

ESF 10 - INCIDENT ANNEX B

PIPELINE EMERGENCY RESPONSE FOR NATURAL GAS PIPELINES

Primary Agency

Environmental & Public Protection Cabinet (EPPC), Office of the State Fire Marshal (OSFM)
*Primary state coordination for incidents involving **natural gas pipeline releases** (including natural gas, natural gas liquids mixed with gas, LNG vapor, and synthetic gas used as fuel).*

If cabinet/agency names are reorganized, the successor agency assumes these duties.

Supporting Agencies

- EPPC – **Department for Environmental Protection (DEP)**
- Department of Military Affairs – **Kentucky Division of Emergency Management (KyEM)**
- **Kentucky Army & Air National Guard**
- **Kentucky Community Crisis Response Board (KCCRB)**
- Kentucky Transportation Cabinet – **Division of Highways (KYTC)**
- Justice & Public Safety Cabinet (JPSC) – **Kentucky State Police (KSP)**
- JPSC – **Department of Motor Vehicle Enforcement** (*or successor function within KSP*)
- Cabinet for Health & Family Services – **Department for Public Health (DPH)**
- **Department of Agriculture**
- **Kentucky Office of Homeland Security (KOHS)**
- **American Red Cross (ARC)**

Purpose

Provide a coordinated framework for local, state, federal, and responsible-party actions that protect life, property, and the environment from **actual or threatened releases from pipelines transporting natural gas**.

Situation & Assumptions

Situation

- Natural gas pipelines (local distribution and interstate transmission) traverse all regions of the Commonwealth; diameters, pressures, and operating conditions vary by system function.

Assumptions

- Natural gas pipeline incidents present **specialized hazards** requiring product-specific tactics.

- **Natural gas is lighter than air** and typically disperses outdoors; **indoors** it accumulates near **ceilings/voids** and confined spaces.
 - Gas may be **odorized** (mercaptan) but odor can be **unreliable** due to dilution, masking, or olfactory fatigue.
 - Transmission lines may operate at **very high pressure**, producing long jet flames and high radiant heat.
 - **Hydrogen sulfide (H₂S)** may be present in some gas streams; it is highly toxic and rapidly causes olfactory fatigue—**do not enter** suspect areas without proper monitoring and PPE.
 - Pipeline operators will deploy **trained, equipped personnel**; local/state actions should integrate and coordinate with operator responders.
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Concept of Operations (Summary)

- All operations use **ICS under NIMS**. Establish an **Incident Command Post (ICP)** and, at minimum, an **Incident Commander (IC)**, **Safety Officer (SO)**, and **Operations Section Chief (OSC)**.
 - Implement **hot/warm/cold zones**, initiate a **Site Safety Plan (HASP)**, and transition to **Unified Command (UC)** when multiple authorities (OSFM/KSP/KYTC/local fire/HazMat/operator, etc.) have jurisdictional roles.
 - Use the **EOC/ESF-10** for resource ordering, public information via **PIO/JIC**, and state/federal coordination.
 - **Valve operations** on the pipeline are performed **only by the operator** unless otherwise directed by UC.
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Immediate Actions – Local Responders (Quick Checklist)

En route

- Approach **upwind/upgrade**; identify wind with flags/meters.
- Stage well away from visible vapor/jet flame; avoid **low structural overhangs** where gas can pocket.

On scene

- Establish **ICS**; assign **SO**; set **control zones**; start **air monitoring** (LEL/O₂/H₂S/CO minimum).
 - **Eliminate ignition sources**: vehicles, non-intrinsically safe devices, pilot lights, smoking, open flames; consider utility power isolation if directed by UC.
 - **Do not extinguish a primary pipeline flame** (it may be controlling the release). You may cool/protect exposures and manage **secondary/perimeter fires** per SO/OSC guidance.
 - Implement **protective actions** (evacuation/shelter-in-place) with ESF-2/ESF-13 support; for flammable gas atmospheres, use **knock-and-announce/PA** (avoid doorbells/phones).
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- **Notify immediately:**
 - **KyEM Duty Officer:** 1-800-255-2587
 - **Office of the State Fire Marshal (OSFM):** 1-502-573-0382
 - **Pipeline operator** (from nearest marker/dispatch database) – give name/title, call-backs, precise location (GPS), and safe meet point
 - **Railroad dispatch** if tracks traverse the hazard area—request a temporary traffic hold
- Integrate **operator representatives** into **Unified Command** upon verified arrival.
- Control access/perimeter; move non-responders **upwind**; coordinate EMS triage/transport.
- Indoors/structures: ventilate **from high points** when safe and directed by UC; monitor continuously for LEL before re-entry.

