GW - 005

H_2S CONTINGENCY PLAN

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, September 22, 2011 9:50 AM
To: Sanchez, Daniel J., EMNRD
Cc: Jones, William V., EMNRD; VonGonten, Glenn, EMNRD; Gonzales, Elidio L, EMNRD; Whitaker, Mark A, EMNRD
Subject: Targa Eunice Middle Plant (GW-005) & Acid Gas Injetion Well (API# 30-025-21497) at the South Booster Station (GW-344) MIT Passed OCD Inspection This Morning

Daniel:

OCD received confirmation from the Hobbs District this morning that the MIT performed on the leaky line was witnessed by Mark Whitaker this morning passed inspection. The AGI Well is now in operation.

EL Gonzales said the final C-103 report and all applicable forms will be posted to the API# (see in above subject) Well File upon receipt and probably by COB next Tuesday.

Please contact E.L. Gonzales if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, September 07, 2011 6:42 AM
To: Chavez, Carl J, EMNRD; VonGonten, Glenn, EMNRD
Cc: Gonzales, Elidio L, EMNRD; Sanchez, Daniel J., EMNRD; Jones, William V., EMNRD
Subject: RE: Targa 30-025-21497 (GW-344) Targa South Booster

Glenn, et al.:

Re: Targa Acid Gas Injection Well Start-up

EL just clarified that the injection will commence on Thursday, September 8, 2011.

Carl J. Chavez, CHMM
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http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Chavez, Carl J, EMNRD
Sent: Wednesday, September 07, 2011 6:09 AM
To: VonGonten, Glenn, EMNRD
Cc: Gonzales, Elidio L, EMNRD
Subject: FW: Targa 30-025-21497 (GW-344) Targa South Booster

FYI. It appears Targa will begin injecting Acid Gas on Wednesday, August 24, 2011.

Carl J. Chavez, CHMM
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http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Herrera, Cindy, EMNRD
Sent: Friday, September 02, 2011 9:08 AM
To: Sanchez, Daniel J., EMNRD; Chavez, Carl J, EMNRD; Griswold, Jim, EMNRD
Cc: Gonzales, Elidio L, EMNRD
Subject: Targa 30-025-21497

For your information. If you have any questions, please feel free to call EL Gonzales.
Thanks,

TARGA

Targa Midstream Services Limited Partnership
6 Desta Drive, Suite 3300
Midland, TX 79705
432.688 0555

www.targaresources.com

Certified Mail: 7010 3090 0001 8450 9696

HOBBS OCD

SEP 01 2011

RECEIVED

August 29, 2011

Mr. Elidio Gonzales
Hobbs OCD District 1
1625 North French Drive
Hobbs, NM 87240

RE: Targa Midstream Services LLC
Eunice Plant Acid Gas Injection Well
Administrative Order SWD-1161, Case No. 14575

Dear Sir:

Per the above mentioned Administrative Order dated February 23, 2009, first paragraph, page 3 of 4, Targa is providing written notice of the date of commencement of injection to the Division's District 1 Office. Targa started the equipment and injected water and acid gas on Wednesday August 24, 2011. That is the date injection commenced. Also commencing that date Targa shall submit monthly reports of the disposal operations on Division form C-115, in accordance with Division Rules 26.13 and 7.24.

If you have any questions, or need additional information, please contact me at cwrangham@targaresources.com or (432)-688-0542.

Sincerely,

Cal Wrangham
Targa Resources ES&H Manager

cc: E. Hawkins-Targa Legal Senior Counsel
B. Little-Eunice Area Manager
R. Woodell-ES&H Specialist
J. Keiser-Assistant Vice-President ES&H

Chavez, Carl J, EMNRD

From: Wrangham, Calvin W. [CalvinWrangham@targaresources.com]
Sent: Thursday, March 31, 2011 12:32 PM
To: Chavez, Carl J, EMNRD; Hudson, Matt
Cc: VonGonten, Glenn, EMNRD; Lowe, Leonard, EMNRD; Griswold, Jim, EMNRD
Subject: RE: GW-003 and GW-004 H2S CPs

Carl,
Targa is the operator of the Targa Eunice Plant (GW-005), Eunice North Compressor Station (GW-345), and South Eunice Compressor Station (GW-344). As you stated below these facilities are covered in an already submitted H2S CP.

The original GW Discharge plans for North CS (GW-004) and South CS (GW-003) were retained by Chevron to cover the environmental projects occurring at those two sites. New DP numbers were issued to Targa for the current operations, North CS (GW-345 and for South CS GW-344).
As stated above the current operations at these facilities concerning H2S CP are covered by Targa's Plan referring to GW-005, GW-344 and 345.

Targa is in the process of adding a acid gas injection well at the Monument Plant (GW-025) and are in the process of renewing the H2S CP for that facility to cover the existing and new processes. The Buckeye Compressor Station (GW-029) is part of the Monument Plant gathering system so that facility will be included in the Monument H2S CP.

Targa also operates The Saunders Plant (GW-026) and are in the process of renewing the H2S CP for that facility. The Vada Compressor Station (GW-027) is part of the Saunders Plant gathering system so that facility will be included in the Saunders H2S CP.

Hope this helps clarify the plans and facilities covered.

Thanks, Cal.

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, March 31, 2011 12:08 PM
To: Hudson, Matt
Cc: Wrangham, Calvin W.; VonGonten, Glenn, EMNRD; Lowe, Leonard, EMNRD; Griswold, Jim, EMNRD
Subject: GW-003 and GW-004 H2S CPs

Matt:

Good morning. Subsequent to our meeting with Chevron USA, Inc. (Chevron) this morning regarding the above subject facilities, please find attached the letters that were mailed to you, but as you indicated, Chevron deals with just the environmental aspects of the facilities and Targa is the operator who would be responsible for any H2S CP. In addition, as we discussed, Targa has already submitted an H2S CP for the GW-005 Middle GP, which will cover all of the above subject facilities including possibly GWs-29 344 of Targa.

Please respond to this e-mail with any clarifications of Chevron's involvement with the H2S CP aspects at the facilities mentioned above. Please contact me if you have questions. Thank you.

Xc: OCD Online "GWs 3, 4, 29 and 344" at "H2S Contingency Plan" Thumbnail

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.
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New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Brett F. Woods, Ph.D.
Acting Cabinet Secretary

Daniel Sanchez
Acting Division Director
Oil Conservation Division

March 1, 2011

Ms. Cindy Klein
ES&H Specialist
Targa Midstream Services, L.P.
6 Desta Drive Suite 3300
Midland, TX 79705

Dear Ms. Klein:

Re: Dynegy Warren Eunice Middle Gas Plant (GW-005) Oil and Gas Facilities/Operations that may Vent and/or Flare H_2S Gas

The New Mexico Oil Conservation Division (OCD) is writing to operators of the above-referenced types of facilities or operations that may have New Mexico Environmental Department (NMED) - Air Quality Bureau (AQB) Oil and Gas type Permits. The purpose of this communication is to inform operators of such facilities regarding OCD Rules that may be applicable to gas plant operators and/or oil and gas facilities/operations in the hope that it provides some clarification regarding the applicability of these rules, and to ultimately increase overall compliance

In New Mexico, the OCD Rules that pertain to Hydrogen Sulfide (H_2S) Gas are provided at § 19.15.11 et seq. NMAC (Hydrogen Sulfide Gas). The OCD Oil and Gas Rules that address "No-Flare" and the OCD Form C-129 process are provided at § 19.15.7.37 et seq. NMAC (Application for Exception to No-Flare). Gas plants háve gas gathering pipelines with meters connected to operators who then either sell or vent casinghead gas into the gas gathering pipelines that feed into the plants. The OCD Rules that pertain to "Casinghead Gas" are provided at § 19.15.18.12 et seq. NMAC (Production Operating Practices).

This letter was precipitated by a recent event where a gas plant operator shut-in a "gas gathering pipeline." This "shutting-in" of the pipeline impacted approximately thirty individually-metered operators who may have continued operating instead of "shutting-in" their well(s). In spite of the fact that approximately thirty operators were impacted, the OCD observed that only one of those thirty operators contacted the OCD via Form C-129 as required under the OCD Rules to obtain approval of their application for an "exception to no-flare." (The operator initially had contacted the OCD to request approval to vent H_2S gas into the air rather than shut-in the well.) The OCD has serious public safety concerns when operators do not properly shut-in their wells when gas gathering pipelines and/or meters are shut-in, especially where the wells are near populated and/or agricultural areas due to the potential for loss of life from toxic gas.

In subsequent communications with gas plant operators who flare gas, the OCD discovered that the operators were under the impression that if their facility has an NMED- AQB Construction Permit which includes a provision to flare/emit gas, then this is all that is needed to operate in New Mexico. This is actually only partially

correct because operators are also required to comply with the requirements set out in the OCD Rules regarding flaring and venting. For example, in the situation where a gas plant operator has notified connected well operators of a gas-gathering pipeline shut-down, each of those well operators is required to shut-in its well(s) or to obtain OCD District Supervisor approval to flare via an OCD C-129 Form. Operators who do not comply are illegally venting and/or flaring gas under OCD Rules.

In addition, gas plants and/or oil and gas operators may be required to satisfy OCD § 19.15.11 et seq. NMAC (Hydrogen Sulfide Gas) Contingency Plan requirements for facilities and wells in cases where 100 ppm or greater H_2S concentrations may impact public areas. OCD records indicate that Targa Midstream Services, L.P. has recently submitted an H_2S Contingency Plan (CP) that is on file and is under review by the OCD. If you do not have an approved CP under § 19.15.11 et seq. NMAC (Hydrogen Sulfide Gas) for your gas plant yet, please submit your CP to the OCD Environmental Bureau in Santa Fe on or before August 11, 2011. (*The OCD notes that it is aware of some operators who have recently submitted CPs to the OCD that are currently under review. Please advise if this is the case for* Targa Midstream Services, L.P.).

The OCD recognizes that when multiple sets of Rules, Regulations and Statutes apply, it can sometimes be tricky to definitively determine which requirements apply, to whom and in what circumstances. Operators must, however, take all care to ensure that they are at all times operating in compliance with all applicable state, federal and/or local rules and regulations. In this instance, this means that operators are subject not only to the requirements imposed by the NMED-AQB permitting structure, but also to those set forth in the OCD Rules.

We hope that this communication has helped to clarify the issue regarding the applicability of the OCD Rules in these situations, regardless of the existence of a valid NMED-AQB permit. Please contact Carl Chavez of my staff at (505) 476-3490 if you have questions or need assistance with the CP. The OCD looks forward to bringing your facility into compliance with OCD Rules if it is not currently already in compliance. Thank you for your cooperation in this matter.

Sincerely,

Daniel Sanchez,
Compliance & Enforcement Manager

xc: Richard Goodyear, NMED- AQB
OCD Environmental Bureau
OCD District Offices

TARGA

HYDROGEN SULFIDE CONTINGENCY PLAN

for

EUNICE PLANT, GATHERING SYSTEM

and

EUNICE AREA ACID GAS PIPELINE

TITLE 19 NATURAL RESOURCES AND WILDLIFE
CHAPTER 15 OIL AND GAS
PART 11 HYDROGEN SULFIDE GAS

VERSADO GAS PROCESSORS, L. L. C.
operated by
TARGA MIDSTREAM SERVICES,
LIMITED PARTNERSHIP

October 6, 2010

Table of Contents

APPENDIX

1. INTRODUCTION

The Eunice Gas Plant (hereinafter the 'Plant') is a natural gas processing plant which handles and/or generates hydrogen sulfide and/or sulfur dioxide; therefore this Hydrogen Sulfide Contingency Plan (H_2S Plan or Plan) has been developed:

1. to satisfy the New Mexico Oil Conservation Division Rule 11;

2. to conform with API "Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide," RP 55; and

3. to create a site-specific hydrogen sulfide contingency plan that outlines the emergency response procedures that will be implemented to ensure a coordinated, efficient and immediate action Plan for alerting and protecting operating personnel and the public as well as to prevent or minimize environmental hazards and damage to property.

The terms used in this Plan are to be used in the same manner as defined in Title 19 Chapter 15 Part II of the New Mexico Administrative code (19.15.11.7- Definitions) unless otherwise defined herein.

1.1 PLANT DESCRIPTION

The Plant is located in Eunice, Lea County, New Mexico and encompasses 20+ acres. It is owned by Versado Gas Processors, LLC and operated by Targa Midstream Services, Limited Partnership.

More specifically, the Plant is located in Section 3, Township 22S, Range 37E in Eunice, Lea County, New Mexico.

1. Plants coordinates are:
   Latitude: 32.425264°N Longitude: -103.147499° W

2. Plants physical address is:
   ¾ miles SE of City
   Eunice, New Mexico 88231

3. Plants mailing address is:
   P. O. Box 1909
   Eunice, New Mexico 88231

4. Driving Directions from Eunice, New Mexico to the Plant:
   From the intersection of Main Street and Texas Avenue (New Mexico Highway 176), travel east on Highway 176 (approximately 0.6 miles) to the intersection of US Hwy 176 and County Road 18 (Middle Plant Lane) in Eunice, New Mexico. Turn right onto

County Road 18 and travel south approximately 0.6 mile to the entrance to the Eunice Gas Plant.

The location of the Plant in relation to the city of Eunice is illustrated herein on Figure 1.

