called upon to perform duties in an emergency situation. Each incident may differ by type, and impact, but the basic responsibilities of

the involved organizations remain the same. The following plan is established to ensure effective emergency response in a rural setting. This plan utilizes the National Incident Management System (NIMS) and the Incident Command System (ICS)

A. Purpose

The goal of the Annex is to provide agencies within Upshur County with the information needed to assist them with the response and recovery of a Natural Gas Pipeline Emergency. This plan will serve as an Annex to the existing county Emergency Operations Plan

B. Scope

The scope of this annex describes the responsibilities and activities of local first responders, private agencies and industries for providing pipeline incident response services in Upshur County.

II. Situation and Assumptions

A. Situation

Natural gas pipelines are located throughout Upshur County. There are essentially three major types of pipelines along the transportation route: gathering systems, transmission systems, and distribution systems.

- Gathering pipeline systems gather raw natural gas from production wells.
- Transmission pipeline systems transport natural gas thousands of miles across many parts of the continental United States.
- Distribution pipeline systems distribute natural gas to homes and businesses through mains and service lines.

Except for gas service lines, the pipe used in natural gas pipeline systems can range in size from 2 inches to 42 inches in diameter; gas service lines are generally from ½ inch to 2 inches in diameter. Natural gas gathering and transmission pipeline systems are constructed from steel pipe. However, natural gas distribution systems have been constructed from many different materials including cast iron, steel, copper, and plastic pipe. Plastic pipe is most commonly installed today for gas distribution systems. Natural gas pipeline systems are owned and operated by many different companies. This Annex is intended for emergencies on these 'systems' which can easily cascade into large incidents as opposed to incidents after the private gas meter which are handled routinely by the Emergency Services Sector (ESS).

General Assessment

This section provides a general assessment and overview of pipeline system incident capabilities in Upshur County.

Natural gas does not present a threat in a controlled environment; however, an accidental release could result in dangerous situations. Pipelines in Upshur County are subject to age, old standards, poor

mapping, abandonment, natural disasters, unauthorized construction disturbance, and very large diameter.

The ultimate responsibility for safeguards relating to pipelines belongs to the party owning and or operating them.

Limitations

This section also addresses limitations that may complicate the response operations. Assumptions addressed might include the following:

1. Private gas company equipment and resources located in the region will be available for use during incident response situations.
2. Resources available through local, county, state, and private mutual aid agreements will be provided for use during the incident response.
3. Resources through state and federal agencies will be provided during the recovery phase.
4. Sufficient volunteer firefighters will be available during the initial response phase to assist with operations.

III. Concept of Response Operations

This section describes how pipeline incident response operations will be conducted in Upshur County in cooperation with other jurisdictions, other services, and government agencies.

A. General

This section details the provisions for initializing and managing response tasks. It identifies who will be in charge of directing response operations and provides a general overview of how these activities will be accomplished using NIMS and ICS.

1. To ensure the necessary planning and coordination are accomplished prior to the occurrence of a pipeline incident and to facilitate the management of services during the incident,
2. It is essential to define the planning and coordination responsibility for leadership by private industry and elected officials. It is the duty of elected officials to set policy prior to major incidents, this is accomplished through regular review and updating of the Emergency Operations Plan (EOP).
3. For the safety of all private industry must work with first responders to provide realistic exercise and training under the Homeland Security Exercise and Evaluation Program (HSEEP) and also review plans by actively participating in the Local Emergency Planning Committee (LEPC).

4. All involved will operate under the National Incident Management System (NIMS) and Incident Command System (ICS).

Lead Agencies

Initial 'size up' or 'situational assessment' by the first units on scene is critical to the determination of the activation of any plan. Pipeline incident response beyond the capabilities of the first agency on scene will need to be a coordinated effort in Upshur County that will require an expanded Incident Command and possibly an Incident Management Team. The Incident Command is responsible for establishing operational assignments. However, this plan suggests that in the early primary response phase the following responsibilities be represented:

- Pipeline Operator: control and shutdown of the pipeline.
- Fire Service: protection of the exposure.
- Law Enforcement: protection of the population.

Pipeline Incident Response Management

The Incident Commander or Unified Commander(s) oversee the response phase and have command and control commensurate with their legal scope of authority over all agencies and organizations involved in response operations.

