ConocoPhillips

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HYDROGEN SULFIDE (H₂S) OPERATIONS

Contingency Plan
For
Permian Drilling Operations

ConocoPhillips Company
Mid-Continent Business Unit
Permian Asset Area

I. PURPOSE

The purpose of this Contingency Plan is to provide an organized plan of action for alerting and protecting the public following the release of a potentially hazardous volume of hydrogen sulfide. This plan prescribes mandatory safety procedures to be followed in the event of a release of H_2S into the atmosphere from exploration and production operations included in the scope of this plan. The extent of action taken will be determined by the supervisor and will depend on the severity and extent of H_2S release. Release of H_2S must be reported to the Drilling Superintendent and documented on the IADC and in Wellview.

II. SCOPE

This Contingency plan shall cover the West Texas and Southeastern New Mexico areas, which contain H2S gas and could result in a release where the R.O.E. is greater than 100 ppm at 50' and less than 3000' and does not include a public area and 500 ppm R.O.E. does not include a public road. Radius of exposure is defined as the maximum distance from the source of release that a specified calculated average concentration of H₂S could exist under specific weather conditions.

III. PROCEDURES

THIST EMPLOYEE ON DECILE
Assess the incident and ensure your own safety.
Note the following:
 Location of the incident. Nature of the incident. Wind direction and weather conditions. Other assistance that may be needed.
Call local supervisory personnel (refer to Section V: Emergency Call List) unti- personal contact is made with a person on the list.
Perform emergency assessment and response as needed. The response may include rescue and/or evacuation of personnel, shutting in a system and/or notification of nearby residents/public (refer to Section VII: Public Notification/Evacuation).
Secure the site.
Follow the direction of the On-scene Incident Commander (first ConocoPhillips supervisor arriving on-scene).
First Supervisor on Scene (ConocoPhillips On-scene Incident Commander)
Becomes ConocoPhillips' On-scene Incident Commander upon arrival to location.
—— Follow the principles of the D.E.C.I.D.E. process below to assess the incident. (Note wind direction and weather conditions and ensure everyone's safety).
DETECT the problem ESTIMATE likely harm without intervention CHOOSE response objectives IDENTIFY action options DO the best option EVALUATE the progress
Complete the Preliminary Emergency Information Sheet (refer to Section VIII: Forms/Reports).
Call your supervisor (refer to Section V: Emergency Call List).

Perform emergency response as necessary. (This may include notification & evacuation of all personnel and/or nearby residents/public (refer to Section VII: Public Notification/Evacuation), requesting assistance from ConocoPhillips Public Notification/Evacuation), requesting assistance from ConocoPhillips personnel or outside agencies (refer to Section V: Emergency Call List) and personnel or outside agencies (refer to Section V: Emergency Call List) and obtaining any safety equipment that may be required (refer to Section IV: Emergency Equipment and Maintenance). Notify appropriate local emergency response agencies of the incident as needed. Also notify the appropriate regulatory agencies. (refer to Section V: Emergency Call List).
Ensure site security.
 Ensure site security. Set barricades and /or warning signs at or beyond the calculated 100 ppm H₂S radius of exposure (ROE). All manned barricades must be equipped with an H₂S monitor and a 2-way radio.
detaging area as determined.
—— Set roadblocks and staging area as determined.
—— Set roadblocks and one of the stablish the Incident Command Structure by designating appropriate on-scene response personnel as follows:
Recording Secretary Public Information Officer Safety/Medical Officer Decontamination Officer
—— Have the "Recording Secretary" begin documenting the incident on the "Incident —— Have the "Recording VIII; Forms/Reports).
Have the "Recording Secretary" Log" (refer to Section VIII: Forms/Reports).
Log" (refer to become a last tree your radio tower stating
Log" (refer to Section VIII. To an all channels that use your radio tower stating ————————————————————————————————————
—— Perform a Site Characterization and designate the following:
Hot Zone Hazardous Area Warm Zone Preparation & Decontamination Area Cold Zone Safe Area
·