Figure 1
Eunice Gas Plant

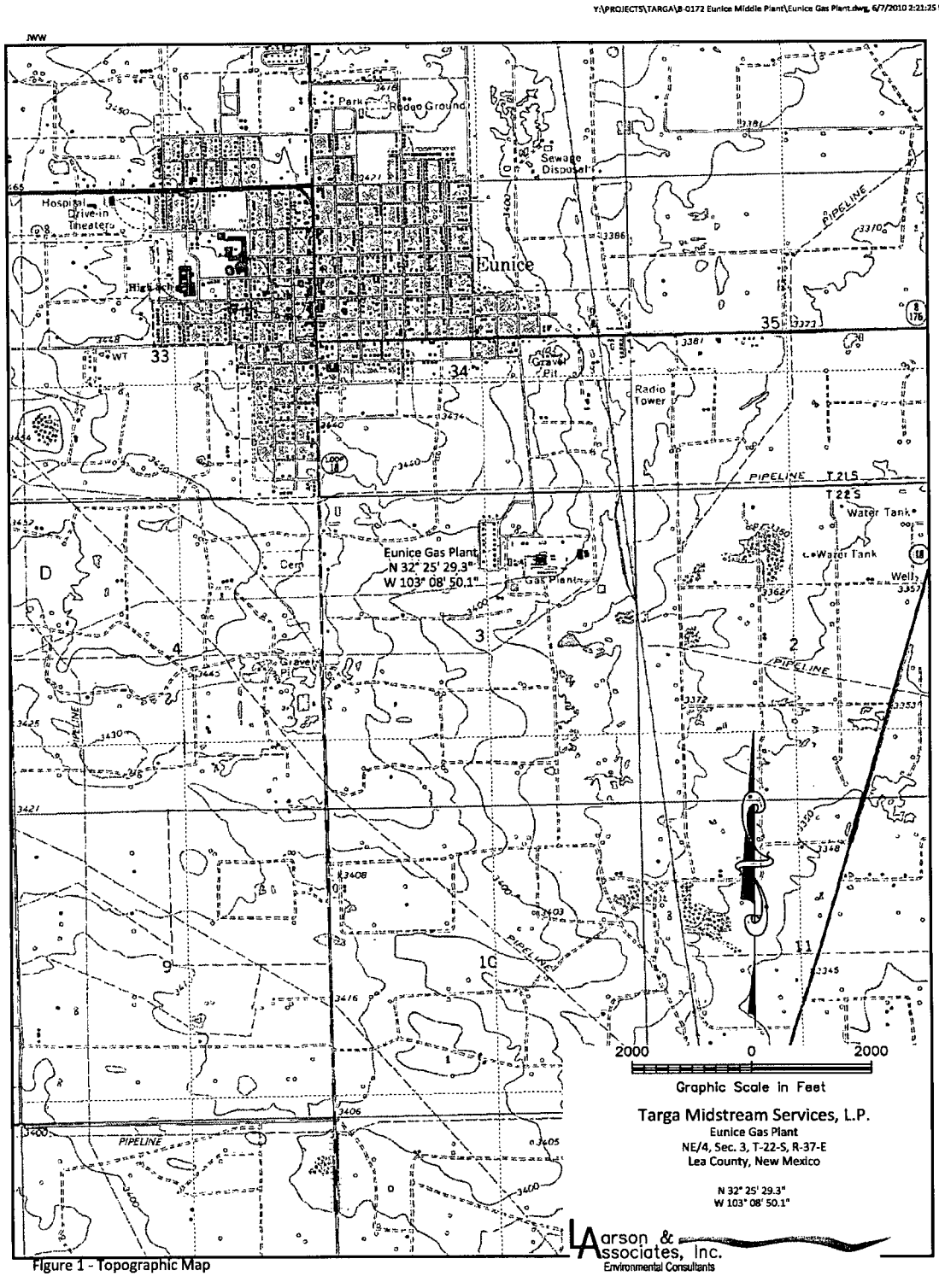


Figure 1 - Topographic Map

1.2 ACID GAS INJECTION & MAP

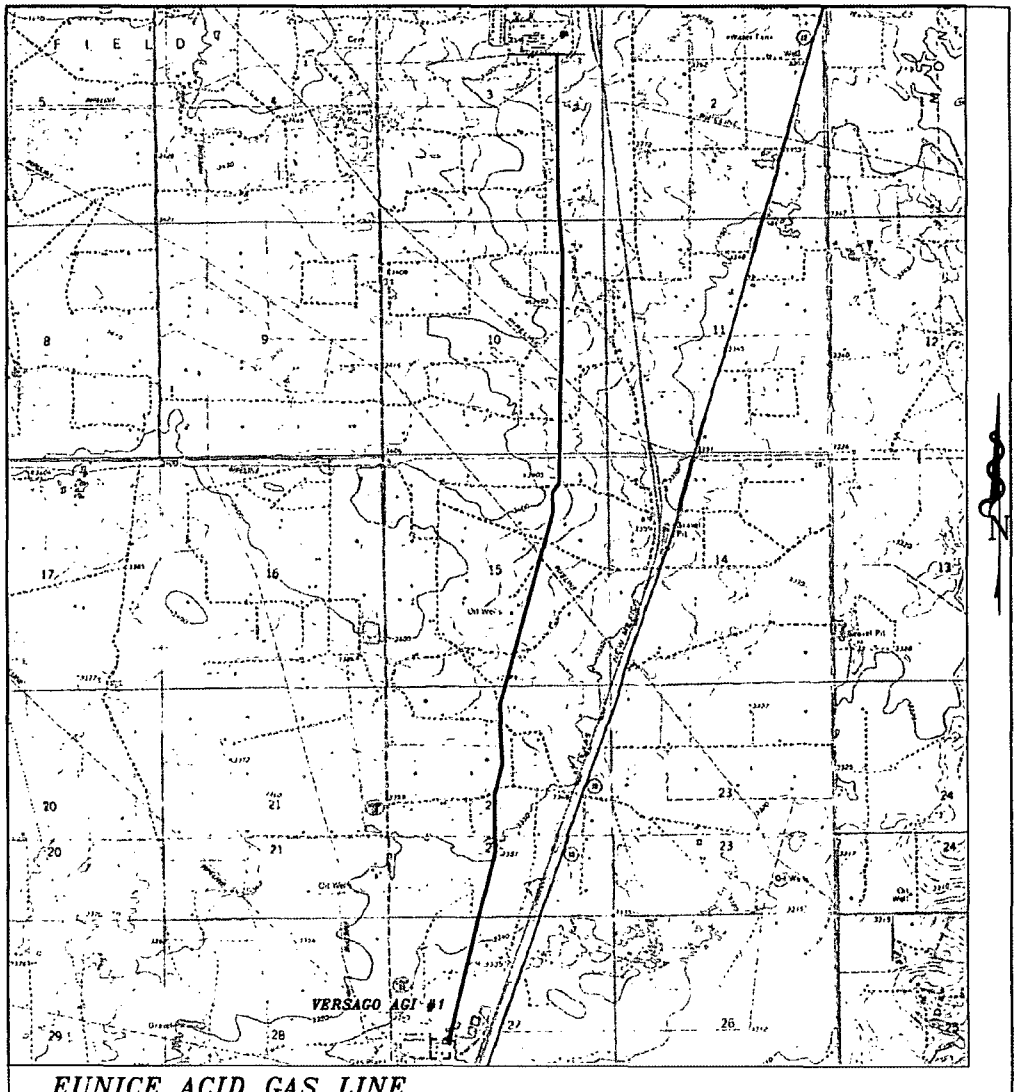
The Eunice Acid Gas Injection line is located in Lea County, New Mexico. The acid gas line encompasses approximately 4.5 mile corridor of privately owned land. A 100 foot wide easement for line installation has been established. The acid gas injection line is owned by Versado Gas Processors, LLC and operated by Targa Midstream Services, LP.

The acid gas pipeline is located in Sections 3, 10, 15, 22 and 27, Township 22 South, Range 37 East, Lea County, New Mexico.

The acid gas injection well is located 1200 feet from the west line and 2580 feet from the south line, Unit L of Section 27, Township 22 south, Range 37 east, NMPM, Lea County, New Mexico.

The location of the Plant and Acid Gas Pipeline is illustrated herein on Figure 2.

Figure 2
Eunice Gas Plant &
Acid Gas Pipeline



EUNICE ACID GAS LINE
Sections 3,10,15,22&27, Township 22 South, Range 37 East, N.M.P.M., Lea County, New Mexico.

basin surveys focused on excellence in the oilfield	P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (505) 393-7316 - Office (505) 392-3074 - Fax basinsurveys.com	W.O. Number: JMS 19950 Survey Date: VARIES Scale: 1" = 3000' Date: 07-11-2008	*TARGA RESOURCES*

1.3 DESCRIPTION OF OPERATIONS

1. The Plant operations include gas processing, conditioning and compression, as well as flow lines and storage tanks. The Plant gathers and processes produced natural gas from Lea and Eddy Counties, New Mexico. Once gathered at the Plant, the produced natural gas is compressed; treated in an amine process for the removal of carbon dioxide and hydrogen sulfide; and dehydrated to remove the water content. The processed natural gas and recovered gas liquids are sold and shipped to various customers.

2. Because the natural gas that is gathered at the Plant contains hydrogen sulfide, it must be treated or processed to remove these and other impurities. The carbon dioxide and hydrogen sulfide (H_2S) stream that is removed from the natural gas in the amine treating process is compressed to approximately 50 psi and is sent via a high density 16" polyethylene which is inserted into a 22" poly line.

3. The Plant is in the process of installing an acid gas injection (AGI) well to accommodate disposal of the acid gas stream generated by existing operations, therefore permanently shutting down the Sulfur Recovery Unit and its permitted air emissions. The operation generates approximately 5 mmcf/d of acid gas for disposal, which consists of approximately 15% H_2S and 85% carbon dioxide.

1.4 DESCRIPTION OF ACID GAS PIPELINE OPERATIONS

1. The acid gas stream is received at the well site (located at the South Eunice Compressor Station about 5 miles south of the Plant) where it mixed with water and is further compressed to 1200 psi for injection. This is accomplished by using an electric driven, reciprocating compressor.

2. The acid gas is injected into the San Andres Formation at a depth of 4450 feet to 5000 feet below the surface. The wellbore is constructed with 3 casing strings, all with cement circulated to the surface. The acid gas well is permitted under Division Order No. R-12809 and Administrative Order SWD-1611.

3. An air blower will move air through the pipeline annulus (which is the between the outside of the 16" and inside of the 22" poly lines) from the acid gas compressor toward the Plant where a fixed H_2S detector is located to detect any leaks from the inner pipe. This detector system alarms in the Eunice Plant Control Room which is manned 24 hours a day.

4. An ESD Valve located at the inlet of the Pipeline and another one at the compressor and injection well end which can be remotely operated from the Eunice Plant Control Room in case of emergency. There are also remotely activated valves at the

Compressor/Injection Site to move any gas from the pipeline to a Flare for safe removal in an emergency.

5. There is a subsurface safety valve (SSSV) on the injection well located below ground to isolate the down hole well contents in case of an emergency.

6. The acid gas compressor area is equipped with a fixed H_2S detector system which alarms in the Eunice Plant Control Room which is occupied 24 hours a day.

7. The pipeline ROW has warning signs containing the words "poison gas" to warn the public that a potential danger exists.

8. The compressor/injection area is protected from public access with chain link fencing.

9. Wind direction indicators known as wind socks are located at the compressor/injection site so that it is visible from all principal working areas at all times.

2. THE PLAN

2.1 RESPONSIBILITY FOR CONFORMANCE WITH THE H_2S PLAN

It is the responsibility of all personnel on-site to follow the safety and emergency procedures outlined in the Hydrogen Sulfide Contingency Plan (the H_2S Plan) as well as the following documents:

- Targa Midstream Safety & Health Manual;
- Targa Midstream Eunice Plant Emergency Response, Groundwater Discharge Plan and Oil Spill Contingency Plan; and
- Targa Midstream Environmental Policies and Programs.

2.2 REVISIONS TO THE PLAN

The H_2S Plan will be reviewed annually and revised as necessary to address changes to the Plant facilities, operations, or training requirements, contact information and the public areas including roads, businesses, or residents potentially affected by the operations of the Plant, specifically those areas within the radii-of-exposure.

2.3 AVALABILITY OF THE H_2S PLAN

The H_2S Plan shall be available to all personnel responsible for implementation, regardless of their normal location assignment. A copy of the Plan will be maintained at the Plant in the Area Manager's office, control room and all Plant Supervisors. See Appendix A for the H_2S Distribution List, which lists all the additional entities that have been provided a copy of the H_2S Plan.

2.4 CONTENT OF THE PLAN

At a minimum, the H_2S Plan will contain information regarding:

1. The emergency procedures to be followed in the event of an H_2S or SO_2 release that may pose a threat to the Plant, public or public areas;

2. The characteristics of H_2S and SO_2;

3. A facility description, map and/or drawings; and

4. Information regarding training and drills to be conducted related to this Plan.

3. PLAN DESIGN CONSIDERATIONS

3.1 CHARACTERISTICS OF H_2S, SO_2 AND CARBON DIOXIDE

3.1.1 Hydrogen Sulfide (H_2S)

The proposed inlet gas streams into the Plant will contain approximately 6,000 ppm (or 0.60 mole percent) of hydrogen sulfide based on data generated from the sampling of the inlet gas on September 28, 2010.

Hydrogen sulfide is a colorless, toxic and flammable gas, and has the odor of rotten eggs. Hydrogen sulfide gas is heavier than air.

Hydrogen sulfide presents a significant health hazard by paralyzing the respiratory system resulting in serious injury or death.

Hydrogen Sulfide Properties & Characteristics	
CAS No.	7783-06-4
Molecular Formula	H_2S
Molecular Weight	34.082
TWA	10 ppm
STEL	15 ppm
IDLH	100 ppm
Specific Gravity (air = 1.0)	1.189
Boiling Point	-76.5°F
Freezing Point	-121.8°F
Vapor Pressure	396 psia
Auto Ignition Temperature	518°F
Lower Flammability Limit	4.3%
Upper Flammability Limit	46.0%
Stability	Stable
pH in Water	3
Corrosivity	Reacts with metal, plastics, tissues & nerves

Physical Effects of Hydrogen Sulfide		
Concentration		Physical Effect
ppm	%	
1	.00010	Can be smelled (rotten egg odor)
10	0.0010	Obvious & unpleasant odor; Permissible Exposure Limit; Safe for 8-hour exposure
15	0.0015	Short Term Exposure Limit (STEL); Safe for 15 minutes of exposure without respirator
50	0.0050	Loss of sense of smell in 15 minutes
100	0.0100	Immediately Dangerous to Life & Health (IDLH); Loss of sense of smell in 3-15 minutes; Stinging in eyes & throat; Altered breathing
200	0.0200	Kills smell rapidly; Stinging in eyes & throat
500	0.0500	Dizziness; Unconscious after short exposure; Need artificial respiration
700	0.0700	Unconscious quickly; death will result if not rescued promptly
1,000	0.1000	Instant unconsciousness; followed by death within minutes

3.1.2 Sulfur Dioxide (SO_2)

Sulfur dioxide is produced as a by-product of H_2S combustion. The waste gas stream consisting of hydrogen sulfide and carbon dioxide is routed to the plant acid gas flare during abnormal conditions when the acid gas injection equipment is out of service. Waste gas is routed to the acid gas flare during maintenance operations.

It is colorless, transparent, and is non-flammable, with a pungent odor associated with burning sulfur.

Sulfur dioxide is heavier than air, but will be picked up by a breeze and carried downwind at elevated temperatures. Sulfur dioxide can be extremely irritating to the eyes and mucous membranes of the upper respiratory tract.

Sulfur Dioxide Properties & Characteristics	
CAS No.	7446-09-5
Molecular Formula	SO_2
Molecular Weight	64.07
TWA	2 ppm
STEL	5 ppm
IDLH	100 ppm
Specific Gravity (air = 1.0)	2.26
Boiling Point	14°F
Freezing Point	-103.9°F
Vapor Pressure	49.1 psia
Auto Ignition Temperature	N/A
Lower Flammability Limit	N/A
Upper Flammability Limit	N/A
Stability	Stable
Corrosivity	Could form an acid rain in aqueous solutions

Physical Effects of Sulfur Dioxide	
Concentration	**Effect**
1 ppm	Pungent odor, may cause respiratory changes
2 ppm	Permissible exposure limit; Safe for an 8 hour exposure
3-5 ppm	Pungent odor; normally a person can detect sulfur dioxide in this range
5 ppm	Short Term Exposure Limit (STEL); Safe for 15 minutes of exposure
12 ppm	Throat irritation, coughing, chest constriction, eyes tear and burn
100 ppm	Immediately Dangerous To Life & Health (IDLH)
150 ppm	So irritating that it can only be endured for a few minutes
500 ppm	Causes a sense of suffocation, even with first breath
1,000 ppm	Death may result unless rescued promptly.

3.1.3 Carbon Dioxide

The current inlet gas streams to the Plant contain approximately 3.8% carbon dioxide based on an inlet sample collected on September 28, 2010.

Carbon dioxide gas is colorless, odorless, and non-flammable. Carbon dioxide is heavier than air.

Carbon Dioxide Properties & Characteristics	
CAS No.	124-38-9
Molecular Formula	CO_2
Molecular Weight	44.010
TWA	5,000 ppm
STEL	30,000 ppm
IDLH	40,000 ppm
Specific Gravity (air = 1.0)	1.5197
Boiling Point	-109.12°F
Freezing Point	-69.81°F
Vapor Pressure	830 psia
Auto Ignition Temperature	N/A
Lower Flammability Limit	N/A
Upper Flammability Limit	N/A
Stability	Stable
pH in saturated solution	3.7
Corrosivity	dry gas is relatively inert & not corrosive; can be corrosive to mild steels in aqueous solutions

Physical Effects of Carbon Dioxide	
Concentration	**Effect**
1.0 %	Breathing rate increases slightly
2.0 %	Breathing rate increases to 50% above normal level. Prolonged exposure can cause headache, tiredness
3.0 %	Breathing rate increases to twice normal rate and becomes labored. Weak narcotic effect. Impaired hearing, headache, increased blood pressure and pulse rate
4 – 5 %	Breathing increases to approximately four times normal rate, symptoms of intoxication become evident, and slight choking may be felt
5 – 10 %	Characteristic sharp odor noticeable. Very labored breathing, headache, visual impairment, and ringing in the ears. Judgment may be impaired, followed within minutes by loss of consciousness
10 – 100 %	Unconsciousness occurs more rapidly above 10% level. Prolonged exposure to high concentrations may eventually result in death from asphyxiation

3.2 RADII OF EXPOSURE (ROE)

For the existing operations, the Radius of Exposure for both 500-ppm and 100-ppm of H_2S gas was determined using the The Pasquill-Gifford derived equation, as defined by NMAC, which uses the maximum daily rate of the gaseous mixture that is handled by the Plant.

The rates and other variables used to calculate the ROE is discussed in greater detail in **Appendix B - ROE calculations. Also refer to Appendix C - map showing 500-ppm ROE and the 100-ppm ROE.**

500 ppm ROE – public road	**2,900 feet**
300 ppm ROE	**4,033 feet**
100 ppm ROE – public area	**6,346 feet**

4. EMERGENCY ACTION PROCEDURES

4.1 EMERGENCY RESPONSE ORGANIZATION

The Plant uses the Incident Command System (ICS) for emergency response. The ICS structure used is based on the National Interagency Incident Management System (NIIMS), and is consistent with the National Contingency Plan (NCP).

In the event of an accidental release that results in the activation of the H_2S Plan and all personnel have been evacuated out of the affected area, the Area Manager, or his designee, will be the On-Scene Incident Commander (IC in this Plan). Upon notification of an emergency the Area Manager or his relief will serve as the Field Incident Commander (FIC). Under certain conditions, the New Mexico State Police responding to the emergency may elect to assume the position of FIC or they may establish a Unified Command of which the Targa Area Manager may be a key member. The responsibility of the FIC is to ensure control of the emergency incident. The IC will contact and coordinate with Targa's management in corporate office.

The Area Manager or his designee shall determine:

1. Plant Shutdowns;
2. Isolation of pipeline segments; and
3. Repairs, tests or restarts as required.

If an emergency occurs, the Area Manager, or his designee, shall be notified first. The Area Manager, or his designee, shall notify Targa's Office in Midland, Texas. If any person in this chain of command is unavailable, the Targa employee shall elevate the communication to the next level.

4.2 EMERGENCY RESPONSE

This section explains the procedures and decision to be used in the event of an H_2S release; much of which has been pre-determined to ensure a coordinated, efficient and immediate action Plan for alerting and protecting operating personnel and the public as well as to prevent or minimize environmental hazards and damage to property.