The Emergency Operations Center (EOC) Supervisor is responsible for the operations of the Upshur County Emergency Operations Center during response operations. The EOC Supervisor is normally the County Emergency Manager or his or her designee.

The E 911 Director and Assistant E 911 Director are responsible for the operations in the communication center, coordination with the EOC, and coordination with the ICP Communications Section.

Coordination with Other Jurisdictions

The Incident Command Post will determine the method they wish to use for coordinating response from other jurisdictions. However, if activated, the Upshur County Emergency Operations Center (EOC) will make automatic basic notifications to the region and state using secure and open systems such E-Team, Homeland Security Information Network (HSIN) and WV Situational Awareness. Partial activation of the EOC will be authorized at the request of the Incident Commander. Full activation of the EOC will be recommended to elected officials based on completeness of situational reports to the Emergency Manager.

IV. Organizational and Assignment of Responsibilities

A. General For All First Responders

1. The first arriving units must assess the situation for its potential danger to the safety and health of the population in the immediate incident area. Report an initial size up to the E 911 Communication Center.

2. Once the Incident Command has determined the end of involvement by the Emergency Services Sector (ESS), Transfer of Command to the agency or private company designated to oversee the completion of the clean-up process must be formally documented.
3. All agencies involved in the pipeline incident will maintain sufficient records to justify expenses and submit an after-action report for study and critique to improve response capabilities in the future. It is conceivable that state or federal funds will not be available to cover part or all of the expenses involved in the incident. With proper records, agencies may recover some of the funds expended in the incident through direct billing and insurance or good will monies from the pipeline operator.
4. The Incident Command is responsible for determining a Shelter-In-Place or Evacuation notification be issued. The EOC and 911 can assist using available notification systems if directed to do so.
5. Maintain and protect any evidence of a crime, especially terrorism.
6. Make early considerations of possible locations unique to large incidents such as a Perimeter, Staging Area, Helispot (Landing Zone), water supply, Hot Zone, Triage Area, Rehabilitation Camp, Media, and a Decontamination Area as needed. This information should be forwarded to the EOC and 911 and provided to other responding agencies. Include GPS coordinates if possible.
7. Develop traffic flows for area and provide this information to the EOC. Request WVDOH assistance for incidents that will exceed 2 hours.

B. Upshur County Emergency Operations Center (If Activated)

1. Will document all formal requests for state level resources on E-Team and coordinate with the Logistics Section Chief.
2. Request WVDHSEM Area Liaison to the EOC.
3. Contact Air Traffic Control at Harrison Marion Regional Airport to establish restricted air space over the incident when so directed by the Incident Commander.
4. Notify Upshur County Board of Education if school bus travel will be affected.
5. Contact National Weather Service for a special forecast for the incident area.

C. Pipeline Operator Expectations

1. Provide a representative to the EOC
2. Provide a representative to the Incident Command Post
3. Assist in evaluation of potential impact on public health, safety and infrastructure
4. Assist in the recovery efforts

D. Utility and Public Service District Expectations

1. Determine and evaluate the effects of the incident on utilities.
2. Prepare to temporarily stop service to the area affected by the incident should it be required by the situation.
3. Provide a person to the command post or EOC to represent the utility upon request.

E. Upshur County Schools Expectations

1. If school is in session activate school COOP and Evacuation Plans
2. Turn on WV-SIRN radios and monitor Upshur OEM Talkgroup.

F. WV Region of the American Red Cross

1. Open and operate shelter(s) for evacuees should residents in community need to be evacuated.
2. Provide canteen service upon request from the Incident Commander for on-scene working personnel should incident be of long duration.\
3. Provide upon request individual to the staging area with radio to represent American Red Cross and act as link to IC during incident.
4. Provide mental health services to affected residents.
5. Provide medication replacement services to affected residents