AND

	On-Scene Incident Command Post Public Relations Briefing Area Staging Area Triage Area Decontamination Area	(Cold Zone) (Cold Zone) (Cold Zone) (Cold Zone) (Warm Zone)
	Refer all media personnel to ConocoPhillips' On-Scene Public Info Officer (refer to Section VI: Public Media Relations).	ormation
	Coordinate the attempt to stop the release of H ₂ S. You should consupstream and downstream valves to shut-off gas supply sources, as or clamping leaks. Igniting escaping gas to reduce the toxicity haz used ONLY AS A LAST RESORT. (It must first be determined be safely ignited, taking into consideration if there is a possibility flammable atmosphere.)	ard should be if the gas can
	Once the emergency is over, return the situation to normal by:	
	Confirming the absence of H ₂ S and combustible gas through	out the area,
	Discontinuing the radio silence on all channels, stating that incident is over,	the emergency
	Removing all barricades and warning signs,	٠
	Allowing evacuees to return to the area, and	
	Advising all parties previously notified that the emergency l	nas ended.
	Ensure the proper regulatory authorities/agencies are notified of th to Section V: Emergency Call List).	e incident (refer
	Clean up the site. (Be sure all contractor crews have had appropri training.)	ate HAZWOPER
	Report completion of the cleanup to the Asset Environmentalist. (Environmentalist will report this to the proper State and/or Feder	al agencies.)

Emergency Procedures . Responsibility

In the event of a release of potentially hazardous amounts of H2S, all personnel will immediately proceed upwind/ crosswind to the nearest designated briefing area. The COPC Drilling Rep. will immediately, upon assessing the situation, set this into action by taking the proper procedures to contain the gas and notify appropriate people and agencies.

- 1. In an emergency situation, the Drilling Rep. on duty will have complete responsibility and will take whatever action is deemed necessary in an emergency situation to insure the personnel's safety, to protect the well and to prevent property damage.
- 2. The Toolpusher will assume all responsibilities of the Drilling Rep. in an emergency situation in the event the Drilling Rep. becomes incapacitated.
- 3. Advise each contractor, service company, and all others entering the site that H2S may be encountered and the potential hazards that may exist.
- 4. Authorize the evacuation of local residents if H2S threatens their safety.
- 5. Keep the number of persons on location to a minimum during hazardous operations.
- 6. Direct corrective actions to control the flow of gas.
- 7. Has full responsibility for igniting escaping gas to reduce the toxicity hazard. This should be used ONLY AS A LAST RESORT.

IV. EMERGENCY EQUIPMENT and MAINTENANCE

Emergency Equipment Suppliers

Total Safety US Odessa, Tr/ Hobs, NM

H₂S monitors
Breathing air includes cascade systems
Fire fighting equipment
First aid and medical supplies
Safety equipment

432.561.5049 Odessa, Tx. 575.392.2973 Hobbs, NM

Safety International - Odessa, Tx.

H₂S monitors
Breathing air includes cascade systems
First aid and medical supplies
Safety equipment
H2S Specialist

432.580.3770

Indian Fire & Safety - Hobbs, NM

H₂S monitors Breathing air including cascade systems trailer mounted 30 minute air packs Safety Equipment 575.393.3093

Leek Fire & Equipment Company - Odessa, Tx.

H₂S monitors Fire fighting equipment First aid and medical supplies Safety equipment 432,332,1693

Emergency Equipment and Maintenance (continued)

General Information

Materials used for repair should be suitable for use where H₂S concentrations exceed 100 ppm. In general, carbon steels having low-yield strengths and a hardness below RC-22 are suitable. The engineering staff should be consulted if any doubt exists on material specifications.

Appropriate signs should be maintained in good condition at location entrance and other locations as specified in Texas Rule 36 and NMOCD Rule 118.

All notification lists should be kept current with changes in names, telephone numbers, etc.

All shutdown devices, alarms, monitors, breathing air systems, etc., should be maintained in accordance with applicable regulations.

All personnel working in H_2S areas shall have received training on the hazards, characteristics, and properties of H_2S , and on procedures and safety equipment applicable for use in H_2S areas.

