New Mexico

H_2S Contingency Plan

2024

Papaya 10 State

#201H

32.500183, -103.462951

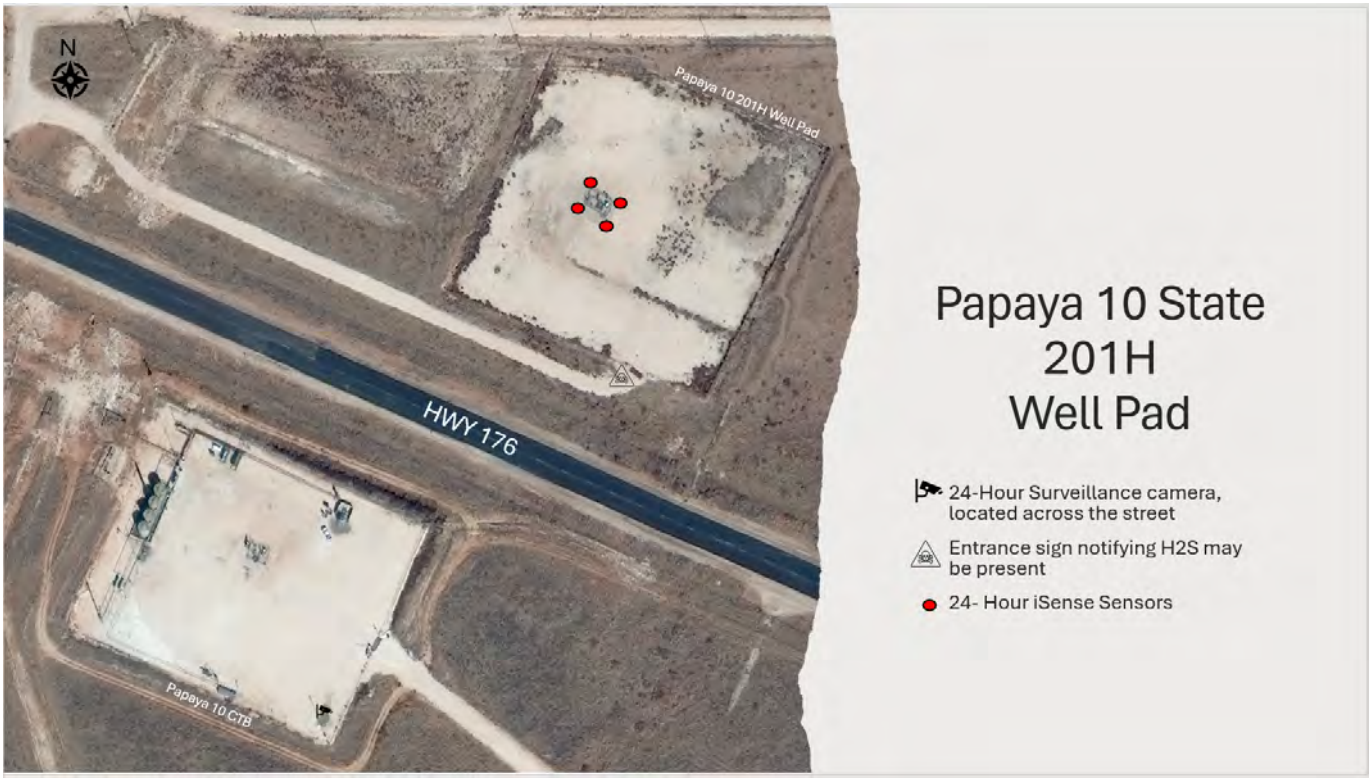
Lea County, NM

Scope

The EOG Resources, Inc. (EOG) Hydrogen Sulfide (H_2S) Contingency Plan (Contingency Plan) for the Papaya 10 State 201H well pad provides methods to alert and protect the public within the Area of Exposure of a release of a Potentially Hazardous Volume of H_2S from the Papaya 10 State 201H well pad. The Contingency Plan outlines emergency procedures for personnel at the Papaya 10 State 201H well pad to follow in the event of a release, describes the training and drills that will be conducted, and specifies coordination with state emergency plans and responders. Contingency plan will be reviewed annually and updated as needed.

Site Description

The Papaya 10 State #201H is an active well located in Unit D, Section 10, Township 21S, Range 34 E. This location is monitored with 24-hour surveillance camera, and iSense, a continuous methane monitoring technology.



Definitions

Area of Exposure – the area within a circle constructed with a point of escape at its center and the radius of exposure as its radius.

Potentially Hazardous Volume – the volume of H_2S gas of such concentration that:

- the 100-ppm radius of exposure includes a Public Area,
- the 500-ppm radius of exposure includes a Public Road, or
- the 100-ppm radius of exposure exceeds 3,000 feet.

