

**Nearburg Producing Company**

**3300 N A St., Bldg 2, Suite 120  
Midland, TX 79705**

**Hydrogen Sulfide (H<sub>2</sub>S) Contingency  
Plan**

**For**

**Kudu 9 Federal #7  
1980 FSL and 990 FWL  
Sec 9, 19S, 33E  
Lea County, New Mexico**

**PUBLIC PROTECTION PLAN  
NEARBURG PRODUCING COMPANY**

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# **PUBLIC PROTECTION PLAN**

## **NEARBURG PRODUCING COMPANY**

### **1. PURPOSE**

This plan is intended to protect the health and safety of the public, contractors and Nearburg Producing Company (NPC) personnel should an unanticipated release of a potentially hazardous volume of Hydrogen Sulfide (H<sub>2</sub>S) occur.

Further to:

- Comply with the Bureau of Land Management's (BLM) Onshore Oil and Gas Operations Onshore Oil and Gas Order No. 6, Hydrogen Sulfide Operations (43 CFR Part 3160).
- Comply with the State of New Mexico Oil Conservation Division's (NMOCD) rule 19 NMAC 15.C 118.
- Assure proper notification of the appropriate parties and agencies.

### **2. SCOPE**

The provisions of this document are intended to address Hydrogen Sulfide (H<sub>2</sub>S) releases and H<sub>2</sub>S emergencies at Nearburg Producing Companies production batteries and all surrounding operated field locations in the McKittrick Hills Field. Facilities for which calculations indicate a potential hazardous volume of H<sub>2</sub>S could occur have additional site specific response information and radius of exposure drawn on the attached plat map. The field is located approximately 20 miles west of Carlsbad, New Mexico (Eddy County).

This plan is intended to be used in conjunction with the Emergency Response plan that is available at the Artesia Field Office and applies to RMS Level 1 incidents.

### **3. DEFINITIONS**

**All Clear** - Notification of effected personnel, by the response leader, that the incident has ended and the area is safe to re-enter.

**A Potentially Hazardous Volume** - a volume of Hydrogen Sulfide (H<sub>2</sub>S) gas of such concentrate that:

- The 100-ppm ROE includes any public area.
- The 500-ppm ROE includes any public road.
- The 100-ppm ROE exceeds 3,000 feet.

**Facility** – Equipment involved in producing, processing, or transporting natural gas and/or crude oil, including the property to the edge of the pad or fence.

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**Hydrogen Sulfide Gas (H<sub>2</sub>S)** – is extremely flammable, colorless, poisonous gas that may occur naturally as a component of production streams, such as crude oil, produced water and natural gas. At low concentrations it has a rotten egg odor, but at higher concentrations deadens the sense of smell. Its specific gravity is heavier than air giving it a tendency to collect in low-lying areas on still days. The permissible exposure limit is 10 ppm and the short term exposure limit is 15 ppm. It is considered to be immediately dangerous to life and health at 300 ppm. H<sub>2</sub>S is readily dispersed in air and is water soluble.

**ICS (Incident Command System)** – A team based concept for emergency response in which roles and responsibilities are predetermined.

**Incident Commander (IC)** – Senior Nearburg Producing Company employee in charge of an emergency response.

**Incipient Stage Fire** – A fire in the beginning or very early stages of development, which can be effectively extinguished by one or more persons with portable fire fighting equipment.

**Muster Site** – A pre-defined staging or meeting area.

**RMS Level I** – an emergency that can be reasonably addressed by Artesia Area Office in which the incident occurs and that can be resolved in approximately two days or less.

**ROE (Radius of Exposure)** – The radius constructed with the point of escape (of gas) as its starting point and its length calculated using the Pasquill-Gifford derived equation or computer modeling where the H<sub>2</sub>S concentration is greater than 10%.

**PPM** – Parts per Million

**Public Area** – Any building or structure that is not associated with the well, facility or operation for which the ROE is being calculated and that is used as a dwelling, office, place of business, church, school, hospital or government building, or any 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** – Any federal, state, municipal or county road or highway.

**Serious Incident** – An event which results or has the potential to result in severe personal injury and/or significant equipment damage.

**Sulfur Dioxide (SO<sub>2</sub>)** – A heavy colorless toxic gas that is formed when hydrogen sulfide is burned. It has a pungent odor and is a respiratory irritant. The permissible exposure limit is 2 ppm, the short term exposure limit is 5 ppm. It is considered to be immediately dangerous to life and health at 100 ppm. SO<sub>2</sub> is readily dispersed in air and is water soluble.