4.2.1 Objective

All Area employees shall be prepared to respond to an H_2S or SO_2 emergency at the Plant and Pipelines. Emergency response actions may be taken for a variety of situations that may occur in the Plant. The Plan is activated in based on the concentration of H_2S that has been released.

- Plant - Emergency alarm sounded and/or flashing red beacons activated for H_2S greater than 10 ppm,

- 100 ppm in any public area, or
- 500 ppm at any public road, or
- When a 100 ppm ROE is greater than 3,000 feet from the site of the release.

As soon as the Plan has been activated based on the criteria above, the Area Manager, or his designee, shall be notified. In the absence of the Area Manager or his relief the Targa employee (first responder) at the site shall assume the role of FIC and determine whether or not to activate the Contingency Plan. It is the responsibility of the FIC to ensure control of the emergency response management system and if necessary to coordinate these efforts with any state or local emergency plans.

4.2.2 Evacuation and Emergency Assembly Areas

Evacuation to the assembly point for all visitors and Plant personnel begins when the emergency alarm is activated. After assembly, if necessary the Plant operators are to put on the 30-min SCBA to rescue any personnel that are in distress and assist any distressed personnel in evacuating to Emergency Assembly Area 1.

Emergency services (911) will be contacted if there are injuries or as otherwise deemed necessary. The operators will then, wearing the SCBA, investigate the cause of the release. At the sound of the alarm and/or flashing red beacons, all other personnel in the Plant are to stop work, check the prevailing wind direction and immediately proceed along designated evacuation routes and/or upwind to the pre-designated Emergency Assembly Area (Main Office Building) as shown in Appendix D.

Prevailing winds for the area are from the south. Personnel should evacuate along the designated route unless the designated evacuation route is downwind of the release (based on the windsock), then all evacuees should proceed upwind to the Emergency Assembly Areas.

The Plant and acid gas pipeline show evacuation routes to be determined on wind direction and windsocks.

Emergency Assembly Area **Main Office Building of the Plant** **See Appendix D**

Roll call shall be conducted at the Emergency Assembly Area to assure all personnel have evacuated safely. This facility requires all visitors check in before entering the Plant, thus the check-in sheet will be used at the Emergency Assembly Areas to make a full accounting of all personnel and visitors.

4.2.3 Immediate Action Plans/Initial Responses

Targa Plant Operators are authorized to elevate the level of response based on observed conditions if a lower level response may not be effective in protecting personnel, the public or the environment.

The following outlines the immediate action Plan. This is to be used when responding to an H_2S release occurring at the Plant, acid gas pipeline or the acid gas well. Additional or long term response actions will be determined on a case-by-case basis, if needed, once the Incident Command Center and System is established following the immediate response.

Some steps may be taken simultaneously.

A. Request assistance, if needed.
    1. Alert and account for facility personnel
    2. Move away from the source and get away from the affected area
    3. Don personal protective breathing equipment
    4. Alert other affected personnel
    5. Assist personnel in distress
    6. Proceed to the designated emergency assembly area
    7. Account for on-site personnel

B. Take immediate measures to control the presence of or potential H_2S discharge and to eliminate possible ignition sources. Emergency shutdown procedures should be initiated as deemed necessary to correct or control the specific situation. When the required action cannot be accomplished in time to prevent exposing operating personnel or the public to hazardous concentrations of H_2S, proceed to the following steps, as appropriate for the site-specific conditions.

C. Alert the public (directly or through appropriate government agencies) that they may be subjected to an atmosphere exceeding 30 ppm of H_2S. Initiate evacuation of those within the exposure area.

D. Contact the Area Manager or first available person on the call list. Notify them of the circumstances and whether or not immediate assistance is needed. The Area Manager should notify (or arrange for notification of) other supervisors and other appropriate personnel (including public officials) on the call list, as necessary.

E. Cordon off the exposure area to prevent entry, make recommendations to public officials regarding blocking unauthorized access to the unsafe area, and assist as appropriate. Make recommendations to public officials regarding evacuating the public and assist as appropriate.

F. Notify, as required, state and local officials and the National Response Center to comply with release reporting requirements.

G. Monitor the ambient air in the area of exposure (after following abatement measures) to determine when it is safe for re-entry.

H. Return the situation to normal.

4.2.4 Expansion on Immediate Action Plan

The following discussion expands on the emergency actions in the order in which they were previously listed. Ideally, some of these actions, after the first, will be performed simultaneously. There may be situations where actions must be performed in a different sequence from those listed. The employee first knowing about the potential hazard (First Responder) will take the first action(s). Subsequent actions will generally be taken by or assisted by those dispatched to help.

A. Request Assistance if Needed

Any employee who finds himself in an emergency situation involving the escape of hydrogen sulfide gas that would pose a hazard to the public shall notify the Area Manager, or his designated alternate, by the fastest means. The employee will advise the Area Manager, or alternate, of the location and nature of the emergency and the assistance needed. He will also state the actions taken and those he will be taking while waiting for assistance. The Area Manager is directly responsible for requesting the assistance needed. He will also proceed with the appropriate notifications. Please refer to Appendix B of this Plan for a list of emergency telephone numbers.

B. Stop the Escape of Hydrogen Sulfide

Isolate the leak by closing the upstream and downstream valves. If necessary, initiate emergency shutdown (ESD) procedures for the equipment.

C. Alert the Public and Evacuate Those Within the Exposure Area

Alert all persons who are within the exposure area. Refer to the map and list of ROEs in Appendix C. In the event a leak causes a potentially hazardous volume public, notification must be made immediately by the employee who discovers (or arrives first at the leak site) and judges the situation serious enough to require immediate evacuation. If it is determined that the notification proceeding shall not be immediate, the Area Manager is the designated employee to initiate evacuations. Whether by the first person at the scene or by the Area Manager, notification to the public shall be made by the fastest possible means.

In the event that complete or partial evacuation becomes necessary, evacuation must be confirmed by personal observations, which should include repeat visits to the area to confirm that persons have not entered the evacuated area. If evacuation is deemed

prudent, advise persons and/or assist them to leave the area without delay by the fastest, safest route out of the exposure area. In populated areas such as the City of Eunice, evacuations will be conducted by city officials with the aid of Targa employees, if requested.

- First, evacuation should be from the 500 ppm exposure area, giving priority to the downwind position.
- Next, evacuate those within the potential exposure area, giving priority to the downwind position.
- Monitor ambient hydrogen sulfide concentrations in adjacent areas to ensure that any exposed residents are evacuated.
- Always wear a breathing apparatus.

D. Contact the Area Manager

The Targa employee (first responder) responding to or receiving notification of an emergency situation shall immediately proceed to the location and attempt to assess the situation, notify the Area Manager or his relief, and take the following actions:

- Provide the Area Manager with as much data possible concerning the location, the extent of emergency and need for additional assistance.
- Warn others in the area of situation, evacuate if necessary.
- Remain at the site, at a safe distance, and available for communication. Wait for assistance to arrive before attempting to enter into any potentially hazardous area.
- Initiate rescue and first aid as the situation dictates.

E. Cordon off the Exposure Area to Prevent Entry and/or Make Barricade and Evacuation Recommendations

Place barricades outside the area of exposure on all routes to prevent entry into the area. Barricades must be manned by Targa and/or law enforcement personnel to prevent entry. The persons manning the barricades must be equipped with a protective breathing apparatus, hydrogen sulfide measuring devices, and two-way radios or cell phones. Barricades should be placed a safe distance away from the potential exposure area and should be monitored for Hydrogen Sulfide.

Based on all information available and the calculated potential exposure information listed in Appendix B, make recommendations to public officials for the strategic placing barricades, for evacuating the public, and assist as needed. Priority should be given to those areas in the 500 ppm radius of exposure, then the 100 ppm radius of exposure, with consideration given to the wind direction. Proper caution should be used for shifting changes in wind direction.

F. Complete Notifications as Required

Generally, some notifications will have been made under Steps A or D. Any of the following notifications that were not made must be made as soon as possible. Normally the Region ES&H Advisors will complete the agency notifications.

- Complete the chain of notification within the company.
- The local public safety officials not already notified who need to be aware of the situation.
- New Mexico Oil Conservation Division – Notification to the OCD should be made as soon as possible, but must be made no more than 4 hours after a Plan evacuation. A full report of the incident must be submitted to the Division on Form C-141 no later than 15 days following the release.
- Environmental Protection Agency Regional Office.

G. Monitor for Safe Re-entry

As soon as the complete and permanent stoppage of the release is confirmed, begin monitoring evacuated areas for hydrogen sulfide and combustible gas concentrations. Monitor the ambient air in the area of exposure only after following abatement measures, to determine when it is safe for re-entry.

H. Return of the Situation to Normal

No re-entry will be allowed until ambient conditions have been assessed and verified. Communications for re-entry should be coordinated through the Area Manager assuming the role of Field Incident Commander (FIC). When total absence of hydrogen sulfide and combustible gas is confirmed throughout the evacuated area, notify the sheriff's office so that they may be informed of the situation. Advise all parties previously notified that the emergency has ended.

4.2.5 Post-Emergency Actions

In the event this plan is activated, the following post-emergency actions shall be taken in an effort to reduce the possibility of a recurrence of the type of problem that required its activation and to assure that any future activation will be as effective as possible:

- Clean up, recharge, restock, repair, and replace emergency equipment, as necessary, and return it to its original location.

- Critique all actions and procedures, providing additional training to employees if need is indicated. Modify contingency plan, if necessary.

- Review the cause of the emergency and modify operating maintenance and other surveillance procedures, if needed.

- Ensure all agency notifications have been completed and follow-up with any written notification requirements.

- Ensure all previously notified or evacuated persons have been advised that the emergency situation has ended.

4.3 EMERGENCY SHUT DOWN SYSTEM

The Plant, acid gas pipeline and acid gas well have extensive Emergency Shut Down (ESD) and Process Shutdown (PSD) systems designed to isolate and out-going gas and product streams, contain hydrocarbon and H_2S releases, and safely depressurize equipment to flares. There systems are automatically and manually initiated, depending on process conditions. There are manually activated ESD buttons located at exit locations at the Plant and the acid gas well. A diagram is presented in Appendix D.

4.4 NOTIFICATION AND REPORTS

The Plant has various notification and reporting obligations. Some are related to its state air quality permit that is overseen by New Mexico Environmental Department (NMED) as well as well as state and federal spill reporting obligations. In addition to the regulatory obligations noted above, Plant personnel also have internal and external notification and reporting obligations associated with the activation of this Plan.

The New Mexico Oil Conservation Division (NMOCD) will be notified as soon as possible but no later than 4 hours following a release of H_2S requiring activation of this Plan. This shall be followed up with a full report of the incident using the NMOCD's C-141 form, no later than 15 days following the release.

4.4.1 Discovery and Internal Reporting

All Plant personnel who perform operations, maintenance and/or repair work within the Plant, acid gas pipeline and acid gas well must wear H_2S monitoring devices to assist them in detecting the presence of unsafe levels of H_2S. When any personnel, while performing such work, discovers a leak or emission release they are to attempt to resolve the issue as long as H_2S levels remain below 10 ppm. The personal monitoring devices they wear will give off an audible alarm at 10 ppm.

If the response action needed to resolve the issue is more than simply closing a value or stopping a small leak, personnel shall notify the Area Manager, or his designee and convey, at a minimum, the following information:

- Name, telephone number, and location of person reporting the situation; and

- Type and severity of the emergency; and

- Location of the emergency (area/block, mile markers, latitude & longitude, or building), and the distance to surrounding equipment and/or structures; and

- The cause of the spill or leak, name and quantity of material released, and extent of the affected area including the degree of environmental hazard; and

- Description of injuries and report of damage to property and structures; and

- Initiate and maintain a Chronological Record of Events log. This record should record the time, date, and a summary of the event.

If personnel detect H_2S levels greater than 10 ppm either as a result of his/her personal monitoring device or hearing the emergency alarm, Plant operators are to contact their immediate supervisor for assistance and put on the 30-min SCBA for rescue if necessary.

All non essential persons shall be notified of the release and evacuated from the area. Responding operators wearing the SCBAs are to first assist any persons requiring assistance during the evacuation, then attempt to resolve the issue. The Plant operator is then responsible for notifying the Area Manager or his designee so that the IC system can be implemented and H_2S Plan activated if necessary.

Once the Area Manager is contacted, he or his designee is to notify the appropriate corporate management, EHS personnel, Plant emergency response personnel, and advise them of the existing emergency situation. Corporate management will then conduct the reporting up that is necessary based on the situation.

Plant personnel are to advise any contractor, service company, and all others on-site or attempting to enter the Plant that the H_2S Plan has been activated.

4.5 PUBLIC AWARENESS AND COMMUNICATION

Public awareness and communication is a primary function of the H_2S Plan. The Company has compiled a list of various public, private, state and local contacts that are to be notified at various phases during the activation of the Plan. Refer to the Emergency Notification List in Appendix E that indicates when certain entities are to be contacted in event of activation of this Plan.

Company will inform all state and local response organizations of its Plan as well as those businesses that fall within its 500-ppm and 100-ppm ROE as illustrated in Appendix C.

4.5.1 Public Areas, Nearby Businesses and Residents

The contact information for local and state agencies and contractors is contained in Appendix F. All entities within the 500 ppm and 100 ppm radius of exposure will be contacted by Plant personnel as designated by Area Manager if the Plan is activated and based on response level as described in the Immediate Action Plan and advised of the following:

- The nature and extent of the release/emergency at the Plant, acid gas pipeline or acid gas well and recommendations for protective actions, such as evacuation or shelter-in-place;
- Any other event specific information that is necessary to protect the public; and
- Updates as to the status of the release and continued safety measures to be taken, including but not limited to when to evacuate and/or when it is safe to return to the area.

4.5.2 Residences or Public Roads

Public County Road 176 and HWY 18 are within the 100 ppm radius of exposure, along with several county and lease roads. Several residences are included within the 100 ppm radius of exposure.

4.5.3 Businesses or Other Public Areas

All businesses included within the ROE will be provided with a copy of the H_2S Plan and will be contacted about participation when local emergency response training events or drills occur.

Due to the overlapping nature of the radius of exposures for the plant, pipeline and acid gas well, all residences, manned and unmanned businesses and producers will be notified if the Plan is enacted.

4.6 SITE SECURITY

A. In order to have an accurate listing of all personnel on-site in the event of an emergency, a daily sign-in log sheet shall be utilized. The sign-in log sheet shall include at a minimum the person's name, the company name, the time of arrival, and the time of departure.

B. The Incident Commander shall be responsible to assure that all personnel sign-in upon arrival and sign-out upon departure from the job site.

C. The Incident Commander may at his discretion assign the responsibilities for the daily sign-in log sheet to the individual designated as the Record Keeper or another designee.

D. At the discretion of the Incident Commander, a security coordinator and/or a security team may be established, and the access to the job site restricted.

E. Road blocks will occur as outlined in the Response Level detail for the Plant, road crossing, pipeline, or acid gas well sites.

4.7 SIGNS & MARKERS

The Plant, acid gas pipeline and acid gas well have numerous warning signs indicating the presence of H_2S/Poisonous Gas and high pressure gas at the entrance to the Plant, along the pipeline right away, acid gas well and road crossings. Emergency response phone numbers are posted at the entrance to the Plant and acid gas well. Acid gas pipeline markers also include emergency response numbers.

Signs are located at the Plant and acid gas well gate entrances indicating that all visitors are to sign in at the Plant office.

4.8 FIRST AID STATION

The first aid station will be located at the Emergency Assembly Area.

FIRST AID KITS are located:
Plant Office Building **Maintenance/Safety Office Building** **Each Company Vehicle**

4.9 MEDIA SITE

At no time shall any unescorted representative from the media be allowed any closer to the Plant, acid gas pipeline, or acid gas well than cold zone location, unless approved by the Incident Commander and the Safety Officer has approved their entry.

Media personnel shall not be allowed to enter Targa Midstream property without the approval of Targa Midstream Area Manager or his designee, and shall be escorted by Targa Midstream personnel at all times.

All media inquiries should be directed to Corporate Communications in Houston. The FIC or his designee will provide Corporate Communications with periodic updates and will take their direction with regard to any onsite communication with the media.

5. TRAINING/DRILLS/EDUCATION

5.1 TRAINING

Targa recognizes that the most critical portion of this plan is Emergency Procedures. To ensure the most effective implementation of these procedures, pre-emergency measures shall be completed to attain a state of preparedness. These actions are as follows:

- Every employee is to be completely familiar with the contents and location of the contingency plan.
- Surveillance and preventative maintenance to minimize the possibility of an accidental release of gas.
- Training and drills will be conducted as further described below.
- All emergency breathing equipment is maintained and ready for use.
- This Plan is made available to appropriate public response officials and shall be reviewed and discussed thoroughly with the City of Eunice emergency response officials.
- Targa will use brochures, public notices, or other means, as deemed appropriate and practical, to alert and educate any persons who reside within the potential areas of exposure.

