H2S-___047____

H2S CONTINGENCY PLAN

2018

Chavez, Carl J, EMNRD

From:	Chavez, Carl J, EMNRD
Sent:	Wednesday, October 17, 2018 9:57 AM
То:	Goetze, Phillip, EMNRD
Cc:	Griswold, Jim, EMNRD
Subject:	Targa H2S Contingency Plans Placed into Admin. Record

Phil:

Re: Recent Targa H2S CP Submittals Placed into Admin. Record

- GW-005 (H2S-048) Targa Eunice GP:
- Carl on 10/17 evaluated any recent H2S CP submittal(s) to enter into the admin. record and entered it on same day if submitted to comply with regulations. Carl notified Phil G that H2S CPs is in admin. record.
- GW-025 (H2S- 046) Targa Monument GP w/ AGI Well:
- Carl on 10/17 evaluated any recent H2S CP submittal(s) to enter into the admin. record, and entered it on same day if submitted to comply with regulations. Carl notified Phil G that H2S CPs is in admin. record.
- GW-026 (H2S-047) Targa Saunders GP:
- Carl on 10/17 evaluated any recent H2S CP submittal(s) to enter into the admin. record, and entered it on same day if submitted to comply with regulations. Carl notified Phil G that H2S CPs is in admin. record.

Phil:

In order to satisfy the 19.15.11 NMAC (Hydrogen Sulfide Gas) Regulations, you must submit the H2S CP prior to commencing operations (see 19.15.11.8(C) NMAC, 19.15.11.9(D)(E)(F) NMAC.....).

Upon receipt of the H2S CP, OCD will create an "H2S" Order No., insert the CP into the administrative record, and begin reviewing. You will have satisfied the regulations by submitting and following your CP, and OCD will follow-up with its review any amendments or additional information it needs to accept it for record.

Please contact me if you have questions. Thank you.

Mr. Carl J. Chavez, CHMM (#13099) New Mexico Oil Conservation Division Energy Minerals and Natural Resources Department 1220 South St Francis Drive Santa Fe, New Mexico 87505 Ph. (505) 476-3490 E-mail: <u>CarlJ.Chavez@state.nm.us</u>

"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: <u>http://www.emnrd.state.nm.us/OCD</u> and see "Publications")

Chavez, Carl J, EMNRD

From:	Klein, Cindy S. <cynthiaklein@targaresources.com></cynthiaklein@targaresources.com>
Sent:	Friday, March 9, 2018 10:54 AM
То:	Chavez, Carl J, EMNRD
Cc:	Wrangham, Calvin W.; Goetze, Phillip, EMNRD
Subject: Targa Midstream Services LLC, Saunders Plant, H2S Plan Revised 3-3-2018	
Attachments:	Targa Saunders H2S Plan Revised 3-3-2018.pdf; Appendix A H2S Plan Distribution
	List.pdf; Appendix B Radius of Exposure Calculations doc.pdf; Appendix C ROE Map
	2018.pdf; Appendix D Plot with evacuation routes.pdf; Appendix E Targa Notification
	List.pdf; Appendix F Emergency Responder List.pdf; Appendix G - C-141.pdf; Appendix
	H - Empl Train Doc Form.pdf

Mr. Chavez,

Please find attached the updated, Targa Midstream Services, Saunders Plant H2S Contingency Plan. Also find appendix items attached.

Please feel free to contact me if you have any questions or need further information.

Thank You, Cindy Klein



Cindy Klein · <u>Targa Midstream Services LLC</u> · ES&H Supervisor Saunders Gas Plant, Lovington NM | Office: 575.396.3221 Ext. 238 |Cell: 575.631.7093 |Fax: 575.396.7702 email: <u>cklein@targaresources.com</u>

This email (including any attachments and accompanying emails) may contain proprietary and confidential information. If you are not the intended recipient, please telephone the sender and immediately delete this e-mail (including any attachments and accompanying emails). Please do not replicate, disclose, distribute, forward, or retain this e-mail or any part of this email. Thank you.



H₂S CONTINGENCY PLAN

Targa Saunders Gas Plant

owned by Versado Gas Processors, L.L.C.

operated by Targa Midstream Services LLC

Updated / Revised March 3, 2018

1.	OPE	RATOR – QUICK REFERENCE	1
2.	IMN	IEDIATE ACTION PLAN	6
3.	EME	ERGENCY RESPONSE	
3	.1	Objective	8
-	.2	Response Levels	
	.3	Evacuation and Emergency Assembly Areas	
	.4	Emergency Shut-down	
3	.5	Post emergency Actions	
	.6	Notification and Reports	10
3	.7	Response Details	.11
4.	sco	PE	13
4	.1	Plant location	13
		Figure 1 Saunders Gas Plant	15
4	.3	Description of Plant Operations	16
4	.5	Function of Sign-in Log Sheet	16
4	.6	Sign and Markers	16
5.	RAD	DII OF EXPOSURE (ROE)	17
		Figure 2 Worst Case Scenario ROE	17
6.	TRA	AINING/DRILLS/EDUCATION	17
6	.1	Training	17
6	.2	Emergency Response Drills	18
6	.3	Responsibility for Conformance of the H ₂ S Plan	19
6	.4	Revisions to the Plan	19
6	.5	Availablity of the H_2S Plan	19
6	.6	Emergency Response Organization	20
6	.7	Characteristics of H ₂ S, SO ₂ , and CO ₂	20
7.	PUE	BLIC AWARENESS AND COMMUNICATION	25
7	.1	Media	25
7	.2	Public Areas, Businesses, and Residents	25
7	.3	Public Roads	26