H2S Safety Equipment and Monitoring Systems

An H2S emergency response package will be maintained at locations requiring H2S monitoring. The package will contain at a minimum the following:

- 3 Fixed H2S sensors located as follows:
 - 1 on the rig floor
 - 1 at the Bell Nipple
 - 1 at the Shale Shaker or Flowline
- 1 Entrance Warning Sign located at the main entrance to the location, with warning signs and colored flags to determine the current status for entry into the location.
- 2 Windsocks that are clearly visible.
- 1 Audible warning system located on rig floor
- 2 Visual warning systems (Beacon Lights)
 - 1 located at the rig floor
 - 1 located in the mud mixing room

Note: All alarms (audible and visual) should be set to alarm at 10 ppm.

- 2 Briefing areas clearly marked
 - 2 SCBA's at each briefing area
 - 1-SCBA located at the Drilling Reps office

Note:

- 1. All SCBA's must be positive pressure type only!!!
- 2. All SCBA's must either be Scott or Drager brand.
- 3. All SCBA's face pieces should be <u>size large</u>, unless otherwise specified by the Drilling Supervisor.
- 5 Emergency Escape Paks located at Top Doghouse.

Note: Ensure provisions are included for any personnel working above rig floor in derrick.

1—<u>Tri or Ouad gas monitor</u> located at the Drilling Reps office. This will be used to determine if the work area if safe to re-enter prior to returning to work following any alarm.

V. EMERGENCY CALL LIST:

The following is a <u>priority</u> list of personnel to contact in an emergency situation:

Supervisory Personnel	Office No.	Home	Cellular
R.W. "Cottton" Hair Permian Drilling Supt.	432.368.1302	432.563.9467	432.556.9116
Tom Samarripa WSER	423.368.1263	432.367.4961	432.556.9113
David Cook Permian Asset Operations Manager	432.368.1100		432.978.9804
Leo Gatson Safety and Environmental Coordinator	432.368.1248		432.631.066
Lynn Dooley Drilling Coordinator	832,486.2567	281.225.8063	281.435.3517

EMPRGENCY CALLEIST: State Officials

Regulatory Agencies

Texas Railroad Commission (District 8)

Office: 432.684.5581

Midland, Texas

New Mexico Oil Conservation Commission

Office: 575.393.6161

P. O. Box 1980

Hobbs, New Mexico 88240-1980

Bureau of Land Mngt.

Carlsbad Field Office

620 E. Greene St.

Carlsbad, NM 88220

Office: 575.234.5972

Fax: 575.885.9264

EMERGENCY CALL LIST: Local Officials

Refer to the Location Information Sheet

Note: The LIS should include any area residents (i.e. rancher's house, etc)

VI. Public Media Relations

The Public Information Officer becomes the ConocoPhillips on-scene contact (once designated by the Phillips On-Scene Incident Commander).

Confers with Houston Office's Human Relations Representative, who is responsible for assisting in the coordination of local public relations duties.

Answer media questions honestly and <u>only with facts</u>, do not speculate about the cause, amount of damage, or the potential impact of the incident of the community, company, employees, or environment. (This information will be formally determined in the incident investigation.)

If you are comfortable answering a question or if you are unsure of the answer, use terms such as the following:

- "I do not know. I will try to find out."
- I am not qualified to answer that question, but I will try to find someone who can."
- "It is under investigation."

Note:

Do Not Say "No Comment." (This implies a cover-up.)

Do Not Disclose Names of Injured or Dead! Confer with the Houston Office's Human Relations Representative, who is responsible for providing that information.

VII. Public Notification/Evacuation

Alert and/or Evacuate People within the Exposure Area

1. <u>Public Notification</u> – If the escape of gas could result in a hazard to area residents, the general public, or employees, the person <u>first</u> observing the leak should take <u>immediate</u> steps to cause notification of any nearby residents. The avoidance of injury or loss of life should be of prime consideration and given top priority in all cases. If the incident is of such magnitude, or at such location as to create a hazardous situation, local authorities will be requested to assist in the evacuation and roadblocks of the designated area until the situation can be returned to normal.

Note: Bilingual employees may be needed to assist in notification of residents.

2. Evacuation Procedures – Evacuation will proceed upwind from the source of the release of H₂S. Extreme caution should be exercised in order to avoid any depressions or low-lying areas in the terrain. The public area within the radius of exposure should be evacuated in a southwesterly and southeasterly direction so as to avoid the prevailing southern wind direction.

Roadblocks and the staging area should be established as necessary for current wind conditions.