Public Area – a building or structure that is not associated with the well, facility or operation for which the radius of exposure is being calculated and that is used as a dwelling, office, place of business, church, school, hospital or government building, or a portion of a park, city, town, village or designated school bus stop or other similar area where members of the public may reasonably be expected to be present.

Public Road – a federal, state, municipal or county road or highway.

Emergency Procedures

In the event of a release of H_2S above 100 ppm, EOG will begin the emergency shutdown (ESD) process for the facility via either the onsite ESD procedures or the central control room in order to stop additional flow of H_2S into the facility.

Emergency Shutdown Procedure (ESD) Procedure:

This site is equipped with Cygnet, allowing an emergency shutdown of the location to be conducted remotely from the 24-hour monitored Control Center. The Control Center has the capability to remotely shut in the well via ESD valve on the wellhead that will shut the well from flowing. These ESD valves are tested monthly.

In the event a remote ESD attempt fails, the closest H_2S trained employee equipped with H_2S personal protective equipment (PPE) and respirator will activate the ESD button located at the entrance of location.

The Contingency Plan will be activated if the ESD process fails to shut-in the well, a well control issue occurs or the H_2S levels exceed 100 ppm in the radius of exposure.

Roles and Responsibilities:

Incident Commander - the Foreman has overall responsibility in an emergency, will activate emergency procedures, and make critical decisions.

Communication Commander – the Control Center will call emergency services and issue a mass alert via email to notify personnel of the emergency at the facility. Communication Commander will notify on-call field and safety personnel to activate Contigency Plan via telephone.

Scene Supervisors - Lease Operators will control access to the facility and keep people away from unsafe areas. Additionally, the Lease Operators will notify New Mexico State Police to stop traffic ½-mile East/West of the facility and keep them informed of the status of the situation at the facility. No traffic will be allowed within the perimeter of the facility until the facility has been determined to be safe for re-entry by the Incident Commander.

Immediate Action Steps to be Taken by the Incident Commander/Scene Supervisors:

- Evacuate personnel at the facility to an upwind/crosswind location and account for all personnel. Personnel are trained to look at windsocks to determine wind direction.
- Eliminate potential ignition sources.
- Call Emergency Services (911) for any persons who are unresponsive or may be critically injured.
- Isolate the facility and prevent entry by additional persons (other than emergency responders) into the 100-ppm radius of exposure.
- Confirm with the Control Center that the emergency notification steps to relevant agencies have been initiated.
- Evacuate any Public Areas within the 100-ppm radius of exposure, if applicable.
- Notify the Incident Commander of the event, if not already aware.
- Notify the Regulatory group so that required release reporting can be timely made to the appropriate state agencies (NMAC 19.15.27, and19.15.28)
- Public officials will be briefed on any recommended road closures, evacuations, or shelter in place.
- Ambient air will be continuously monitored by onsite fixed detection monitors. Periodic monitoring by a handheld electronic monitor will be conducted in addition to the fixed detection. No persons will be allowed to reenter until the concentration has been verified to be below the OSHA permissible exposure limit of 20 ppm.

Coordination with State Emergency Plans

As described in the action steps listed in the previous section of the Contingency Plan, calling 911 and having the control center notify the relevant agencies starts the coordination process. Additionally, the necessary reports will be made to state agencies, and public officials will be briefed on evacuation, roadblocks, and shelter-in-place recommendations. The State Emergency Response Commission (SERC) and the Local Emergency Planning Commission (LEPC) may also be involved in coordinating emergency services under the Contingency Plan. EOG shall notify the New Mexico Energy, Minerals and Natural Resources Department (NMEMNRD), Oil Conservation Division (Division) upon a release of H2S requiring activation of the Contingency Plan as soon as possible, but no more than four (4) hours after Contigency Plan activation, recognizing that a prompt response should supersede notification. EOG shall submit a full report of the incident to the OCD on form C-141 no later than 15 days following the release requiring Contingency Plan activation (19.15.11.16 NMAC).

Per 19.15.11.9.B(2)(e) NMAC, New Mexico State Police shall be notified of H_2S Contingency Plan activation. EOG shall cooperate with the other involved emergency responders, such as the New Mexico State Police, local fire department, city police, Sheriff's Office, NMOCD, or other appropriate public emergency response agencies to manage an effective and safe response to the emergency.

Contact List for Eddy and Lea Counties

EOG Personnel

Control Room	24-hour Operation	432-848-9170
Medley Production Superintendent	Zack Jones	432-488-8556
Medley Foreman	Daniel Dunaway	575-390-7133
NM Safety Superintendent	Edward Charo	432-215-6388
TX Safety Superintendent	Marco Rocha	432-701-3313
Safety Supervisor	Ashley Mayfield	432-258-7998

*On call positions will step in during off days and vacations.