All training records for the Plant are maintained at the Plant. The following is a limited list and summary of the training programs that relate to the H_2S Plan and Emergency Response:

Plant Orientation Training - All Plant personnel, visitors, and contractors must attend a Plant overview orientation prior to obtaining permission to enter the Plant. A refresher course on this training is required annually for all persons. This training also complies with the requirements of the Targa Safety Standards Manual.

Hydrogen Sulfide and Sulfur Dioxide Training – All Plant personnel receive annual refresher training on hydrogen sulfide and sulfur dioxide, which is conducted by the Targa Training Group. If an individual is unable to attend, they may be required to attend a third party training session. All contract employees and visitors are required to have had hydrogen sulfide training and to provide the Plant a copy of their certification card prior to obtaining permission to enter the Plant.

Respirators - All Plant personnel are trained annually on the proper use of SCBA respirators. In addition to the annual training, all Plant personnel are fit tested annually on the respirators per OSHA Rules.

Hazard Communication - All Plant personnel are trained annually on Hazard Communication and SARA Title III Right-to-Know information. The annual training includes, at a minimum, a review of material safety data sheets (MSDS) for those materials that are present at the Plant and labeling.

Personal Protective Equipment (PPE) - All Plant personnel are trained annually on the Targa requirements for personal protective equipment (PPE). The training includes, at a minimum, a review of all the types and levels of personal protective equipment and how to select the correct equipment for the job.

5.2 EMERGENCY RESPONSE DRILLS

The Plant will conduct, at least, a tabletop drill annually. Multiple drills during the year may be scheduled at the discretion of the Area Manager or as part of the Emergency Response Agencies.

The annual drill will exercise this Plan and include, at a minimum, contacting the entities that are identified as being within the 500-ppm ROE and the Local Emergency Response contacts. The drills will also include briefing of public officials on issues such as evacuation or shelter-in-place plans.

Drill training will be documented and those records will be maintained at the Plant. The documentation shall include at a minimum the following:

- Description or scope of the drill, including date and time;
- Attendees and Participant to the drill;
- Summary of activities and responses; and
- Post drill de-brief and reviews.

Appendix A — *H_2S Plan Distribution List*

New Mexico Oil & Gas Conservation Division

New Mexico Department of Public Safety

Eunice Fire Department

Lea County LEPC

Eunice Police

Eunice Gas Plant Supervisors

Control Room

Acid Gas Well Building and Location

Targa Midstream Office (Midland, TX)

The formulas for calculating the two ROEs (as specified by OCD Rule 118, Pasquill-Gifford Equation) are as follows:

500-ppm RADIUS OF EXPOSURE CACULATION

$$X = [(0.4546)(\text{hydrogen sulfide conc.})(Q)]^{(0.6258)}$$

100-ppm RADIUS OF EXPOSURE CACULATION

$$X = [(1.589)(\text{hydrogen sulfide conc.})(Q)]^{(0.6258)}$$

Where:

X = Radius of exposure in feet

Hydrogen Sulfide Concentration = Decimal equivalent of mole or volume fraction of hydrogen sulfide in the gaseous mixture

Q = Escape rate expressed in cubic feet per day (corrected for standard conditions of 14.73 psi absolute and 60 degrees Fahrenheit)

- For existing facilities or operations, the escape rate (Q) is the maximum daily rate of the gaseous mixture produced or handled or the best estimate thereof. For the Eunice Plant, after the installation of the AGI well, the Company is using for contingency planning purposes an "escape rate" equal to the anticipated (maximum) inlet gas volume of 5,000 MCFD. The (actual) inlet gas volume at the Plant will be somewhat variable and is continuously metered. The assumed 5,000 MCFD inlet gas volume has been selected as the "escape rate" because it is the highest anticipated inlet volume that the Plant would handle under its proposed operations and is considered worst case interpretation of the volume of gas. It should be noted that the plan will remain effective as long as the processed volume and H_2S content equate to the same ROE. As addressed below.

- As to hydrogen sulfide concentration of the inlet gas, daily monitoring data of current operations indicates variable concentrations, but concentration will not exceed 150,000 ppm or 15 mole percent. Therefore, 150,000 ppm or 15 mole percent has been used in the worst case scenario for the expanded operations with the AGI well for contingency planning purposes.

Using:

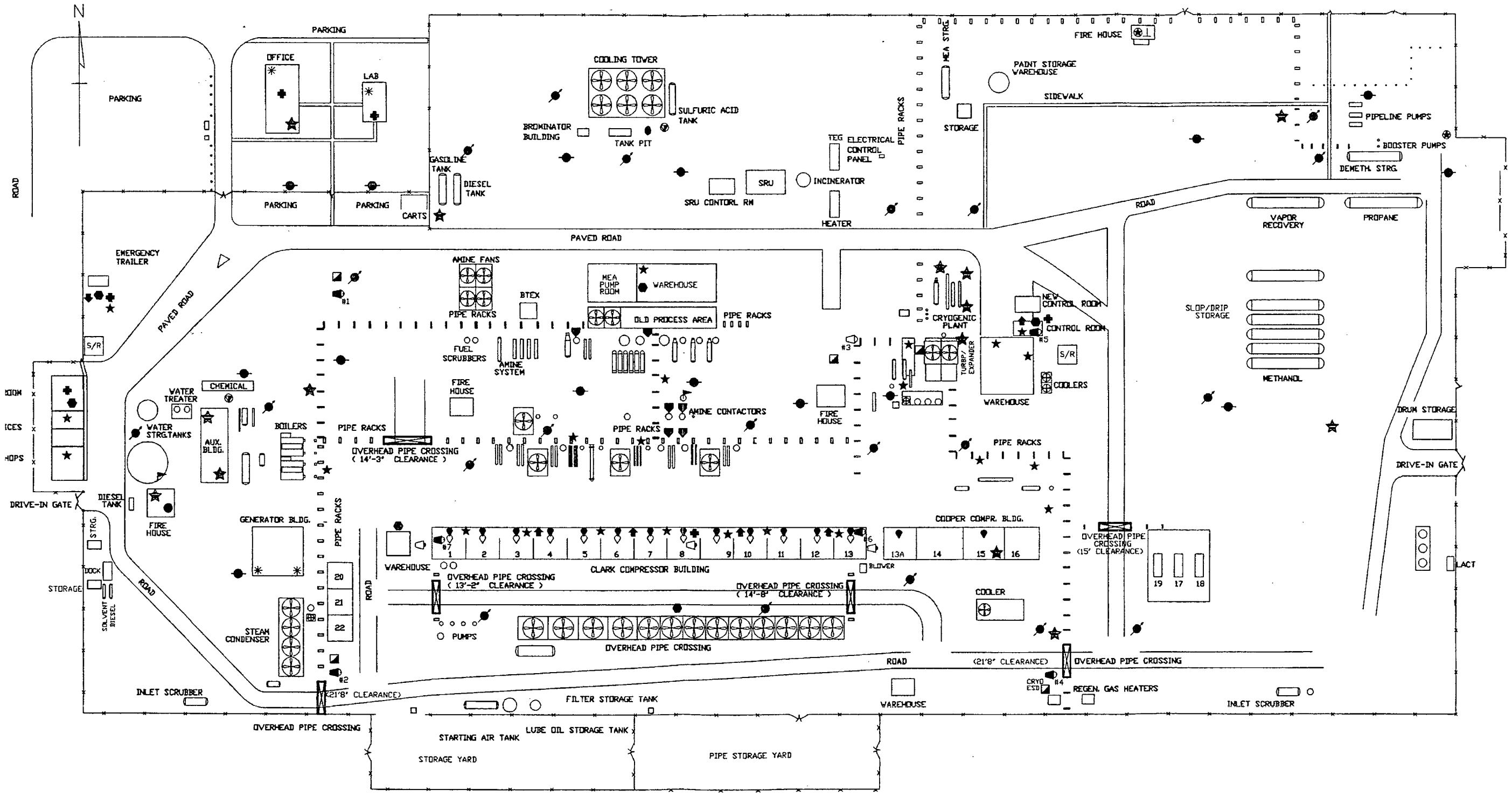
Q = 5,000,000

H_2S conc = 150,000 ppm or 15 mole%

500-ppm ROE = 2900 feet

100-ppm ROE = 6346 feet

EUNICE PLANT EMERGENCY & PREPARATION PLAN



EMERGENCY TELEPHONE NUMBERS

EUNICE PLANT	575 394-2534
PLANT MANAGER Gary Maricle	575 602-6005 (CELL)
FIELD SUPERVISOR CHUCK TOLSMA	575 631-6026 (CELL)
OPERATIONS SUPERVISOR FRANK BRAINARD	575 631-0420 (CELL)
OFFICE ADMINSTRATION Jennifer Jones	575 394-2534 EXT. 222
FIRE DEPARTMENT	911 OR 394-2111
SHERIFF	911 OR 394-2020
POLICE	911 OR 394-2112
STATE POLICE	911 OR 392-5588
AMBULANCE	911 OR 394-2112

EMERGENCY EQUIPMENT LEGEND

- SHUTDOWN STATION
- FIRE EXTINGUISHER - DRY CHEMICAL
- FIRE EXTINGUISHER - CO2
- WHEEL UNIT FIRE EXTINGUISHERS - DRY CHEMICAL
- FIRE PUMP
- HYDRANT
- FIRE MONITER
- FIRST AID KIT
- SHOWERS & EYEWASH
- FIRE BLANKET
- EMERGENCY SIRENS
- EMERGENCY ALARM SWITCH
- FIRE DETECTOR
- GAS DETECTOR
- H_2S GAS DETECTOR
- WIND SOCK
- S/R SMOKE ROOM
- SELF-CONTAINED BREATHING APPARATUS

COMPANY PERSONNEL

Call the following persons in the order listed until one is notified of the emergency:

1. Area Management

Eunice Plant

Gary Maricle, Eunice Area Manager
Office 575-394-2534, ext. 226 Eunice, NM
Mobile 575-602-6005

Alternate:
Frank Brainard, Eunice Operations Supervisor
Office 575-394-2534, ext. 229
Home none
Mobile 575-631-0420

Alternate:
Chuck Tolsma, Eunice Field Supervisor
Office 575-394-2516, ext. 327
Home 575-631-1846
Mobile 5 75-631-6026

Alternate:
Tim Jordan, Saunders Plant Area Manager
Office 575-396-3221 Lovington, NM
Home 575-396-0189 Lovington, NM
Mobile 575-631-7091

Alternate:
Todd Young, Area Manager
Office 575-393-2823 ext. 234
Home 432-523-3770 Andrews, TX
Mobile 575-441-1645

2. ES&H Group

Cal Wrangham, ES&H Manager
Office 432-688-0542 Midland, TX
Home 432-697-6580 Midland, TX
Mobile 432-425-7072

Rebecca Woodell, ES&H Compliance Specialist
Office 575-394-2534, ext. 239 Eunice, NM
Home 575-394-2280
Mobile 575-631-7085

Cindy Klein, ES&H Compliance Specialist
Office 575-396-3221, ext. 38
Home 575-398-6670
Mobile 575-631-7093

3. Region Manager

Clark White, Permian Basin Region Manager
Office 713-584-1525 Houston, TX

4. Field Operators

Eunice Area
Doyle Mapp 575-631-7064
Roger Holland 575-631-7094
Robert McBee 575-631-7061

Call company support personnel in Houston, TX, as needed:

Assistant V-P ES&H
Jessica Keiser 713-584-1084
Cell Phone 713-263-4537

Corporate Security
Weldon Green 713-584-1301
Cell Phone 281-802-5351

LAW ENFORCEMENT AND EMERGENCY SERVICES

STATE POLICE New Mexico 575-392-5588

LOCAL AGENCIES FOR LEA COUNTY

Eunice – Police	575-394-2112
Eunice – Fire Dept.	575-394-3258
Hobbs - Sheriff	575-396-3611
Hobbs – Police	575-397-9265
Hobbs – Fire Dept.	575-397-9265
Hobbs – Ambulance	575-397-9265
Lovington – Sheriff	575-396-3611
Lovington – Police	575-396-2811
Lovington – Fire Dept	575-396-2359
Lovington - Ambulance	575-396-2811

STATE AGENCIES

Oil Conservation Division, Santa Fe	505-476-3440
Oil Conservation Division – District Office, Hobbs	575-393-6161
Environmental Department – Air Quality Bureau, Santa Fe	505-827-1494

FEDERAL AGENCY

U. S. EPA – Region VI Office, Dallas, TX	800-887-6063

CONTRACTOR SUPPORT

ELECTRIC SERVICE COMPANIES

Excel Energy - Customer Service	800-895-4999 24 hour
Kay and Company	806-592-3513

WATER SERVICE AND VACUUM TRUCKS

Chaparrel Services – Eunice, NM	575-394-2545 24 hour
Danny's Hot Oil	575-398-3490
Gandy Corporation – Lovington, NM	575-396-4948 24 hour
Key Energy Services – Hobbs , NM	575-397-4994 24 hour

ROUSTABOUT CREWS

Flint Energy Services – Odessa, TX	432-332-0687 24 hour
Gandy Corporation – Lovington, NM	575-396-4948 24 hour
B & H Construction - Eunice, NM	575-934-2588 24 hour

DIRT WORK EQUIPMENT

B & H Construction – Eunice, NM	575-394-2588 24 hour
EDW Construction – Hobbs, NM	575-391-7814 24 hour
EKB Welding – Monument, NM	575-361-7078 24 hour
Ferguson Construction – Lovington	575-396-3689 24 hour
Gandy Corporation – Lovington, NM	575-396-4948 24 hour

WELDERS

EKB Welding – Monument, NM	575-361-7078 24 hour
Flint Energy Services – Odessa, TX	432-332-0687 24 hour
B & H Construction – Eunice, NM	575-394-2588 24 hour

SAFETY EQUIPMENT

Total Safety Equip. – Hobbs, NM	575-392-2973 24 hour

TARGA

Targa Midstream Services Limited Partnership
6 Desta Drive, Suite 3300
Midland, TX 79705
432.688.0555
www.targaresources.com

September 8, 2010

Mr. Glenn von Gonten
Acting Bureau Chief
State of New Mexico
Oil Conservation Division
1220 S. St. Francis
Santa Fe, New Mexico 87505

RE: Targa Midstream Services Limited Partnership
19.15.11 NMAC H2S Contingency Plan for Eunice Plant Acid Gas Pipeline

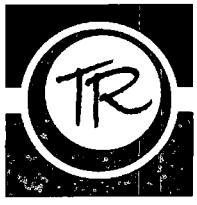
Dear Sir:
Targa Midstream Services L. P. is submitting the attached H2S Contingency Plan for a new pipeline which will transport acid gas from the Targa Eunice Plant to an acid gas injection well which is located at the Targa South Eunice Compressor Station. The Plan is written per 19.15.11.9 NMAC and submitted per 19.15.11.9 D. NMAC. This submittal is both hard copy and electronic.

Please feel free to contact me with any questions or concerns at 432.688.0542 or cwrangham@targaresources.com

Sincerely,

Cal Wrangham
ES&H Manager

Cc Gary Maricle – Targa Eunice Area Manager
Jessica Keiser – Targa Assistant Vice President - ES&H
Rebecca Woodell - Eunice Plant ES&H Specialist



TARGA

HYDROGEN SULFIDE CONTINGENCY PLAN

for

EUNICE AREA ACID GAS PIPELINE

and

COMPRESSION/INJECTION WELL SITE

TITLE 19 NATURAL RESOURCES AND WILDLIFE
CHAPTER 15 OIL AND GAS
PART 11 HYDROGEN SULFIDE GAS

19.15.11

VERSADO GAS PROCESSORS, L. L. C.
operated by
TARGA MIDSTREAM SERVICES,
LIMITED PARTNERSHIP

July 29, 2010

19.15.11.9 NMAC H2S CONTINGENCY PLAN

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NEW MEXICO 19.15.11.9
HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN

1. INTRODUCTION

These written procedures are established to minimize any hazard to the public that might result from an emergency due to an accidental release of hydrogen sulfide. Targa Midstream Services Limited Partnership (Targa) has prepared this Contingency Plan as required by State of New Mexico 19.15.11 NMAC - Hydrogen Sulfide Gas. The Plan was developed in accordance with these regulations and American Petroleum Institute Recommended Practice 55, "Recommended Practices for Oil and Gas Producing Gas Processing Plant Operations Involving Hydrogen Sulfide", Second Edition, February 15, 1995.

1.1. GENERAL STATEMENT

This Contingency Plan has been written to provide information essential for the response to an emergency situation. An emergency situation exists when it is determined that extraordinary procedures, equipment, manpower and/or supplies must be used to protect the public from existing or potential hazards resulting from the escape of hydrogen sulfide gas.

No contingency plan can predict all situations. It is the intent of this document to allow for careful thought concerning any potential emergency and remedial actions to be followed. This plan will be fully implemented in the event of an accidental release of a potentially hazardous quantity of hydrogen sulfide gas.

1.2. KEY CONTACT

For Plan implementation refer to the Emergency Notification List in Appendix B.