Note: In all situations, consideration should be given to wind direction and weather conditions. H₂S is heavier than air and can settle in low spots. Shifts in wind direction can also change the location of possible hazardous areas.

VIII. FORMS & REPORTS

- I. Incident Log
- II. Preliminary Emergency Information Sheet
- III. Emergency Drill Report
- IV. Onshore Hazardous Material Spill/Release Report Form
- V. Immediate Report of Occupational Injury or Illness Report of Accident-Public Contractor Report of Loss or Damage to Company Property Report of Automotive Incident

ConocoPhillips, Inc. will comply with Onshore Order No. 2 and No. 6 for working in an H2S environment or a potential H2S environment.

I. Hydrogen Sulfide Training

All contractors and subcontractors employed by ConocoPhillips will receive or have received training from a qualified instructor within the last twelve months in the following areas prior to commencing drilling operations on this well.

- 1. The hazards and characteristics of hydrogen sulfide (H2S)
- 2. Safety precautions.
- 3. Operations of safety equipment and life support systems.

In addition, contractor supervisory personnel will be trained or prepared in the following areas:

- 1. The effect of H2S on metal components in the system, especially where high tensile strength tubulars are to be used.
- Corrective action and shutdown procedures when drilling or reworking a well, blowout prevention and well control procedures, if the nature of work performed involves these items.
- 3. The contents and requirements of the contingency plan when such plan is required.

II. H2S EQUIPMENT AND SYSTEMS

1. Safety Equipment

The following minimum safety equipment will be on location:

- A. Wind direction indicators placed near rig floor/mud return lines and at points along the perimeter of the location to allow visibility of at least one indicator from any point on location.
- B. Automatic H2S detection alarm equipment (both audio and visual)
- C. Clearly visible warning signs. Signs will use the words "POISON GAS" and "CAUTION" with a strong color contrast,
- D. Protective breathing equipment will be located in the doghouse and at briefing areas on location.
- 2. Well Control Systems
 - A. Blowout Prevention Equipment

Equipment includes but is not limited to:

- 1. Pipe rams to accommodate all pipe sizes
- 2. Blind rams
- 3. Choke manifold
- 4. Closing Unit
- 5. Flare line and means of ignition

B. Communication

The rig contractor will be required to have two-way communication capability. ConocoPhillips will have either land-line, satellite phone, microwave phone, or mobile (cellular) telephone capabilities.

C. Mud Program

The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices and the use of H2S scavengers when appropriate will minimize hazards when penetrating H2S bearing zones.

D. Drill Stem Tests

Any planned drill stem test will be cancelled if H2S is detected prior to such test. In the event that H2S is detected during testing, the test will be terminated immediately.

ConocoPhillips Emergency Contact Phone Numbers

ConocoPhillips (281)293-3600 **Drilling Superintendent** Cotton Hair work (432)368-1302 (432)556-9116 Safety (WSER) work (432)368-1263 Tom Samarripa (432)556-9113 **Drilling Engineer** Jason Tilley work (832)486-2919 (281)684-4720 Regulatory Contact Celeste Dale (432)688-6884

Emergency Numbers

Hospital: Lea Co. Regional Medical Center(Hobbs) (575)492-5000 Ambulance: Hobbs Fire Dept. (575)397-9308 Air Ambulance: Care Star (888)624-3571 Aero Star (800)627-2376 Fire Dept (Hobbs) (575)397-9308 (Maljamar non-emerg) (575)676-4100 State Police: (Artesia) (575)748-9718 (Hobbs) (575)392-5580 Emerg (575)392-5588 Sheriff: (Lovington) (575)396-3611 Police: (Lovington) (575)396-5166 NM OCD (575)393-6161 (575)370-7106 **Emerg BLM** (575)393-3612 fax (575)393-4280 New Mexico Emerg Response Comm(Santa Fe) (505)476-9600 **24HR** (505)827-9126 New Mexico State Emerg Ops Ctr (505)476-9635 National Emerg Response Center (Washington, DC) (800)424-8802

Recommended Telephone Procedures for Emergencies

- 1 State emergency situation
- 2 Give your full name, company & phone number
- 3 Give cause of injury and condition of injured
- 4 Provide good directions to location or highway
- 5 Send vehicle to meet EMS at highway or landmark
- 6 Stay by phone until EMS arrives on location