State Emergency Response Commission (SERC)

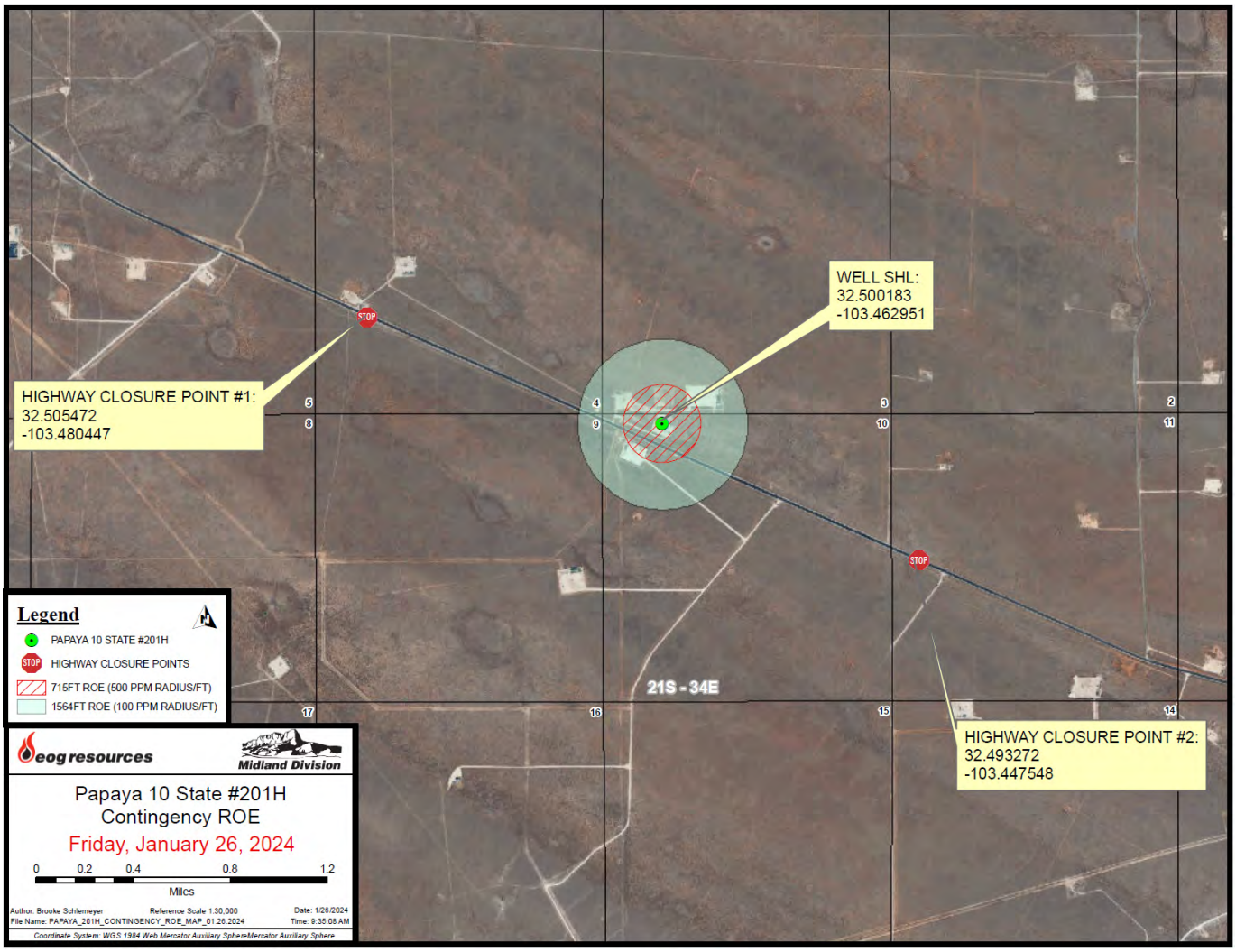
P.O. Box 27111
Santa Fe, NM 87502

(505) 250-7397
(505) 476-9635- Emergency

Law Enforcement	
Eddy County Sheriff	575-887-7551 or 911
Lea County Sheriff	575-396-3611 or 911
Hobbs Police Department	
300 N. Turner Street Hobbs, NM 88240	575-397-9265 or 911
New Mexico State Police	
5100 Jack Gomez Blvd. Hobbs, NM 88240	575-392-5880 or 911
National Response Center (NRC)	
2100 2nd St. SW Stop 7238 Washington, DC 20593	800- 424-8802
Lea County Emergency Management Director	
Lorenzo Velasquez 1019 E. Bender Blvd. Hobbs, NM 88240	575-391-2983 575-942-8222 (cell)
Fire Department	911
Bureau of Land Management	575-393-3612
New Mexico Oil Conservation Division	
Hobbs	575-241-7063
Santa Fe	505-476-3441
Hospitals	
Carlsbad Medical Center	575-887-4100
Nor-Lea Hospital District	575-396-6611
Hobbs Hospital	575-492-5000

Map

The map below identifies potentially affected public roads and depicts proposed evacuation routes and roadblock locations.