For Operations:

Gary Maricle
Area Manager
Eunice Plant and Gathering
Eunice, NM
Office 575-394-2534
Mobile 575-602-6005

For Plan Development:

Cal Wrangham
ESH Manager, Midland, TX
432-688-0542

1.3. PURPOSE AND SCOPE OF CONTINGENCY PLAN

The purpose of this plan is to provide for the logical, efficient and safe emergency response action to be taken by Targa. The protection of the general public and workers in the event of an accidental release of potentially hazardous quantity of Hydrogen Sulfide Gas (H2S) from its operations is of the highest priority.

This plan covers the Acid Gas Pipeline which extends from the Targa Eunice Plant to the Targa South Eunice Compressor Station, the Acid Gas Injection Compressor and associated equipment, and the Acid Gas Injection Well. These facilities are in Lea County. These facilities are owned by Versado Gas Processors, L. L. C. and operated by Targa Midstream Services Limited Partnership.

The majority of this equipment lies in rural areas that are sparsely populated. However, the Eunice Plant, which is the northern most end of the Acid Gas Pipeline, is near the proper city limits of the City of Eunice, New Mexico.

Due to the proximity to the City of Eunice, a reaction-type contingency plan has been developed. A reaction-type contingency plan is a pre-planned written procedure for alerting and protecting the public within an area of exposure. This plan is used when it is impossible or impractical to brief in advance all of the public that might possibly be within an area of exposure at the moment of an accidental release of a potentially hazardous volume of hydrogen sulfide.

2. GENERAL INFORMATION

2.1. DESCRIPTION OF FACILITIES AND SAFETY SYSTEMS

The pipeline and equipment covered by this plan are used to transport and inject acid gas into the disposal formation. The acid gas injection authority is by order of the Division, Order No. R-12809.

A map of the pipeline included in Appendix C, showing the location of the facilities and potential exposure areas.

Sources of potentially hazardous volumes of H_2S gas include the pipeline and the compressor station. Leaks from these sources could create a hydrogen sulfide (H_2S) exposure area. Whether such exposure areas would be hazardous would depend upon their location and size. The exposure potential has been calculated for the sources using calculations based on an escape rate defined by NMAC 19.15.11. This rate is based on the maximum daily rate of the gaseous mixture handled in this system and is assumed to be the maximum possible for the system. This is generally and intentionally a conservative calculation. The H_2S concentrations were determined using applicable ASTM or GPA standards. The maximum daily rate of the gaseous mixture handled in this system is 5 mmcf/d, consisting of approximately 15% H2S and 85% CO2. The Pasquill-Gifford derived equation as defined by NMAC was used to calculate the 100 PPM and 500 PPM radius of exposure (ROE) for H2S.

The process begins at the Eunice Plant where a combination of H2S and CO2, know as acid gas is the overhead stream from the plant treating system. This stream will be compressed to approximately 50 psi before going into the pipeline. This line is approximately 4.5 miles long and ends at the Targa South Eunice Compressor Station where it is mixed with water and the solution compressed with an acid gas compressor to approximately 1200 psi, then injected to the formation through an injection well.

The pipeline is constructed of a 16" poly line which is inserted into a 22" poly line which acts as an outer layer of protection for added safety. The poly lines are made of 4710 SDR 17. An air blower will move air through the annulus from the acid gas compressor toward the Eunice Plant where a fixed H2S detector is located to detect any leaks from the inner pipe. This detector system alarms in the Eunice Plant Control Room which is occupied 24 hours a day.

There is an ESD Valve located at the inlet of the Pipeline and another one at the compressor and injection well end which can be remotely operated from the Eunice Plant Control Room in case of emergency. There are also remotely activated valves at the Compressor/Injection Site to move any gas from the pipeline to a Flare for safe removal in an emergency. 19.15.11.12 D. (1)

There is a subsurface safety valve (SSSV) on the injection well located below ground to isolate the down hole well contents in case of an emergency. 19.15.11.12 D. (2)

The acid gas compressor area is equipped with a fixed H2S detector system which alarms in the Eunice Plant Control Room which is occupied 24 hours a day.

The pipeline ROW has warning signs containing the words "poison gas" to warn the public that a potential danger exists. 19.15.11.10

The compressor/injection area is protected from public access with chain link fencing. 19.15.11.12 B.

Wind direction indicators known as wind socks are located at the compressor/injection site so that it is visible from all principal working areas at all times. 19.15.11.12 C.

2.2. AVAILABILITY OF PLANS, PPE SAFETY EQUIPMENT & SUPPLIES

A copy of this contingency plan shall be retained at the Eunice Plant. Additional copies will be kept in field operator's vehicles for referral away from the office. The contingency plan shall be available to all personnel responsible for implementation and will be periodically reviewed and updated. A copy of the Plan will also be made available to the City of Eunice emergency response officials.

Each Field Operator has access to a self-contained breathing apparatus (SCBA), a personal H_2S monitor, a fire extinguisher, and a first aid kit. In addition, when responding to a release, the field operator will have a portable H_2S detector that can be used in the field to determine H_2S levels. Portable H_2S detectors are located at each field office.

In addition to this Plan the Eunice Plant has an emergency plan for responding to an emergency at the facility. This emergency plan contains a list and location of the safety equipment in the plant.

2.3. COORDINATION WITH STATE EMERGENCY PLAN 19.15.11.9 B. (2) (e)

Under certain conditions as provided for in the New Mexico Hazardous Materials Emergency Response Plan (HMER), the New Mexico State Police responding to the emergency may elect to assume the position of Field Incident Commander (FIC) or they may establish a Unified Command of which Targa may be a key member. Under the Unified Command scenario, the Targa FIC 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 the effective and safe response to the emergency situation.

The Area Manager (or his designee) for the Plant, depending on the location of the emergency, will serve as Targa's Field Incident Commander. The Field Incident Commander's responsibility is to ensure control of the emergency incident. Targa's FIC will notify or delegate notifications

of all Targa or contract personnel as well as the civil authorities needed for response to the situation. Targa's FIC will also assign additional Targa personnel to support roles as needed.

2.4. CHARACTERISTICS OF HYDOGEN SULFIDE & SULFUR DIOXIDE

19.15.11.9 B. (2) (b)

2.4.1. Hydrogen Sulfide

Hydrogen sulfide is an extremely toxic and flammable gas that is sometimes present in raw or unprocessed natural gas. The majority of the facilities covered by this Plan contain various amounts of hydrogen sulfide. **INHALATION AT CERTAIN CONCENTRATIONS CAN LEAD TO INJURY OR DEATH.**

Hydrogen sulfide is a colorless gas that has a foul, rotten egg odor. In low concentrations, it is detectable by its characteristic odor. However, smell cannot be relied on to forewarn of dangerous concentrations because exposure to high concentrations (greater than 100 ppm) of the gas rapidly paralyzes the sense of smell.

IT SHOULD BE WELL UNDERSTOOD THAT THE SENSE OF SMELL CAN BE RENDERED INEFFECTIVE BY HYDROGEN SULFIDE, WHICH CAN RESULT IN AN INDIVIDUAL FAILING TO RECOGNIZE THE PRESENCE OF DANGEROUSLY HIGH CONCENTRATIONS.

A more detailed description of physical properties and physiological effects of hydrogen sulfide can be found in Appendix A of this Plan.

2.4.1. Sulfur Dioxide

Sulfur dioxide is a combustion product of hydrogen sulfide. It is also a colorless gas but is non-flammable. It has a pungent odor associated with burning sulfur. **INHALATION AT CERTAIN CONCENTRATIONS CAN LEAD TO INJURY OR DEATH.**

A more detailed description of physical properties and physiological effects of sulfur dioxide can be found in Appendix A of this Plan.

3. EMERGENCY PROCEDURES 19.15.11.9 B. (2) (a)

3.1. ACTIVATION OF THE CONTINGENCY PLAN 19.15.11.9 C and B. (f)

This contingency plan will be activated immediately upon the knowledge that a potentially hazardous volume of hydrogen sulfide (H2S) gas has been released. A potentially hazardous volume occurs when a release creates a concentration of H2S of more than

- 100 ppm in any public area,
- 500 ppm at any public road, or
- when a 100 ppm ROE is greater than 3000 feet from the site of the release.

The Area Manager or designated relief will serve as the Field Incident Commander (FIC) and will activate the Plan. In the absence of the Area Manager or his relief the Targa employee (first responder) at the site shall assume the role of FIC and determine whether or not to activate the Contingency Plan. It is the responsibility of the FIC to ensure control of the emergency response management system and if necessary to coordinate these efforts with any state or local emergency plans.

Note: Appendix B contains Emergency Notification List and phone numbers.

3.2. INITIAL RESPONSE, ROLES & RESPONSIBILITIES

3.2.1. FIRST RESPONDER

The Targa employee (first responder) responding to or receiving notification of an emergency situation shall immediately proceed to the location and attempt to assess the situation, notify the Area Manager or his relief, and take the following actions:

- Provide the Area Manager with as much data possible concerning the location, the extent of emergency and need for additional assistance.
- Warn others in the area of situation, evacuate if necessary.
- Remain at the site, at a safe distance, and available for communication. Wait for assistance to arrive before attempting to enter into any potentially hazardous area.
- Initiate rescue and first aid as the situation dictates.

It is possible that a person other than a Targa employee could discover a potentially hazardous hydrogen sulfide gas leak. Should a call be received from a member of the general public, employees will be dispatched to the scene immediately by activation of the company notification list. The Targa employee arriving at the seen will take the actions noted above as the first responder.

3.2.2. AREA MANAGER

Upon notification of an emergency the Area Manager or his relief will serve as the Field Incident Commander (FIC). Under certain conditions, the New Mexico State Police

responding to the emergency may elect to assume the position of FIC or they may establish a Unified Command of which the Targa Area Manager may be a key member. The responsibility of the FIC is to ensure control of the emergency incident. The Area Manager serving as the FIC shall have the following role and responsibilities.

- Notify other key Targa personnel and alert them to the situation.
- Proceed to the site to assess the size and scope of the situation.
- Establish preliminary "Hot" and "Safe" zones based on information in Appendix C.
- Determine if the Contingency Plan is to be activated based on his assessment of the situation and the Potential Exposure Area information located in Appendix C.
- Alert other emergency response personnel of the situation.
- Arrange for back up personnel to be dispatched to the scene.
- Establish an on-site mobile command station.
- Initiate any "municipal emergency response" requests as deemed appropriate.
- FIC is responsible for assigning support roles as listed below.

In the absence of the Area Manager or his relief the Targa employee (first responder) at the site shall assume the role of FIC and determine whether or not to activate the Contingency Plan. The Field Incident Commander, or relief, will remain on site until the emergency is over, ensure all repairs have been completed, and ensure the operation has returned to normal before releasing emergency team members.

3.2.3. OTHER ROLES

The FIC will assign the following support positions as needed:

Operations and Planning Section Chief: The Operations and Planning Section Chief (OPSC) plays an integral role in interfacing with the various State and Local emergency responders in coordinating all response activities. This allows the FIC to focus on the incident and its big picture decisions.

Technical Specialist: Technical Specialists, those individuals possessing critical skills, experience, and knowledge in specific areas of Targa's or industry operations may be enlisted to assist in providing operational solutions for controlling releases in their areas of expertise.

Engineers / Field Operators: Engineers / Field Operators will assist in providing operational solutions to controlling the size and scope of an incident. The following tasks should receive the initial priority.

- Identify source location and isolation equipment if available.
- Provide detailed isolation instructions for responding personnel. Keep in mind the responders may or may not be Targa employees and may or may not have a good understanding of gas processing operations.

- Begin the operational aspect of a facility recovery plan, first to address operational needs to return to "normal" operating mode, and second to complete long term considerations for site mitigation.

Safety Officer: The Safety Officer (SO) plays an integral part in assisting the FIC in managing the onsite issues surrounding an incident. The Safety Officer is constantly evaluates the safety and health issues involved with the incident and monitors pieces of the response process to allow the FIC to address "bigger picture" issues. The following is an abbreviated list of responsibilities.

- Confirm that the FIC's preliminary "hot and safe zones" are still applicable and adjust accordingly for such activities as staging areas.
- Address Safety, Health, Environmental, and Regulatory issues including notifications.

Other Employees: All other personnel should stand by and wait for instructions from the FIC. Once accounted for, Targa employees may be called upon to provide logistical support in many different directions. These may include contacting vendors for supplies, contacting local company support groups for assistance to the general public, providing onsite logistical support to the responders "staging area" where others wait to assist in the actual response efforts, escorting vendors to remote locations as a guide, blocking roads, assisting with evacuations, etc.

Media Contact: All media inquiries should be directed to Corporate Communications in Houston. The FIC or his designee will provide Corporate Communications with periodic updates and will take their direction with regard to any onsite communication with the media.

However, it should be understood that no employee or contractor will be asked to provide incident scene support that they are not comfortable in their ability to perform, or have not been specifically trained to do.

3.3. IMMEDIATE ACTION PLAN

The following sequence of events shall be initiated and continued as necessary to end the emergency. Some steps may be taken simultaneously. At the end of the list of actions is a description of each task.

A. Request assistance, if needed.
   1. Alert and account for facility personnel
   2. Move away from the source and get away from the affected area
   3. Don personal protective breathing equipment
   4. Alert other affected personnel
   5. Assist personnel in distress
   6. Proceed to the designated emergency assembly area
   7. Account for on-site personnel

B. Take immediate measures to control the presence of or potential H_2S discharge and to eliminate possible ignition sources. Emergency shutdown procedures should be initiated as deemed necessary to correct or control the specific situation. When the required action cannot be accomplished in time to prevent exposing operating personnel or the public to hazardous concentrations of H_2S, proceed to the following steps, as appropriate for the site-specific conditions.

C. Alert the public (directly or through appropriate government agencies) that they may be subjected to an atmosphere exceeding 30 ppm of H_2S. Initiate evacuation of those within the exposure area.

D. Contact the Area Manager or first available person on the call list. Notify them of the circumstances and whether or not immediate assistance is needed. The Area Manager should notify (or arrange for notification of) other supervisors and other appropriate personnel (including public officials) on the call list, as necessary.

E. Cordon off the exposure area to prevent entry, make recommendations to public officials regarding blocking unauthorized access to the unsafe area, and assist as appropriate. Make recommendations to public officials regarding evacuating the public and assist as appropriate.

F. Notify, as required, state and local officials and the National Response Center to comply with release reporting requirements.

G. Monitor the ambient air in the area of exposure (after following abatement measures) to determine when it is safe for re-entry.

H. Return the situation to normal.

The following discussion expands on the emergency actions in the order in which they were previously listed. An attempt was made to list these actions in logical sequence and priority order. Ideally, some of these actions, after the first, will be performed simultaneously. There may be situations where actions must be performed in a different sequence from those listed. The employee first knowing about the potential hazard (First Responder) will take the first action(s). Subsequent actions will generally be taken by or assisted by those dispatched to help.

A. Request Assistance if Needed

Any employee who finds himself in an emergency situation involving the escape of hydrogen sulfide gas that would pose a hazard to the public shall notify the Area Manager, or his designated alternate, by the fastest means. The employee will advise the Area Manager, or alternate, of the location and nature of the emergency and the assistance needed. He will also state the actions taken and those he will be taking while waiting for assistance. The Area Manager is directly responsible for requesting the assistance needed. He will also proceed with the appropriate notifications. Please refer to Appendix B of this Plan for a list of emergency telephone numbers.

B. Stop the Escape of Hydrogen Sulfide

Isolate the leak by closing the upstream and downstream valves. If necessary, initiate emergency shut down (ESD) procedures for the equipment.

C. Alert the Public and Evacuate Those Within the Exposure Area

Alert all persons who are within the exposure area. Refer to the map and list of ROEs in Appendix C. In the event a leak causes a potentially hazardous volume public, notification must be made immediately by the employee who discovers (or arrives first at the leak site) and judges the situation serious enough to require immediate evacuation. If it is determined that the notification proceeding shall not be immediate, the Area Manager is the designated employee to initiate evacuations. Whether by the first person at the scene or by the Area Manager, notification to the public shall be made by the fastest possible means.

In the event that complete or partial evacuation becomes necessary, evacuation must be confirmed by personal observations, which should include repeat visits to the area to confirm that persons have not entered the evacuated area. If evacuation is deemed prudent, advise persons and/or assist them to leave the area without delay by the fastest, safest route out of the exposure area. In populated areas such as the City of Eunice, evacuations will be conducted by city officials with the aid of Targa employees.

- First, evacuation should be from the 500 ppm exposure area, giving priority to the downwind position.
- Next, evacuate those within the potential exposure area, giving priority to the downwind position.

- Monitor ambient hydrogen sulfide concentrations in adjacent areas to ensure that any exposed residents are evacuated.
- Always wear a breathing apparatus.

D. Contact the Area Manager

The Targa employee (first responder) responding to or receiving notification of an emergency situation shall immediately proceed to the location and attempt to assess the situation, notify the Area Manager or his relief, and take the following actions:

- Provide the Area Manager with as much data possible concerning the location, the extent of emergency and need for additional assistance.
- Warn others in the area of situation, evacuate if necessary.
- Remain at the site, at a safe distance, and available for communication. Wait for assistance to arrive before attempting to enter into any potentially hazardous area.
- Initiate rescue and first aid as the situation dictates.