Safety notes

- Assume **H₂S** until ruled out; monitor continuously and select PPE accordingly.
- Gas can migrate to **attics, voids, trenches, and utility chases**; monitor before entry.
- Beware of **static** and **portable radio** ignition in hot/warm zones unless intrinsically safe.

Task Assignments & Responsibilities

Local Responders & Agencies

- Notify operator/KyEM/OSFM; maintain liaison until operator is on scene and **positively identified**.
- Establish **scene control**, zones, and ignition control; conduct **atmospheric monitoring** and rapid size-up.
- Order protective actions; coordinate evacuations/traffic with **KSP/KYTC/ESF-13**.
- Protect life and exposures; preserve the **primary flame** if present; manage secondary fires per UC.
- Protect **critical infrastructure** and waterways; coordinate public information via **PIO/JIC**.
- Document protective actions, meter readings, costs, and times.

State Agencies

Primary – Office of the State Fire Marshal (OSFM)

- Lead state coordination for **fire/explosion hazards** associated with natural gas pipeline incidents; integrate with operator/local UC.
- Assign duties among state agencies and coordinate with federal partners to support OSFM responsibilities.
- Provide **technical guidance** for fire suppression, hazard control, and public safety measures.
- Staff the **SEOC 24/7** as needed and deploy liaisons to the ICP/EOC.

Supporting – Division of Emergency Management (KyEM)

- Activate **SEOC** as needed; request/coordinate agency reps.

- **Area Managers:** on-scene/state liaison; resource coordination; situation reporting.
- Notify Governor if significant population impacts are likely; notify **FEMA Region IV** when federal support may be required.
- Provide **PIO/JIC** support; coordinate with **KOHS** for terrorism-related releases; liaise with **National Guard**.

Kentucky Army & Air National Guard

- Provide **security, manpower, and emergency communications**; SEOC liaison as requested.

KCCRB

- Behavioral health support for survivors/responders; SEOC liaison as needed.

KYTC – Division of Highways

- Coordinate **closures/detours** with KSP/IC; deploy **intrinsically safe** traffic control devices.
- Under DEP/UC direction, support protective works (e.g., temporary barriers) when appropriate.

JPSC – Kentucky State Police (and Department of Motor Vehicle Enforcement)

- Perimeter/traffic control, evidence protection; assist with **warnings/evacuations**; SEOC liaison.

Cabinet for Health & Family Services – DPH

- Coordinate **EMS/medical resources**; provide **public health guidance** on protective actions and ventilation/re-occupancy criteria; staff SEOC as needed.

Department of Agriculture

- Guidance on **animal safety** and protective actions; coordinate treatment/disposition of affected livestock if applicable.

Kentucky Office of Homeland Security (KOHS)

- Coordinate with federal partners for suspected/confirmed **terrorism** incidents; provide assistance as needed.

Volunteer Organizations

American Red Cross (ARC)

- When requested/accepted, provide **shelter, feeding, mass care, and responder support**.

Direction & Control

Direction and control follow **ESF-10** and **ICS/NIMS**. Local IC establishes command, with prompt transition to **Unified Command** including OSFM, the pipeline operator, and other agencies with jurisdiction. The **County/Local EOC** coordinates multi-agency support; the **SEOC** supports as needed.

Demobilization & After-Action

- Confirm shutdown/pressure normalization with operator and hazard clearance via monitoring.
 - Coordinate **re-entry criteria**, utility restoration, and public messaging.
 - Ensure responder **rehab/decon** and medical monitoring (as indicated).
 - KyEM facilitates an **After Action Report/Improvement Plan**; update this Annex/SOPs accordingly.
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Communications & Key Notifications

- **KyEM Duty Officer: 1-800-255-2587**
 - **OSFM: 1-502-573-0382**
 - **Pipeline Operator:** per nearest line marker/dispatch data (provide GPS and safe meet point)
 - **Railroad Dispatch:** if tracks cross the hazard area
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References

- **KRS 227.220** (State Fire Marshal authorities)
- **KRS 39A–39F** (Emergency Management)
- **49 CFR Parts 191 & 192** (Gas pipeline safety & reporting)
- **OSHA 29 CFR 1910.120** (HAZWOPER)
- **NFPA 54** (National Fuel Gas Code); **NFPA 56** (procs for fuel gas piping)
- The Pipeline Group – *Midwest Emergency Response Manual* (2007)
- **National Response Framework; NIMS**