V. Recovery Operations (Type 3 or 2 Incident)

- A) While best practices suggest that recovery begins during the response phase, this is a difficult task for small agencies with limited resources. At some point the incident will become more recovery oriented and some portions of the Emergency Services Sector (ESS) will start to demobilize. At this point, if this was a large scale incident, local government and the pipeline operator will have to become more involved in recovery planning through planning meetings at the EOC. This must be decision makers or their designee authorized to speak or act on behalf of their function. While the EOC does not normally operate under the Emergency Support Function (ESF) configuration, activation of some ESF positions may be considered to give the role some defined scope as laid out in NIMS and the National Response Framework (NRF). Planning objectives and tasks to be alert for:
1. Reunification of evacuees.
 2. Joint Information Center
 3. Duration of services at Pick-up-Points.
 4. Preliminary Damage Assessments within first 48 hours.
 5. Need and responsibility of costs for short-term shelter for those who have lost a dwelling or cannot yet return to the area. Especially if the emergency was not created by natural causes.
 6. Mental health services.

7. Overtime and other costs.
 8. Economic Recovery.
 9. Prolonged gas and other utility outages.
 10. Debris Management.
 11. Media coverage and credentialing.
 12. Community outrage.
 13. Environmental Activists.
 14. VOAD (Voluntary Organizations Active in Disaster.)
 15. Self-dispatched and non-requested recovery groups.
 16. Freelance insurance adjusters.
 17. Pastoral Services.
 18. Delays, closings, losses, to government services such as education.
- B) Collection of Hot Wash data, 911 tapes, Incident Action Plans (IAP) and all other reports for the After Action Report (AAR) and possible legal actions must start as soon as possible with the understanding that all of this data must be protected for any future legal action. The recovery planning team must designate a person responsible for this.
- C) An Emergency Declaration should strongly be considered by elected officials in large or cascading pipeline incidents to give the Emergency Manager emergency powers and have all employees set aside normal business and concentrate on the emergency at hand.

VI. Prevention, Protection, and Mitigation

A) Related Plans and Annexes

1. Region 4 Evacuation Plan. This is the current evacuation plan for the region. This plan should be updated in 2019 to reflect any influence by new large diameter pipelines.
2. Mass Incident Plan. Under Development by OEM.
3. Upshur Pipeline Risk Analysis. Proposed LEPC project for 2018
4. Training and Exercise Plan (3-Year Forward) Proposed pipeline exercise series for 2018-2019
5. Upshur County Hazardous Material Emergency Plan. Currently (2017) under update by LEPC
6. THIRA - Threat Hazard Identification and Risk Assessment. Each year first responder agencies should report their pipeline emergency readiness and equipment needs to the OEM for inclusion in the THIRA. This information is critical for Homeland Security Grant qualification for the state and local sub-grantees.

B) Related Preparedness Systems

Upshur County Evacuation Registry. While both the OEM and LEPC promote an Evacuation Registry or what is also referred to as a special needs registry, participation by the public is minimal. Cooperation with the pipeline companies to promote the registry in mailings, especially to those along large diameter pipelines is essential for building a valid registry.

On-Scene Checklist

	This checklist contains suggestions for large scale (Type 3 and 2) incidents or large diameter pipelines
<input type="checkbox"/>	Give initial scene size-up to 911
<input type="checkbox"/>	Establish location for Incident Command
<input type="checkbox"/>	Designate Incident Commander or Unified Commanders
<input type="checkbox"/>	Identify operator/owner of pipeline
<input type="checkbox"/>	Request activation of County Emergency Operations Center (EOC)
<input type="checkbox"/>	Assemble a complete Incident Command Staff, activating all general and command staff consider requesting a Type 3 Incident Management Team
<input type="checkbox"/>	Sets the incident objectives, strategies, and priorities and has overall responsibility for the incident.
<input type="checkbox"/>	Schedule Planning Meetings as Required.
<input type="checkbox"/>	Transmit a detailed Situation Report to the EOC for transmission on E Team
<input type="checkbox"/>	Create Incident Action Plan
<input type="checkbox"/>	Request Mutual Aid if automatic aid is insufficient
<input type="checkbox"/>	Consider an initial exaggerated perimeter of 150 to 200 feet per 1 inch of pipeline diameter Example: 42 inch line initial perimeter 6,300 feet (1.2 miles) to 8,400 feet (1.6 miles)
<input type="checkbox"/>	Notify elected officials if they need to declare a State of Emergency
<input type="checkbox"/>	Provide for the safety, accountability, and welfare of personnel.
	Establish Communication Plan
<input type="checkbox"/>	Determine if evacuation is necessary/ notify EOC
<input type="checkbox"/>	Establish a Staging Area