E. Cordon off the Exposure Area to Prevent Entry and/or Make Barricade and Evacuation Recommendations

Place barricades outside the area of exposure on all routes to prevent entry into the area. Barricades must be manned by Targa and/or law enforcement personnel to prevent entry. The persons manning the barricades must be equipped with a protective breathing apparatus, hydrogen sulfide measuring devices, and two-way radios or cell phones. Barricades should be placed a safe distance away from the potential exposure area and should be monitored for Hydrogen Sulfide.

Based on all information available and the calculated potential exposure information listed in Appendix C, make recommendations to public officials for the strategic placing barricades, for evacuating the public, and assist as needed. Priority should be given to those areas in the 500 ppm radius of exposure, then the 100 ppm radius of exposure, with consideration given to the wind direction. Proper caution should be used for shifting changes in wind direction.

F. Complete Notifications as Required

Generally, some notifications will have been made under Steps A or D. Any of the following notifications that were not made must be made as soon as possible. Normally the Region ES&H Advisors will complete the agency notifications.

- Complete the chain of notification within the company.
- The local public safety officials not already notified who need to be aware of the situation.
- New Mexico Oil Conservation Division – Notification to the OCD should be made as soon as possible, but must be made no more than 4 hours after a Plan evacuation. A

full report of the incident must be submitted to the Division on Form C-141 no later than 15 days following the release.

- Environmental Protection Agency Regional Office.

G. Monitor for Safe Re-entry

As soon as the complete and permanent stoppage of the release is confirmed, begin monitoring evacuated areas for hydrogen sulfide and combustible gas concentrations. Monitor the ambient air in the area of exposure only after following abatement measures, to determine when it is safe for re-entry.

H. Return of the Situation to Normal

No re-entry will be allowed until ambient conditions have been assessed and verified. Communications for re-entry should be coordinated through the Area Manager assuming the role of Field Incident Commander (FIC). When total absence of hydrogen sulfide and combustible gas is confirmed throughout the evacuated area, notify the sheriff's office so that they may be informed of the situation. Advise all parties previously notified that the emergency has ended.

Initiate the post-emergency actions listed in Section 4.

4. EMERGENCY PREPAREDNESS

4.1. PRE-EMERGENCY ACTIONS

Targa recognizes that the most critical portion of this plan is Section 3 - Emergency Procedures. To ensure the most effective implementation of these procedures, pre-emergency measures shall be completed to attain a state of preparedness. These actions are as follows:

- Every employee is to be completely familiar with the contents and location of the contingency plan.
- Surveillance and preventative maintenance to minimize the possibility of an accidental release of gas.
- Training and drills will be conducted as further described below.
- All emergency breathing equipment is maintained and ready for use.
- This Plan is made available to appropriate public response officials and shall be reviewed and discussed thoroughly with the City of Eunice emergency response officials.
- Targa will use brochures, public notices, or other means, as deemed appropriate and practical, to alert and educate any persons who reside within the potential areas of exposure.

4.2. TRAINING AND DRILLS 19.15.11.9 B. (2) (d)

The value of training and drills in emergency response procedures cannot be over emphasized. All Targa personnel identified in this plan shall be trained on the emergency response plan and procedures annually. The importance of each role of the emergency responders and the effects that each person has during an emergency will be stressed. In additional, the needs for emergency preparedness and maintaining the plan will be emphasized through the use of drills and other exercises that simulate an emergency in which personnel perform or demonstrate their duties. These exercises will consist of table-top or classroom discussions or can be a realistic drill in which equipment is deployed, communications equipment is tested, etc. Public officials will be informed and asked to participate in these exercises. Specific table-top or classroom drills maybe conducted with the City of Eunice emergency response officials to review evacuation measures for the city.

Review and critiques of the drills or exercises will be conducted after they are completed to identify any potential improvement opportunities for the plan. Documentation of the training, drills, and reviews will be kept on file.

4.3. POST-EMERGENCY ACTIONS

In the event this plan is activated, the following post-emergency actions shall be taken in an effort to reduce the possibility of a recurrence of the type of problem that required its activation and to assure that any future activation will be as effective as possible:

- Clean up, recharge, restock, repair, and replace emergency equipment, as necessary, and return it to its original location.
- Critique all actions and procedures, providing additional training to employees if need is indicated. Modify contingency plan, if necessary.
- Review the cause of the emergency and modify operating maintenance and other surveillance procedures, if needed.
- Ensure all agency notifications have been completed and follow-up with any written notification requirements.
- Ensure all previously notified or evacuated persons have been advised that the emergency situation has ended.

5. RESCUE AND FIRST-AID

General Information

The first and foremost objective in any emergency situation (including a hydrogen sulfide leak) is the welfare of the employees and the general public. Good judgment, consultation with supervisors, and the use of protective breathing equipment are of prime importance in controlling the situation and averting personal and property damage. In cases where persons are unable to move, our first objective is their rescue. If they are in an enclosure where hydrogen sulfide has accumulated and are over an arm's length away, a life belt should be secured to them with the other end held by a responsible person stationed in a clear area. Persons should not remove breathing equipment until tests indicate that the air is safe to breathe.

When a hydrogen sulfide emergency exists, personnel must use the 'BUDDY SYSTEM" to prevent anyone from entering a contaminated area alone. Never enter an enclosed place where hydrogen sulfide may have accumulated without wearing protective breathing equipment.

EMERGENCY RESCUE AND FIRST-AID FOR HYDROGEN SULFIDE ASPHYXIATION VICTIM

1. ALWAYS WEAR RESPIRATORY EQUIPMENT WHEN MAKING A RESCUE.

Never enter an area to rescue a person you suspect has been overcome by hydrogen sulfide without taking the time to secure a self-contained respirator. One deep breath of the highly concentrated gas can cause respiratory and cardiac (heart) paralysis.

2. MOVE THE VICTIM TO AN AREA OF FRESH AIR.

3. DETERMINE IF HEART IS BEATING AND IF VICTIM IS BREATHING.

If the victim is breathing, his heart will most likely be beating. If the victim is not breathing, his heart may have stopped.

a. Check for pulse by feeling the carotid artery. This can be done by pressing down on the sides of the trachea (windpipe) adjacent to the jawbone with the thumb on one side and the index finger on the opposite side. If the heart is beating, proceed with mouth-to-mouth resuscitation.

b. If the heart is stopped and the victim is no longer breathing, external heart massage must be given.

4. EXTERNAL HEART MASSAGE PROCEDURE

External heart massage procedure consists of placing the heel of one hand on the center line of the chest approximately two inches above the end of the breastbone. Placement is extremely important, both on the area of chest and use of the heel of hand. The fingers on the bottom hand must never touch the chest. The other hand is placed diagonally across the heel of the first hand. The massage is done by depressing the chest down 1 to 1 1/2" inches by applying the body weight on the hands. It actually takes 80 to 100 pounds of pressure to depress the chest enough to squeeze (pump) the heart. The arms must be kept straight and the body weight utilized for applying pressure. The depressing action must be done in a rapid depress-release motion. It should be repeated a minimum of 60 times per minute. This will be vigorous work. The carotid artery should be checked occasionally to determine if the heart has begun to beat on its own.

5. MOUTH-TO-MOUTH RESUSCITATION

With the victim lying on his back, place one hand under the neck and with the other hand tilt the head back to where the chin extends up as high as possible. This will pull the tongue back from the throat and allow free air passage. Keep one hand under the neck and pinch the nose shut with the other hand, while keeping the head tilted back. Place your mouth over the victim's mouth and blow a forcible breath. Remove your mouth from his and turn your ear toward his mouth to listen for the exhale of air. Continue this procedure approximately 12-13 times a minute until the victim begins to breathe on his own.

6. ARTIFICIAL CIRCULATION (JOINT EXTERNAL HEART MASSAGE AND MOUTH-TO-MOUTH RESUSCITATION USING TWO PERSONS)

Do not waste time, as seconds literally may mean the difference between life and death. As a two-man team, one person should give mouth-to-mouth breathing and the other should apply heart massage. To begin, the lungs should be inflated once and the chest depressed five times. The rhythm should never be broken. The person giving the mouth-to-mouth breathing must get his breath into the victim between the fifth and sixth chest depression. The rhythm is very important and the "breath-in" must not be during a chest depression. It can be done easily, but it takes practice. If circulation is restored, the victim's color will become noticeably better and he should revive within fifteen minutes. The two participants will need to take turns as the external heart massage is strenuous work.

7. ARTIFICIAL CIRCULATION (JOINT EXTERNAL HEART MASSAGE AND MOUTH-TO-MOUTH RESUSCITATION BY ONE PERSON)

If you do not have any help, start the procedure by giving the victim three deep breaths by mouth-to-mouth breathing. Then massage the chest fifteen times, then two deep breaths and continue the 2-15-2-15 sequence. This procedure will be somewhat difficult, but a person in the unconscious state only requires 40% to 50% of the normal circulatory action to stay alive.

8. BRINGING THE VICTIM AROUND

a. A person overcome with hydrogen sulfide may have uncontrolled muscular reaction varying from slight twitching to violent jerking. The rescuer should be prepared for the unexpected.

b. When the victim starts to revive, he may be sick and vomiting. His head should be turned to the side to prevent choking.

c. Oxygen should be used as a supplement when breathing has been restored to normal. However, the emphasis is on quick response of the rescuer in giving mouth-to-mouth breathing/external heart massage. Administering oxygen is absolutely worthless unless the victim is breathing.

d. Treat for shock by keeping the victim quiet, reassuring him he is going to be okay and by preserving body heat.

e. Get professional help immediately. Summon an ambulance and/or doctor. Call the hospital in advance to notify them of the impending arrival and emergency.

9. HOW TO DETERMINE IF THE VICTIM IS RESPONDING TO ARTIFICIAL CIRCULATION.

a. The pupils will constrict to light sources.

b. The victim's color will improve.

APPENDIX A.1 - PHYSICAL PROPERTIES AND PHYSIOLOGICAL EFFECTS OF HYDROGEN SULFIDE

1. Physical Data

Chemical Name: Hydrogen Sulfide
CAS Number: 7783-06-04
Synonyms: Sulfureted hydrogen, hydrosulfuric acid, dihydrogen sulfide.
Chemical Family: Inorganic sulfide.
Chemical Formula: H2S.
Normal Physical State: Colorless gas, slightly heavier than air. Vapor density (specific gravity) at 59°F (15°C) and 1 atmosphere – 1.189.
Auto-ignition Temperature: 500°F (260°C).
Boiling Point: 76.4°F (-60.2°C).
Melting Point: -117.2°F (-82.9°C).
Flammable Limits: 4.3 – 46 percent vapor by volume in air.
Solubility: Soluble in water and oil; solubility deceases as the fluid temperature increases.
Combustibility: Burns with a blue flame to produce sulfur dioxide (SO_2).
Odor and Warning Properties: Hydrogen sulfide has an extremely unpleasant odor, characteristic of rotten eggs, and is easily detected at low concentrations. However, due to rapid onset of olfactory fatigue and paralysis, (inability to smell), ODOR SHALL NOT BE USED AS A WARNING MEASURE.

2. Exposure Limits

The Occupational Safety and Health Administration (OSHA) has established 20 ppm by volume as an acceptable ceiling concentration (ACC) and 50 ppm by volume as an acceptable maximum peak above the ACC for an 8-hour shift for hydrogen sulfide (refer to 29 *Code of Federal Regulations* Part 1910.1000, Subpart Z, Table Z-2). The American Conference of Governmental Industrial Hygienists (ACGIH) recommends a Threshold Limit Value (TLV) of 10 ppm (eight-hour TWA) and a short term exposure limit (STEL) of 15 ppm averaged over fifteen minutes. Exposure at the STEL should not be repeated more than four times per day with at least sixty minutes between successive exposures in this range.

3. Physiological Effects

INHALATION AT CERTAIN CONCENTRATIONS CAN LEAD TO INJURY OR DEATH (refer to Table A-1). Hydrogen sulfide is an extremely toxic, flammable gas that may be encountered in the production and processing of gas well gas, high-sulfur-content crude oil, crude oil fractions, associated gas, and waters. Since hydrogen sulfide is heavier than air, it can collect in low places. It is colorless and has a foul, rotten-egg odor. In low concentrations, it is detectable by its characteristic odor. However, smell cannot be relied on for forewarn of dangerous concentration because exposure to high concentrations (greater than 100 ppm) of the gas rapidly paralyzes the sense of smell due to paralysis of the olfactory nerve. A longer exposure to lower concentrations has a similar desensitizing effect on the sense of smell.

IT SHOULD BE WELL UNDERSTOOD THAT THE SENSE OF SMELL WILL BE RENDERED INEFFECTIVE BY HYDROGEN SULFIDE, WHICH CAN RESULT IN AN INDIVIDUAL FAILING TO RECOGNIZE THE PRESENCE OF DANEROUSLY HIGH CONCENTRATIONS.

Excess exposure to hydrogen sulfide causes death by poisoning the respiratory system *at the cellular level.* There is some indication that the presence of alcohol in the blood aggravates the effects of hydrogen sulfide in acute poisoning cases. Even at low concentrations (10-15 ppm) Hydrogen sulfide is irritating to the eyes and respiratory tract. Closely repeated short-term exposures at low concentrations may lead to irritation of the eyes, nose, and throat. Symptoms from repeated exposures to low concentrations usually disappear after not being exposed for a period of time. Repeated exposures to low concentrations that do not produce effects initially may eventually lead to irritation if the exposures are frequent.

4. Respiratory Protection

The National Institute for Occupational Safety and Health (NIOSH) has examined the criteria for respirator tests and sources of respirator leakage and recommends that positive pressure, either supplied-air or self-contained breathing apparatus, as appropriate, with a full face piece be worn by anyone exposed to atmosphere containing hydrogen sulfide concentrations above OSHA's ACC.

Table A-1
Typical Characteristics of Exposure to Hydrogen Sulfide

Percent by Volume	Parts Per Million by Volume	Grains Per 100 Std. Cubic Feet	Milligrams Per Cubic Meter	Typical Characteristics Regarding Hydrogen Sulfide Exposure
0.000013	0.13	0.008	0.18	Obvious and unpleasant odor generally at 0.13 ppm and quite noticeable at 4.6 ppm. As the concentration increases, the sense of smell fatigues and the gas can no longer be detected by odor.
0.001	10	0.63	14.41	Unpleasant odor. Possible eye irritation. ACGIH recommended Threshold Limit Value (TLV) (eight-hour TWA).
0.0015	15	0.94	21.61	ACGIH STEL averaged over 15 minutes.
0.002	20	1.26	28.83	Burning sensation in eyes and irritation of the respiratory tract after one hour or more exposure. OSHA acceptable ceiling concentration (ACC).
0.005	50	3.15	72.07	Loss of sense of smell after 15 or more minutes exposure. Exposure over one hour may lead to headache, dizziness, and/or staggering. Pulmonary edema reported following extended exposure to greater than 50 ppm. Exposure at 50 ppm or greater can cause serious eye irritation or damage.
0.01	100	6.3	144.14	Coughing, eye irritation, loss of sense of smell after 3 to 15 minutes. Altered respiration, pain in eyes, and drowsiness after 15 to 20 minutes, followed by throat irritation after one hour. Prolonged exposure results in a gradual increase in the severity of these symptoms.
0.05	500	31.49	720.49	Unconsciousness after short exposure, cessation of breathing if not treated quickly. Dizziness, loss of sense of reasoning and balance. Victims need prompt artificial ventilation and/or cardiopulmonary resuscitation (CPR) techniques.
0.10+	1000+	62.98+	1440.98+	Unconsciousness at once. Permanent brain damage or death may result. Rescue promptly and apply artificial ventilation and/or cardiopulmonary resuscitation (CPR).

APPENDIX A.2 - PHYSICAL PROPERTIES AND PHYSIOLOGICAL EFFECTS OF SULFUR DIOXIDE

1. Physical Data

Chemical Name: Sulfur Dioxide.
CAS Number: 7446-09-05.
Synonyms: Sulfurous anhydride, sulfurous oxide.
Chemical Family: Inorganic.
Chemical Formula: SO_2.
Normal Physical State: Colorless gas, appreciably heavier than air. Vapor density (specific gravity) at 32°F (0°C) and 1 atmosphere – 2.26.
Boiling Point: 14°F (-10.0°C).
Flammable Limits: Non-flammable (produced from burning hydrogen sulfide).
Solubility: Readily soluble in water and oil; solubility deceases as the fluid temperature increases.
Odor and Warning Properties: Sulfur dioxide has a pungent odor associated with burning sulfur. It produces a suffocating effect and produces sulfurous acid on membranes of the nose and throat.

2. Exposure Limits

The Occupational Safety and Health Administration (OSHA) has established a permissible exposure limit (PEL) of 5 ppm as an 8-hour TWA for sulfur dioxide (refer to 29 Code of Federal Regulations Part 1910.1000, Subpart Z, Table Z-1). The American Conference of Governmental Industrial Hygienists (ACGIH) recommends 2 ppm as an eight-hour TWA Threshold Limit Value (TLV) and 5 ppm as a STEL averaged over 15 minutes for sulfur dioxide.