**Total Personnel Evacuation** – An evacuation of all persons (contract employees, or visitors) from the emergency area to a muster area.

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### **4. THE PLAN**

#### **Training:**

All personnel (company, contractors and sub-contractors) working in the field for NPC are required to complete hydrogen sulfide training before beginning work and annually thereafter.

Training on the contents of this plan shall be provided to all NPC and appropriate contract personnel working for NPC:

- whenever the employees' responsibilities or designated actions under the plan change,
- whenever the contents of the plan are changed/revised
- whenever a new employee begins employment, and
- periodically as needed for all employees.

Nearburg Producing Company supervision is responsible for this training.

#### **Orientation:**

All persons visiting or working at Indian Basin shall receive an orientation covering the following minimum items:

- ☐ What types of emergencies are possible,
- ☐ What the emergency evacuation alarm sounds like in the gas plant,
- ☐ How to report an incident/emergency,
- ☐ Who will be in charge during an emergency,
- ☐ How to safely evacuate the plant, and
- ☐ Where to assemble so that all persons can be accounted for.

The NPC representative responsible for the contractors or visitors shall conduct the orientations and shall document attendees and dates.

#### **H2S Monitors:**

All personnel working at the Indian Basin are required to wear personal H2S monitor at all times when working in the plant or field. Monitors should have a vibrating alarm if used in high noise areas.

#### **Activation:**

Phase I – activated when:

1. Sustained H2S concentration reaches 10 parts per million (ppm) in any work area and the source is not readily identified and/or controllable.
2. Continuous H2S levels are detected at 10 ppm (or greater) at any public road, near an occupied residence or bus stop, and the source is not readily identified and/or immediately controlled.

Phase II – activated when:

1. A potentially hazardous volume of H2S is detected.
2. When sustained H2S concentrations exceed 50 ppm at any facility boundary.

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### Phase I:

Upon discovery on-site personnel should:

- ☐ Make others on-site aware of the presence of H2S and leave the area upwind or crosswind to a safe location. (Pre-determine if a pre-job tailgate meeting was conducted).
- ☐ Prevent unauthorized persons from entering the area. Request assistance if needed.
- ☐ If a residence or other public area is in the vicinity, monitor for H2S to ensure exposure is less than 10 ppm. Notify supervisor if higher exposures are noted or if any other questions arise about steps necessary to protect these sensitive areas.
- ☐ If considering re-entering the area to assess the H2S source, ensure you have been properly trained to respond. Use an H2S monitor with digital display (preferably a multi-gas monitor) and have a supplied air respirator (SAR) and back up person with SAR readily available. Consider notification of supervisor if appropriate.
- ☐ Proceed with caution. If H2S concentration reaches 10 ppm in your breathing zone, back out and use SAR to re-enter. **If H2S concentration reaches 50 ppm at the facility boundary, immediately notify supervision.**
- ☐ If source can be safely controlled, monitor area to ensure H2S levels are below 10 ppm. End response here and sound all clear to allow others to re-enter the area. Report length of release and volume to supervisor.
- ☐ If the source of H2S cannot be identified and/or controlled, or if you cannot do so without exposing yourself to danger, leave the area to a safe distance.
- ☐ Notify supervision.
- ☐ Continue to monitor for H2S and maintain site security until instructed by supervision to do otherwise.

Supervision:

- ☐ Gather necessary information to determine the course of action and level of response.
- ☐ Mobilize any additional man power or equipment necessary.
- ☐ Ensure Phase II measures are implemented if appropriate.
- ☐ Continue to monitor situation until incident is over.
- ☐ Make notifications if required.
- ☐ Complete reports if required.
- ☐ Investigate as indicated.

### Phase II

Upon discovery on-site personnel should:

- ☐ Make others on-site aware of the presence of H2S and leave the area upwind or crosswind to a safe location. (Pre-determined if a pre-job tailgate meeting was conducted).
- ☐ Prevent authorized persons from entering the area.
- ☐ **Notify Supervisor.**

Supervision:

- ☐ Initiate the Incident Command System as deemed appropriate.
- ☐ Mobilize the resources necessary to maintain site security and provide for the protection of personnel and the public.
- ☐ Issue warnings to all NPC personnel by radio and/or phone (IB Contact List) to make them aware of the incident and its location. Have non-essential personnel leave the area. If deemed necessary, order a total personnel evacuation of the area.