Required Signage and Facility Safety Equipment

Facilities where the gas contains H_2S in concentrations greater than 100 ppm shall have lease signs at the entrance to the location stating:

Danger
Hydrogen Sulfide Poison Gas
May Be Present

*Actual signs at the Papaya 10 State 201H

Signs shall meet the current ANSI Z535.1-2002 (Safety Color Code) guidelines.

Additionally, these locations will have windsocks or wind streamers to detect wind direction.

Fixed iSense monitors are present at the location. Location is not staffed 24 hours/day, but monitors are operational 24 hours/day.

Necessary safety equipment and supplies (e.g., personal H_2S monitors, SCBAs) are in workers' vehicles.

Ignition Procedures

If control of the facility is lost and ignition may occur, protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with NMOCD and local officials, including the NM State Police. NM State Police and fire officials will take over as incident command on scene of any major release.

Characteristics of Hydrogen Sulfide and Sulfur Dioxide

The properties of all gases are usually described in the context of seven major categories:

1. Color
2. Odor
3. Vapor Density
4. Explosive Limits
5. Flammability
6. Solubility (In water)
7. Boiling Point

H_2S is no exception. Information from these categories should be considered to provide a complete picture of the properties of the gas.

1. ***Color-Transparent***

H_2S is colorless so it is invisible. This fact simply means that you can't rely on your eyes to detect its presence, which makes this gas extremely dangerous to be around.

2. ***Odor- Rotten Eggs***

H_2S has a distinctive offensive smell, similar to "rotten eggs." For this reason, it earned its common name "sour gas." However, H_2S, even in low concentrations, is so toxic that it attacks and quickly impairs a person's sense of smell, so it could be fatal to rely on your nose as a detection device.

3. ***Vapor Density – Specific Gravity of 1.192***

H_2S is heavier than air, so it tends to settle in low-lying areas like pits, cellars, or tanks. If you are in a location where H_2S is known to exist, protect yourself. Whenever possible, work in an area upwind and keep to higher ground.

4. ***Explosive limits – 4.3% to 46%***

Mixed with the right proportion of air or oxygen, H_2S will ignite and burn or explode.

5. ***Flammability***

H_2S will burn readily with a distinctive clear blue flame, producing Sulfur Dioxide (SO_2), another hazardous gas that irritates the eyes and lungs.

6. ***Solubility- 4 to 1 Ratio with water***

H_2S can be dissolved in liquids, which means that it can be present in any container or vessel used to carry or hold well fluids including oil, water, emulsion, and sludge. The solubility of H_2S is dependent on temperature and pressure, but if conditions are right, simply agitating a fluid containing H_2S may release the gas into the air.

7. ***Boiling Point – (-76 degrees Fahrenheit)***

Liquefied H_2S boils at a very low temperature, so it is usually found as a gas.

Training Programs and Drills

When working in an area where H_2S may be encountered, specific training is provided to personnel in compliance with applicable regulations. All in-person training and drills are tracked via a QR code sign-in sheet. The code is scanned, and the attendee fills out the associated online form. The response is saved and transferred to a spreadsheet which is then stored on the shared EOG drive for access. Computer-based training (CBT) completion is tracked within the CTB software**.**

Basic Employee and Contractor Training:

- Employee and contractor H_2S training includes:
  - Hazards and characteristics of H_2S
  - Proper use and maintenance of personal protective equipment and life support systems
  - Proper use of H_2S detectors, alarms, and other warning systems
  - Location of briefing areas
  - Evacuation procedures and routes
  - First aid and rescue procedures
- H_2S refresher training is conducted annually.
- Personnel working at the Papaya 10 State 201H are provided with a copy of the Contingency Plan.
- Supervisory personnel are provided additional training related to their roles and responsibilities under the Contingency Plan.
- Onsite and/or classroom drills simulating a release of H_2S is conducted periodically to train on implementing the Contingency Plan.

No training of residents is necessary for the Papaya 10 201H well pad since there are no residential neighbors.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 405561

CONDITIONS

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 405561
	Action Type: [UF-H2S] H2S Contingency Plan (H2S Plan)

CONDITIONS

Created By	Condition	Condition Date
joel.stone	None	11/21/2024