3. Physiological Effects

Acute Toxicity

INHALATION AT CERTAIN CONCENTRATIONS CAN LEAD TO INJURY OR DEATH. Exposure to concentrations below 20 ppm can cause eye irritation, throat irritation, respiratory tract irritation, chest constriction, and some nausea. Exposure to concentrations above 20 ppm can result in marked coughing, sneezing, eye irritation, and chest constriction. Exposure to 50 ppm causes irritation to the nose and throat, running nose, coughing, reflex bronchia-constriction with possible increase in bronchial mucous secretion, and increased pulmonary resistance to air flow (breathing congestion) occurs promptly. This atmosphere, (50 ppm or more), will not be tolerated by most persons for more than 15 minutes. Some reported acute reactions of exposure to high concentrations include, but are not limited to, inflammation of the eyes, nausea, vomiting, abdominal pain, and sore throat. These symptoms are sometimes followed by bronchitis, pneumonia, and/or complaints of weakness for a period of weeks.

Chronic Toxicity

It has been reported that prolonged exposures to sulfur dioxide may lead to increased risk of chronic nasopharyngitis, alteration in sense of smell and taste, shortness of breath on exertion, and a higher frequency of respiratory tract infections compared to unexposed persons. It has also been postulated that sulfur dioxide in the work environment "possibly enhances" the suspected carcinogenic (cancer) effect of arsenic or other cancer agents. No definite evidence is available regarding co-carcinogenesis or promotion of cancer by sulfur dioxide exposure. A few persons apparently have or develop a hyper susceptibility to sulfur dioxide. Decrements in pulmonary function tests have been noted after both acute and chronic exposures.

Exposure Risks

It is not yet clear what concentrations of low level exposure or lengths of exposure increase the risks, nor by how much the risks are increased. Sulfur dioxide exposures should be minimized. Smoking by persons exposed to sulfur dioxide should be strongly discouraged.

4. Respiratory Protection

The National Institute for Occupational Safety and Health (NIOSH) has examined the criteria for respirator tests and sources of respirator leakage and recommends that positive pressure, either supplied-air or self-contained personal breathing apparatus, as appropriate, with a full face piece be worn by anyone exposed to atmosphere containing sulfur dioxide concentrations above OSHA's permissible exposure limit (PEL) (refer to 29 Code of Federal Regulations Part 1910.1000, Subpart Z, Table Z-1).

APPENDIX B - EMERGENCY NOTIFICATION LIST

B.1. COMPANY PERSONNEL

Call the following persons in the order listed until one is notified of the emergency:

1. Area Management

Eunice Plant

Gary Maricle Eunice Area Manager
Office 575-394-2534, ext. 226 Eunice, NM
Mobile 575-602-6005

Alternate: Frank Brainard, Eunice Operations Supervisor
Office 575-394-2534, ext. 229
Home none
Mobile 575-631-0420

Alternate: Chuck Tolsma, Eunice Field Supervisor
Office 575-394-2516, ext. 327
Home 575-631-1846
Mobile 575-631-6026

Alternate: Tim Jordan – Saunders Plant Area Manager
Office 575-396-3221 Lovington, NM
Home 575-396-0189 Lovington, NM
Mobile 575-631-7091

Alternate: Todd Young – Area Manager
Office 575-393-2823 ext. 234
Home 432-523-3770 Andrews, TX
Mobile 575-441-1645

2. ES&H Group

Cal Wrangham – ES&H Manager
Office 432-688-0542 Midland, TX
Home 432-697-6580 Midland, TX
Mobile 432-425-7072

Rebecca Woodell – ES&H Compliance Specialist
Office Office 575-394-2534, ext. 239 Eunice, NM
Home 575-394-2280
Mobile 575-631-7085

Cindy Klein – ES&H Compliance Specialist
Office 575-396-3221, ext. 38
Home 575-398-6670
Mobile 575-631-7093

3. Region Manager

Clark White – Permian Basin Region Manager
Office 713-584-1525 Houston, TX

4. Field Operators

Eunice Area
Doyle Mapp 575-631-7064
Roger Holland 575-631-7094
Robert McBee 575-631-7061

Call company support personnel in Houston, TX, as needed:

1. Assistant V-P ES&H	Jessica Keiser	713-584-1084 Cell Phone 713-263-4537
2. Corporate Security	Weldon Green	713-584-1301 Cell Phone 281-802-5351

B.2. LAW ENFORCEMENT AND EMERGENCY SERVICES

STATE POLICE New Mexico 575-392-5588

LEA COUNTY

Eunice – Police	575-394-2112
Eunice – Fire Dept.	575-394-3258
Hobbs - Sheriff	575-396-3611
Hobbs – Police	575-397-9265
Hobbs – Fire Dept.	575-397-9265
Hobbs – Ambulance	575-397-9265
Lovington – Sheriff	575-396-3611
Lovington – Police	575-396-2811
Lovington – Fire Dept	575-396-2359
Lovington - Ambulance	575-396-2811

B.3. STATE AND FEDERAL AGENCIES

NEW MEXICO

1. Oil Conservation Division, Santa Fe	505-476-3440
2. Oil Conservation Division – District Office, Hobbs	575-393-6161
3. Environmental Department – Air Quality Bureau, Santa Fe	505-827-1494

FEDERAL

1. U. S. EPA – Region VI Office, Dallas, TX	(800) 887-6063

B.4. CONTRACTOR SUPPORT

ELECTRIC SERVICE COMPANIES

Excel Energy - Customer Service	800-895-4999 24 hour
Kay and Company	806-592-3513

WATER SERVICE AND VACUUM TRUCKS

Chaparrel Services – Eunice, NM	575-394-2545 24 hour
Danny's Hot Oil	575-398-3490
Gandy Corporation – Lovington, NM	575-396-4948 24 hour
Key Energy Services – Hobbs , NM	575-397-4994 24 hour

ROUSTABOUT CREWS

Flint Energy Services – Odessa, TX	432-332-0687 24 hour
Gandy Corporation – Lovington, NM	575-396-4948 24 hour
B & H Construction - Eunice, NM	575-934-2588 24 hour

DIRT WORK EQUIPMENT

B & H Construction – Eunice, NM	575-394-2588 24 hour
EDW Construction – Hobbs, NM	575-391-7814 24 hour
EKB Welding – Monument, NM	575-361-7078 24 hour
Ferguson Construction – Lovington	575-396-3689 24 hour
Gandy Corporation – Lovington, NM	575-396-4948 24 hour

WELDERS

EKB Welding – Monument, NM	575-361-7078 24 hour
Flint Energy Services – Odessa, TX	432-332-0687 24 hour
B & H Construction – Eunice, NM	575-394-2588 24 hour

SAFETY EQUIPMENT

Total Safety Equip. – Hobbs, NM	575-392-2973 24 hour

APPENDIX C - POTENTIAL EXPOSURE AREA MAP

19.15.11.9 B. (2) (c)

The information in this appendix has been developed to aid in the determination of potential areas of exposure during a release of hydrogen sulfide.

The system exists in an arid climate. In the event of a hydrogen sulfide emergency, detailed consideration shall be given to ambient conditions and their considerable impact upon the situation. Among the most important factor to regard is wind direction during an emergency so that any evacuation will safely take place. The Radius of Exposure (ROE) has been calculated for potential release for all areas covered by this plan. A radius has been calculated for both 100 ppm and 500 ppm concentrations at the end point away from the release in all directions. The ROE for 100 ppm is 6346 feet and 2900 feet for the 500 ppm ROE. Prevailing winds at the time of the release will result in an exposure area predominately downwind form the release point.

Contents

TITLE 19 NATURAL RESOURCES AND WILDLIFE
CHAPTER 15 OIL AND GAS
PART 11 HYDROGEN SULFIDE GAS

19.15.11.1 ISSUING AGENCY: Energy, Minerals and Natural Resources Department, Oil Conservation Division.
[19.15.11.1 NMAC - N, 12/1/08]

19.15.11.2 SCOPE: 19.15.11 NMAC applies to a person subject to the division's jurisdiction, including a person engaged in drilling,
stimulating, injecting into, completing, working over or producing an oil, gas or carbon dioxide well or a person engaged in gathering, transporting,
storing, processing or refining of oil, gas or carbon dioxide. 19.15.11 NMAC does not exempt or otherwise excuse surface waste management
facilities the division permits pursuant to 19.15.36 NMAC from more stringent conditions on the handling of hydrogen sulfide required of such
facilities by 19.15.36 NMAC or more stringent conditions in permits issued pursuant to 19.15.36 NMAC, nor shall the facilities be exempt or
otherwise excused from the requirements set forth in 19.15.11 NMAC by virtue of permitting under 19.15.36 NMAC.
[19.15.11.2 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.3 STATUTORY AUTHORITY: 19.15.11 NMAC is adopted pursuant to the Oil and Gas Act, NMSA 1978, Section 70-2-6,
Section 70-2-11 and Section 70-2-12.
[19.15.11.3 NMAC - N, 12/1/08]

19.15.11.4 DURATION: Permanent.
[19.15.11.4 NMAC - N, 12/1/08]

19.15.11.5 EFFECTIVE DATE: December 1, 2008, unless a later date is cited at the end of a section.
[19.15.11.5 NMAC - N, 12/1/08]

19.15.11.6 OBJECTIVE: To require oil and gas operations be conducted in a manner that protects the public from exposure to hydrogen
sulfide gas.
[19.15.11.6 NMAC - N, 12/1/08]

19.15.11.7 DEFINITIONS:

A. "ANSI" means the American national standards institute.

B. "Area of exposure" means the area within a circle constructed with a point of escape at its center and the radius of exposure as its
radius.

C. "Dispersion technique" is a mathematical representation of the physical and chemical transportation characteristics, dilution
characteristics and transformation characteristics of hydrogen sulfide gas in the atmosphere.

D. "Escape rate" means the maximum volume (Q) that is used to designate the possible rate of escape of a gaseous mixture
containing hydrogen sulfide, as set forth in 19.15.11 NMAC.

(1) For existing gas facilities or operations, the escape rate is calculated using the maximum daily rate of the gaseous mixture
produced or handled or the best estimate thereof. For an existing gas well, the escape rate is calculated using the current daily absolute open flow
rate against atmospheric pressure or the best estimate of that rate.

(2) For new gas operations or facilities, the escape rate is calculated as the maximum anticipated flow rate through the system. For a
new gas well, the escape rate is calculated using the maximum open-flow rate of offset wells in the pool or reservoir, or the pool or reservoir
average of maximum open-flow rates.

(3) For existing oil wells, the escape rate is calculated by multiplying the producing gas/oil ratio by the maximum daily production

rate or the best estimate of the maximum daily production rate.
(4) For new oil wells, the escape rate is calculated by multiplying the producing gas/oil ratio by the maximum daily production rate of
offset wells in the pool or reservoir, or the pool or reservoir average of the producing gas/oil ratio multiplied by the maximum daily production rate.
(5) For facilities or operations not mentioned, the escape rate is calculated using the actual flow of the gaseous mixture through the
system or the best estimate of the actual flow of the gaseous mixture through the system.
E. "GPA" means the gas processors association.
F. "LEPC" means the local emergency planning committee established pursuant to the Emergency Planning and Community
Right-To-Know Act, 42 U.S.C. section 11001.
G. "NACE" means the national association of corrosion engineers.
H. "Potentially hazardous volume" means the volume of hydrogen sulfide gas of such concentration that:
(1) the 100-ppm radius of exposure includes a public area;
(2) the 500-ppm radius of exposure includes a public road; or
(3) the 100-ppm radius of exposure exceeds 3000 feet.
I. "Public area" means 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.
J. "Public road" means a federal, state, municipal or county road or highway.
K. "Radius of exposure" means the radius constructed with the point of escape as its starting point and its length calculated using
the following Pasquill-Gifford derived equation, or by such other method as the division may approve:
(1) for determining the 100-ppm radius of exposure: $X = [(1.589)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$, where "X" is the
radius of exposure in feet, the "hydrogen sulfide concentration" is the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the
gaseous mixture and "Q" is the escape rate expressed in cubic feet per day (corrected for standard conditions of 14.73 psi absolute and 60 degrees
fahrenheit);
(2) for determining the 500-ppm radius of exposure: $X = [(0.4546)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$, where "X" is the
radius of exposure in feet, the "hydrogen sulfide concentration" is the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the
gaseous mixture and "Q" is the escape rate expressed in cubic feet per day (corrected for standard conditions of 14.73 psi absolute and 60 degrees
fahrenheit);
(3) for a well being drilled, completed, recompleted, worked over or serviced in an area where insufficient data exists to calculate a
radius of exposure but where hydrogen sulfide could reasonably be expected to be present in concentrations in excess of 100 ppm in the gaseous
mixture, a 100-ppm radius of exposure equal to 3000 feet is assumed.
[19.15.11.7 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.8 REGULATORY THRESHOLD:

A. Determination of hydrogen sulfide concentration.
(1) Each person shall determine the hydrogen sulfide concentration in the gaseous mixture within wells, facilities or operations either
by testing (using a sample from each well, facility or operation); testing a representative sample; or using process knowledge in lieu of testing. If

the person uses a representative sample or process knowledge, the concentration derived from the representative sample or process knowledge shall
be reasonably representative of the hydrogen sulfide concentration within the well, facility or operation.
(2) The person shall conduct the tests used to make the determination referred to in Paragraph (1) of Subsection A of 19.15.11.8
NMAC in accordance with applicable ASTM or GPA standards or by another division-approved method.
(3) If the person conducted a test prior to January 31, 2003 that otherwise meets the requirements of Paragraphs (1) and (2) of
Subsection A of 19.15.11.8 NMAC, new testing is not required.
(4) If a change or alteration may materially increase the hydrogen sulfide concentration in a well, facility or operation, the person
shall make a new determination in accordance with 19.15.11 NMAC.
B. Concentrations determined to be below 100 ppm. If the hydrogen sulfide concentration in a given well, facility or operation is
less than 100 ppm, the person is not required to take further actions pursuant to 19.15.11 NMAC.
C. Concentrations determined to be above 100 ppm.
(1) If the person determines the hydrogen sulfide concentration in a given well, facility or operation is 100 ppm or greater, then the
person shall calculate the radius of exposure and comply with applicable requirements of 19.15.11 NMAC.
(2) If calculation of the radius of exposure reveals that a potentially hazardous volume is present, the person shall provide results of
the hydrogen sulfide concentration determination and the calculation of the radius of exposure to the division. For a well, facility or operation, the
person shall accomplish the determination, calculation and submission 19.15.11.8 NMAC requires before operations begin.
D. Recalculation. The person shall calculate the radius of exposure if the hydrogen sulfide concentration in a well, facility or
operation increases to 100 ppm or greater. The person shall also recalculate the radius of exposure if the actual volume fraction of hydrogen
sulfide increases by a factor of 25 percent in a well, facility or operation that previously had a hydrogen sulfide concentration of 100 ppm or
greater. If calculation or recalculation of the radius of exposure reveals that a potentially hazardous volume is present, the person shall provide the
results to the division within 60 days.
[19.15.11.8 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.9 HYDROGEN SULFIDE CONTINGENCY PLAN:

A. When required. If a well, facility or operation involves a potentially hazardous volume of hydrogen sulfide, the person shall
develop a hydrogen sulfide contingency plan that the person will use to alert and protect the public in accordance with the Subsections B through I
of 19.15.11.9 NMAC.
B. Plan contents.
(1) API guidelines. The person shall develop the hydrogen sulfide contingency plan with due consideration of paragraph 7.6 of the
guidelines in the API publication Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen
Sulfide, RP-55, most recent edition, or with due consideration to another division-approved standard.
(2) Required contents. The hydrogen sulfide contingency plan shall contain information on the following subjects, as appropriate to
the well, facility or operation to which it applies.
(a) Emergency procedures. The hydrogen sulfide contingency plan shall contain information on emergency procedures the
person will follow in the event of a release and shall include, at a minimum, information concerning the responsibilities and duties of personnel
during the emergency, an immediate action plan as described in the API document referenced in Paragraph (1) of Subsection B of 19.15.11.9