Upshur County Natural Gas Pipeline Emergency Response
On-Scene Checklist

<input type="checkbox"/>	Utilize Nixle Public Warning System
<input type="checkbox"/>	Notify appropriate water agencies if public water system is needed for suppression
<input type="checkbox"/>	Notify WV-511 and DOH for assistance in road closings
<input type="checkbox"/>	Notify EOC of all resource request.
<input type="checkbox"/>	Request a Joint Information Center be Established or Designate a second PIO to work directly with the media away from the Command Post
<input type="checkbox"/>	Ensure safety measures are in place
<input type="checkbox"/>	Establish a Media Staging Area
<input type="checkbox"/>	Designate a Helispot (landing zone)
<input type="checkbox"/>	Order Demobilization when appropriate

Recommended Minimum Evacuation Distances

For

Natural Gas Pipeline Leaks and Ruptures

(Not applicable for Butane, Propane, or other Hazardous Liquids)

		Pipeline Size (inches)											
		4	6	8	10	12	16	20	22	24	30	36	42
Pressure (psig)	100	91	137	182	228	274	365	456	502	547	684	821	958
	200	129	193	258	322	387	516	645	709	774	967	1161	1354
	300	158	237	316	395	474	632	790	869	948	1185	1422	1659
	400	182	274	365	456	547	730	912	1003	1094	1368	1642	1915
	500	204	306	408	510	612	816	1020	1122	1224	1529	1835	2141
	600	223	335	447	558	670	894	1117	1229	1340	1675	2011	2346
	700	241	362	483	603	724	965	1206	1327	1448	1810	2172	2534
	800	258	387	516	645	774	1032	1290	1419	1548	1935	2322	2709
	900	274	410	547	684	821	1094	1368	1505	1642	2052	2462	2873
	1000	288	433	577	721	865	1154	1442	1586	1730	2163	2596	3028
	1100	302	454	605	756	907	1210	1512	1664	1815	2269	2722	3176
	1200	316	474	632	790	948	1264	1580	1738	1896	2369	2843	3317
	1300	329	493	658	822	986	1315	1644	1809	1973	2466	2959	3453
	1400	341	512	682	853	1024	1365	1706	1877	2047	2559	3071	3583
1500	353	530	706	883	1060	1413	1766	1943	2119	2649	3179	3709	
1600	365	547	730	912	1094	1459	1824	2006	2189	2736	3283	3830	
1700	376	564	752	940	1128	1504	1880	2068	2256	2820	3384	3948	
1800	387	580	774	967	1161	1548	1935	2128	2322	2902	3482	4063	
1900	398	596	795	994	1193	1590	1988	2186	2385	2981	3578	4174	
2000	408	612	816	1020	1224	1631	2039	2243	2447	3059	3671	4283	
2100	418	627	836	1045	1254	1672	2090	2299	2508	3134	3761	4388	
2200	428	642	856	1069	1283	1711	2139	2353	2567	3208	3850	4492	

Table 1 - Evacuation Distance in Feet

The applicable leak or rupture condition is that of a sustained trench fire fueled by non-toxic natural gas escaping from two full bore pipe ends. Blast overpressure is not addressed. The distances shown in Table 1 are intended to provide protection from burn injury and correspond to a thermal heat flux exposure level of 450 Btu/hr ft². This is the accepted limit of heat exposure for unprotected outdoor areas where people congregate; as established by the US Department of Housing & Development Code 24CFR51, Subpart C, Siting of HUD Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature. The formula used to calculate distance was taken from the Gas Research Institute Report GRI-00/0189, *A Model for Sizing High Consequence Areas Associated with Natural Gas Pipelines*, 2001, prepared by C-FER Technologies. That model does not take into account wind or other factors which may greatly influence specific conditions. Users are advised that the distances shown in Table 1 are considered to be "general information" only and are not intended to replace a site specific risk analysis. The Pipeline Association for Public Awareness makes no warranty with respect to the usefulness of this information and assumes no liability for any and all damages resulting from its use. Anyone using this information does so at their own risk.