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- ☐ Notify non-company personnel known to work or reside in the area (IB Contact List). If necessary to ensure their safety, dispatch NPC personnel with the appropriate monitor, supplied air respirators and means of communication to these locations. (*Appendix B*)
- ☐ Have NPC personnel set up road blocks to prevent unauthorized entry into impacted areas until relieved by law enforcement or other authorized personnel.
- ☐ Make all appropriate notifications to NPC, Federal, State and local authorities.
- ☐ When the release has been contained and monitoring indicates the area is safe to re-enter, terminate operations and sound the all clear.
- ☐ Complete records if required.
- ☐ Investigate as indicated.
- ☐ For spills, well blowouts, fires, natural disasters and terrorist or bomb threats

All other personnel not involved in the immediate response:

- ☐ If a total evacuation is ordered, report to the incident command center or nearest muster site to which you have safe access. (See Appendix A for muster site locations)
- ☐ Ensure all contract personnel working for you (or in your area) are accounted for and have them report to a safe muster site.
- ☐ Senior employee at each muster site should make a roster of all personnel reporting to that muster site and be prepared to make it available to the incident commander (IC).
- ☐ Maintain communication with the IC and be prepared to offer assistance as it is requested.


### **Ignition of H<sub>2</sub>S:**

While no uncontrollable release of H<sub>2</sub>S is anticipated, should ignition of gas be necessary for the protection of personnel or the public, the determination would be made by the NPC Incident Commander. The method of ignition will maintain the safety of the person performing this task as the primary concern. The most likely method would be the use of a flare gun from a safe distance.

If this becomes necessary, monitoring will include sulfur dioxide (SO<sub>2</sub>) in addition to H<sub>2</sub>S.

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**6. APPROVALS**

Approved by: Name:  Date: 6.9.05  
Title: Drilling Manager



**NEARBURG PRODUCING COMPANY  
REGULATORY CONTACTS**

Agency	Contact Name		Division/Area	Main Phone #	Cell Phone	Home Phone #
	First	Last				
NMOCD	Emergency Number		District 1	505-370-7106		
NMOCD	Field Rep On-Call		District 1	505-370-7106		
NMOCD	Chris	Williams	District 1	505-393-6161	505-370-3182	
NMOCD	Sylvia	Dickey	District 1	505-393-6161		
NMOCD	Elidio	Gonzales	District 1	505-393-6161	505-370-3177	
NMOCD	Buddy	Hill	District 1	505-393-6161	505-370-3180	
NMOCD	Larry	Johnson	District 1	505-393-6161	505-370-3184	
NMOCD	Lori	Wortenberhy	Santa Fe Division Ofc.	505-827-7131	505-476-3460	505-466-0134
NMOCD	Ed	Martin	Santa Fe Division Ofc.	505-827-7131	505-476-3492	505-685-4056
NMOCD	Roger	Anderson	Santa Fe Division Ofc.	505-827-7131	505-476-3490	505-471-2017
NM State Police			District 1, Hobbs	505-392-5588		
BLM			Hobbs	505-393-3612		
US Coast Guard			National Response Center	800-424-8802		
NMED			Air Quality Bureau	505-827-1494		
	State Emergency Response Center			505-827-9126		
NM OSHA	New Mexico OSHA Ofc.			505-827-2850		

## EMERGENCY SERVICES

Service Provider	Description	Main Phone	
<b>General Emergency</b>	<b>Police, Fire, Ambulance</b>	<b>911</b>	
Hobbs Police, Fire, Ambulance Service		505-397-9265	
Lea Regional Hospital	Medical Services	505-392-1979	
Hobbs Fire Dept.	Fire Control	505-397-9308	
Lea County Sheriff		505-394-2020	

**NEARBURG PRODUCING COMPANY  
EMERGENCY RESPONSE PLAN**

<b>Position</b>	<b>Office Phone</b>	<b>Cell Phone #</b>	<b>Home Phone #</b>
<b>Drilling Superintendent</b>			
Butch Willis	432-686-8235 (223)		
<b>Production Superintendent</b>			
Matt Lee	505-746-0422	505-365-6662	505-746-0932
<b>Operations</b>			
Roger King	505-746-0422	505-361-3605	505-885-3605
Rick Foutch	505-746-0422	505-361-4211	505-887-7844
Jerry Stark	505-746-0422	505-365-4672	505-746-3862
<b>Planning Section</b>			
Fred White	214-739-1778	469-644-1326	972-931-8845
Bob Shelton	432-686-8235 (214)	432-682-3100	432-528-6134
<b>Public Affairs</b>			
Bob Shelton	432-686-8235 (214)	432-682-3100	432-528-6134