NMAC, and telephone numbers of emergency responders, public agencies, local government and other appropriate public authorities. The plan
shall also include the locations of potentially affected public areas and public roads and shall describe proposed evacuation routes, locations of road
blocks and procedures for notifying the public, either through direct telephone notification using telephone number lists or by means of mass

notification and reaction plans. The plan shall include information on the availability and location of necessary safety equipment and supplies.
(b) Characteristics of hydrogen sulfide and sulfur dioxide. The hydrogen sulfide contingency plan shall include a discussion of
the characteristics of hydrogen sulfide and sulfur dioxide.
(c) Maps and drawings. The hydrogen sulfide contingency plan shall include maps and drawings that depict the area of
exposure and public areas and public roads within the area of exposure.
(d) Training and drills. The hydrogen sulfide contingency plan shall provide for training and drills, including training in the
responsibilities and duties of essential personnel and periodic on-site or classroom drills or exercises that simulate a release, and shall describe how
the person will document the training, drills and attendance. The hydrogen sulfide contingency plan shall also provide for training of residents as
appropriate on the proper protective measures to be taken in the event of a release, and shall provide for briefing of public officials on issues such
as evacuation or shelter-in-place plans.
(e) Coordination with state emergency plans. The hydrogen sulfide contingency plan shall describe how the person will
coordinate emergency response actions under the plan with the division and the New Mexico state police consistent with the New Mexico
hazardous materials emergency response plan.
(f) Activation levels. The hydrogen sulfide contingency plan shall include the activation level and a description of events that
could lead to a release of hydrogen sulfide sufficient to create a concentration in excess of the activation level.
C. Plan activation. The person shall activate the hydrogen sulfide contingency plan when a release creates a hydrogen sulfide
concentration greater than the activation level set forth in the hydrogen sulfide contingency plan. At a minimum, the person shall activate the plan
whenever a release may create a hydrogen sulfide concentration of more than 100 ppm in a public area, 500 ppm at a public road or 100 ppm 3000
feet from the site of release.
D. Submission.
(1) Where submitted. The person shall submit the hydrogen sulfide contingency plan to the division.
(2) When submitted. The person shall submit a hydrogen sulfide contingency plan for a new well, facility or operation before
operations commence. The hydrogen sulfide contingency plan for a drilling, completion, workover or well servicing operation shall be on file with
the division before operations commence and may be submitted separately or along with the APD or may be on file from a previous submission. A
person shall submit a hydrogen sulfide contingency plan within 180 days after the person becomes aware or should have become aware that a
public area or public road is established that creates a potentially hazardous volume where none previously existed.
(3) Electronic submission. A filer who operates more than 100 wells or who operates an oil pump station, compressor station,

refinery or gas plant shall submit each hydrogen sulfide contingency plan in electronic format. The file may submit the hydrogen sulfide
contingency plan through electronic mail, through an Internet filing or by delivering electronic media to the division, so long as the electronic
submission is compatible with the division's systems.
E. Failure to submit plan. A person's failure to submit a hydrogen sulfide contingency plan when required may result in denial of
an application for permit to drill, cancellation of an allowable for the subject well or other enforcement action appropriate to the well, facility or
operation.
F. Review, amendment. The person shall review the hydrogen sulfide contingency plan any time a subject addressed in the plan
materially changes and make appropriate amendments. If the division determines that a hydrogen sulfide contingency plan is inadequate to protect
public safety, the division may require the person to add provisions to the plan or amend the plan as necessary to protect public safety.
G. Retention and inspection. The hydrogen sulfide contingency plan shall be reasonably accessible in the event of a release,
maintained on file at all times and available for division inspection.
H. Annual inventory of contingency plans. On an annual basis, each person required to prepare one or more hydrogen sulfide
contingency plans pursuant to 19.15.11 NMAC shall file with the appropriate local emergency planning committee and the state emergency
response commission an inventory of the wells, facilities and operations for which plans are on file with the division and the name, address and
telephone number of a point of contact.
I. Plans required by other jurisdictions. The person may submit a hydrogen sulfide contingency plan the BLM or other
jurisdiction require that meets the requirements of 19.15.11.9 NMAC to the division in satisfaction of 19.15.11.9 NMAC.
[19.15.11.9 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.10 SIGNS, MARKERS: For each well, facility or operation involving a hydrogen sulfide concentration of 100 ppm or greater, the
person shall install and maintain signs or markers that conform with the current ANSI standard Z535.1-2002 (Safety Color Code), or some other
division-approved standard. The sign or marker shall be readily readable, and shall contain the words "poison gas" and other information
sufficient to warn the public that a potential danger exists. The person shall prominently post signs or markers at locations, including entrance
points and road crossings, sufficient to alert the public that a potential danger exists.
[19.15.11.10 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.11 PROTECTION FROM HYDROGEN SULFIDE DURING DRILLING, COMPLETION, WORKOVER AND WELL SERVICING OPERATIONS:

A. API standards. The person shall conduct drilling, completion, workover and well servicing operations involving a hydrogen
sulfide concentration of 100 ppm or greater with due consideration to the guidelines in the API publications Recommended Practice for Oil and
Gas Well Servicing and Workover Operations Involving Hydrogen Sulfide, RP-68, and Recommended Practices for Drilling and Well Servicing
Operations Involving Hydrogen Sulfide, RP-49, most recent editions, or some other division-approved standard.
B. Detection and monitoring equipment. Drilling, completion, workover and well servicing operations involving a hydrogen sulfide

concentration of 100 ppm or greater shall include hydrogen sulfide detection and monitoring equipment as follows.

(1) Each drilling and completion site shall have an accurate and precise hydrogen sulfide detection and monitoring system that automatically activates visible and audible alarms when the hydrogen sulfide's ambient air concentration reaches a predetermined value the operator sets, not to exceed 20 ppm. The operator shall locate a sensing point at the shale shaker, rig floor and bell nipple for a drilling site and the cellar, rig floor and circulating tanks or shale shaker for a completion site.

(2) For workover and well servicing operations, the person shall locate one operational sensing point as close to the well bore as practical. Additional sensing points may be necessary for large or long-term operations.

(3) The operator shall provide and maintain as operational hydrogen sulfide detection and monitoring equipment during drilling when drilling is within 500 feet of a zone anticipated to contain hydrogen sulfide and continuously thereafter through all subsequent drilling.

C. Wind indicators. Drilling, completion, workover and well servicing operations involving a hydrogen sulfide concentration of 100 ppm or greater shall include wind indicators. The person shall have equipment to indicate wind direction present and visible at all times. The person shall install at least two devices to indicate wind direction at separate elevations that visible from all principal working areas at all times.

When a sustained hydrogen sulfide concentration is detected in excess of 20 ppm at a detection point, the person shall display red flags.

D. Flare system. For drilling and completion operations in an area where it is reasonably expected that a potentially hazardous hydrogen sulfide volume will be encountered, the person shall install a flare system to safely gather and burn hydrogen-sulfide-bearing gas. The person shall locate flare outlets at least 150 feet from the well bore. Flare lines shall be as straight as practical. The person shall equip the flare system with a suitable and safe means of ignition. Where noncombustible gas is to be flared, the system shall provide supplemental fuel to maintain ignition.

E. Well control equipment. When the 100 ppm radius of exposure includes a public area, the following well control equipment is required.

(1) Drilling. The person shall install a remote-controlled well control system that is operational at all times beginning when drilling is within 500 vertical feet of the formation believed to contain hydrogen sulfide and continuously thereafter during drilling. The well control system shall include, at a minimum, a pressure and hydrogen-sulfide-rated well control choke and kill system including manifold and blowout preventer that meets or exceeds the specifications in API publications Choke and Kill Systems, 16C and Blowout Prevention Equipment Systems for Drilling Wells, RP 53 or other division-approved specifications. The person shall use mud-gas separators. The person shall test and maintain these systems pursuant to the specifications referenced, according to the requirements of 19.15.11 NMAC, or as the division otherwise approves.

(2) Completion, workover and well servicing. The person shall install a remote controlled pressure and hydrogen-sulfide-rated well control system that meets or exceeds API specifications or other division-approved specifications that is operational at all times during a well's completion, workover and servicing.

F. Mud program. Drilling, completion, workover and well servicing operations involving a hydrogen sulfide concentration of 100

ppm or greater shall use a hydrogen sulfide mud program capable of handling hydrogen sulfide conditions and well control, including de-gassing.

G. Well testing. Except with prior division approval, a person shall conduct drill-stem testing of a zone that contains hydrogen sulfide in a concentration of 100 ppm or greater only during daylight hours and not permit formation fluids to flow to the surface.

H. If hydrogen sulfide encountered during operations. If hydrogen sulfide was not anticipated at the time the division issued a permit to drill but is encountered during drilling in a concentration of 100 ppm or greater, the operator shall satisfy the requirements of 19.15.11 NMAC before continuing drilling operations. The operator shall notify the division of the event and the mitigating steps that the operator has or is taking as soon as possible, but no later than 24 hours following discovery. The division may grant verbal approval to continue drilling operations pending preparation of a required hydrogen sulfide contingency plan.

[19.15.11.11 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.12 PROTECTION FROM HYDROGEN SULFIDE AT OIL PUMP STATIONS, PRODUCING WELLS, TANK BATTERIES AND ASSOCIATED PRODUCTION FACILITIES, PIPELINES, REFINERIES, GAS PLANTS AND COMPRESSOR STATIONS:

A. API standards. A person shall conduct operations at oil pump stations and producing wells, tank batteries and associated production facilities, refineries, gas plants and compressor stations involving a hydrogen sulfide concentration of 100 ppm or greater with due consideration to the guidelines in the API publication Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide, RP-55, latest edition or some other division-approved standard.

B. Security. A person shall protect well sites and other unattended, fixed surface facilities involving a hydrogen sulfide concentration of 100 ppm or greater from public access by fencing with locking gates when the location is within 1/4 mile of a public area. For the purposes of Subsection B of 19.15.11.12 NMAC, a surface pipeline is not considered a fixed surface facility.

C. Wind direction indicators. Oil pump stations, producing wells, tank batteries and associated production facilities, pipelines, refineries, gas plants and compressor stations involving a hydrogen sulfide concentration of 100 ppm or greater shall have equipment to indicate wind direction. The person shall install wind direction equipment that is visible from all principal working areas at all times.

D. Control equipment. When the 100 ppm radius of exposure includes a public area, the following additional measures are required.

(1) The person shall install and maintain in good operating condition safety devices, such as automatic shut-down devices, to prevent hydrogen sulfide's escape. Alternatively, the person shall establish safety procedures to achieve the same purpose.

(2) A well shall possess a secondary means of immediate well control through the use of an appropriate christmas tree or downhole completion equipment. The equipment shall allow downhole accessibility (reentry) under pressure for permanent well control.

E. Tanks or vessels. The person shall chain each stair or ladder leading to the top of a tank or vessel containing 300 ppm or more

of hydrogen sulfide in the gaseous mixture or mark it to restrict entry.

[19.15.11.12 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.13 PERSONNEL PROTECTION AND TRAINING: The person shall provide persons responsible for implementing a hydrogen sulfide contingency plan training in hydrogen sulfide hazards, detection, personal protection and contingency procedures.

[19.15.11.13 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.14 STANDARDS FOR EQUIPMENT THAT MAY BE EXPOSED TO HYDROGEN SULFIDE: Whenever a well, facility or operation involves a potentially hazardous hydrogen sulfide volume, the person shall select equipment with consideration for both the hydrogen sulfide working environment and anticipated stresses and shall use NACE Standard MR0175 (latest edition) or some other division-approved standard for selection of metallic equipment or, if applicable, use adequate protection by chemical inhibition or other methods that control or limit hydrogen sulfide's corrosive effects.

[19.15.11.14 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.15 EXEMPTIONS: A person may petition the director or the director's designee for an exemption to a requirement of 19.15.11 NMAC. A petition shall provide specific information as to the circumstances that warrant approval of the exemption requested and how the person will protect public safety. The director or the director's designee, after considering all relevant factors, may approve an exemption if the circumstances warrant and so long as the person protects public safety.

[19.15.11.15 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.16 NOTIFICATION OF THE DIVISION: The person shall notify the division upon a release of hydrogen sulfide requiring activation of the hydrogen sulfide contingency plan as soon as possible, but no more than four hours after plan activation, recognizing that a prompt response should supersede notification. The person shall submit a full report of the incident to the division on form C-141 no later than 15 days following the release.

[19.15.11.16 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

HISTORY of 19.15.11 NMAC:

History of Repealed Material: 19.15.3 NMAC, Drilling (filed 10/29/2001) repealed 12/1/08.

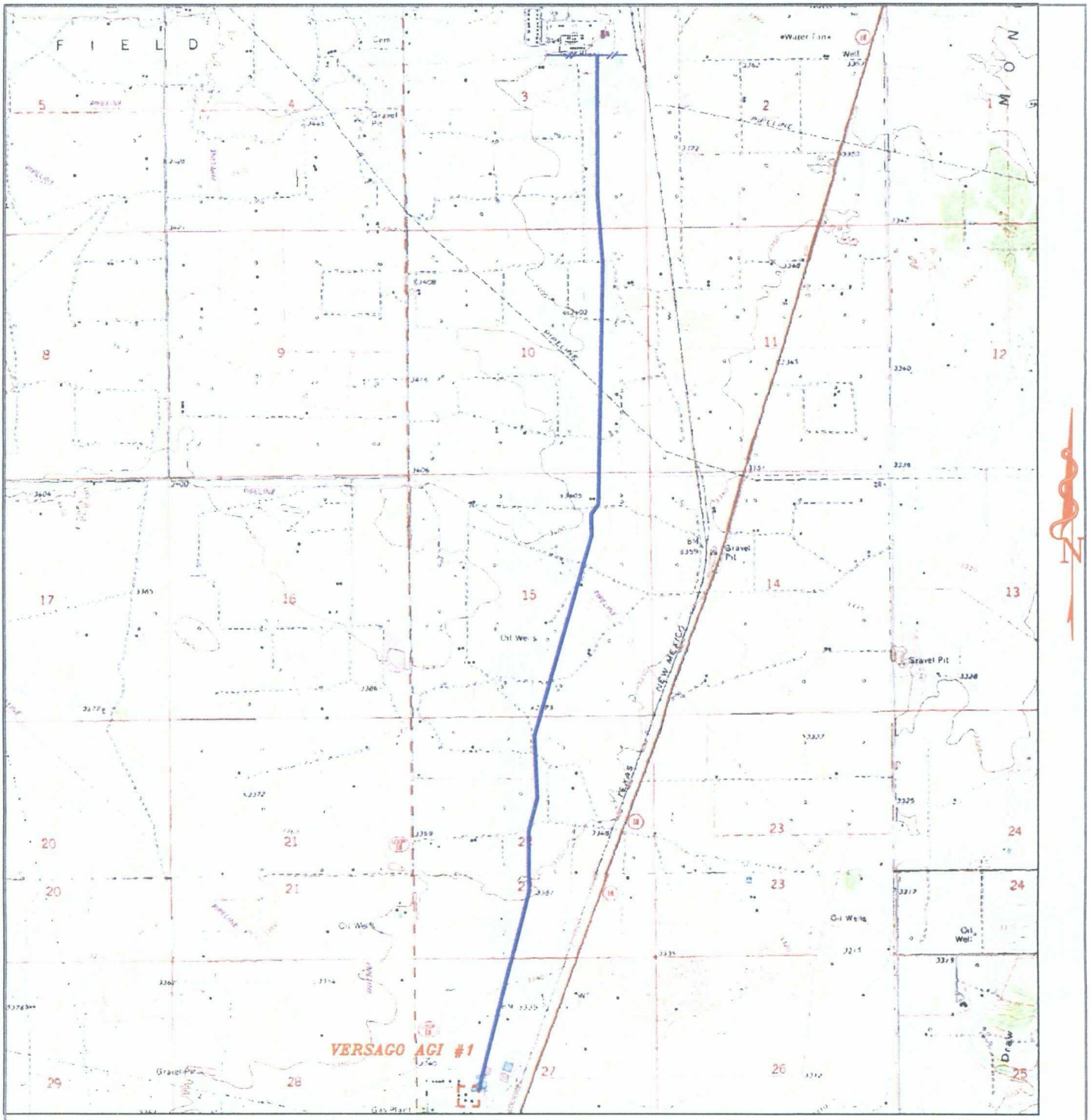
NMAC History:

That applicable portion of 19.15.3 NMAC, Drilling (Section 118) (filed 10/29/2001) was replaced by 19.15.11 NMAC, Hydrogen Sulfide Gas, effective 12/1/08.

OCD Rule 118

Pasquill-Gifford Equation for Calculating Radius of Exposure (ROE) of Hydrogen Sulfide (H2S)

Enter H2S in PPM	150000	*enter Data in green shaded areas*	
Enter Gas flow in mcf/day	5000		
Constant for 500 ppm ROE	0.4546	constant	
Constant for 300 ppm ROE	0.77	constant	
Constant for 100 ppm ROE	1.589	constant	
Mult factor for 500 ppm ROE	340950	formula	
Mult factor for 300 ppm ROE	577500	formula	
Mult factor for 100 ppm ROE	1191750	formula	
Flow Rate of Pure H2S in Gas Stream (Actual Volume Fraction)	750	mcf/day	
H2S Concentration Volume Fraction	0.15	decimal equivalent	
H2S Concentration Volume Fraction in percent %	15.00%	percent	
500 ppm radius of exposure (public road)	**2900**	feet	*ANSWER*
300 ppm radius of exposure	**4033**	feet	*ANSWER*
100 ppm radius of exposure (public area)	**6346**	feet	*ANSWER*



EUNICE ACID GAS LINE

Sections 3,10,15,22&27, Township 22 South, Range 37 East, N.M.P.M., Lea County, New Mexico.

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W.O. Number:	JMS 19950
Survey Date:	VARIES
Scale:	1" = 3000'
Date:	07-11-2008

TARGA RESOURCES