LIST OF FIGURES

Figure 2 Worst Case Scenario ROE

APPENDIX

Appendix A	Distribution List
Appendix B	Radii of Exposure Calculation including Gas Analysis
Appendix C	Radii of Exposure Map, Emergency Assembly Areas and Roadblocks
Appendix D	Plot Plan, Evacuation Routes, Safety Equipment and ESD Stations
Appendix E	Targa Personnel Notification List
Appendix F	Agency/Emergency Responders and Contractor Support Notification List
Appendix G	C-141
Appendix H	Employee Training Documentation Form

1. OPERATOR – QUICK REFERENCE

TARGA SAUNDERS GAS PLANT



2. OPERATOR – QUICK REFERENCE



AGENCY/EMERGENCY RESPONDERS NOTIFICATION LIST (also in Appendix F)

<u>Call 911</u>

State Police	575-392-5588
Lovington Fire Dept.	575-396-7318
Hobbs - Sheriff	575-396-3611
Hobbs – Police	575-397-9265
Hobbs – Fire Dept.	575-397-9265
Hobbs – Ambulance	575-397-9265
Eunice – Police	575-394-2112
Eunice – Fire Dept.	575-394-3258
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	
National Response Center	800-424-8202	
New Mexico Public Regulation Commission Office		
of Public Safety (Pipeline Release)	505-476-0253/505-946-8314	

TARGA SAUNDERS NOTIFICATION LIST (also in Appendix E)

COMPANY PERSONNEL

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

1. Area Management

Randy Duncan, Saunders Plant Manager Office: (575) 396-3221, ext. 231 Home: (575) 396-3744 Mobile: (575) 631-7065

> Alternate: Frank Brainard, Saunders Plant Supervisor Office: (575) 396-3221, ext. 227 Home: (575) 631-0420 Mobile: (575) 631-0420

Alternate: Chuck Tolsma, Field Supervisor Mobile: (575) 631--5424 Home: (575) 631-6026

Alternate: Ralph England, Construction Supervisor Office: (575) 396-3221, ext. 224 Home: (575) 760-3407 Mobile: (575) 441-4653

Alternate: Chris Price, Eunice Plant Area Manger (Eunice, NM) Office: (575) 394-2534, Ext. 226 Home: (575) 602-6005 Mobile: (575) 602-6005

Alternate: Jimmy Oxford, Vice President, Operations Office: (940) 220-2493 Home: (940) 627-6455 Mobile: (940) 577-1061

ES&H Group

Cal Wrangham, ES&H Manager Office: (432) 688-0542 Mobile: (432) 425-7072

Cindy Klein, ES&H Supervisor Office: (575) 396-3221, ext. 238 Home: (575) 398-6670 Mobile: (575) 631-7093

Rebecca Woodell, ES&H Specialist Office: (575) 394-2534, ext. 239 Home: (575) 394-2280 Mobile: (575) 631-7085

Region Manager

Francis Foret, Sr. Vice President, Operations Office: (713) 584-1138 Houston, TX

Field Operator

Alfredo Corral Mobile: (575) 631-1432 Home: (575) 396-2960

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

Jessica Keiser, Sr. Vice President Office: (713) 584-1084 Cell Phone: (713) 818-8209

Corporate Security Weldon Green Office: (713) 584-1301 Cell Phone: (281) 802-5351

IMMEDIATE ACTION PLAN

Targa Saunders Plant Incident Commander (IC) is 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.

There are no public areas, businesses or parties within the 100 and 500 ppm ROE's.

The following outlines the immediate action Plan as provided in the Flow Diagrams in Section 1. When the individual hears, sees, or feels an alert as is recognized by audible, visual, or personal monitor vibration the individual is to proceed to safety as soon as possible which entails evacuation and donning 30-minute SCBA if escape is warranted. 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.
 - **EVACUATE** move away from the source and get away from the affected area (upwind and out of low-lying areas).
 - Don personal protective breathing equipment (30-minute SCBA) for escape.
 - From any location in the facility proceed to the designated Emergency Assembly Area and notify supervisor or incident commander you are accounted for. See Appendix C for locations of Assembly Areas.
 - Assist personnel in distress as directed by the Incident Commander with proper PPE, i.e., 30-minute SCBA unit.
 - Accounting for on-site personnel will be directed by the Incident Commander using the sign-in log at Assembly Area 1, and 2, depending on the "Level Response" outline beginning on Section 1 Flow Diagrams. The sign-in log is brought to the initial Assembly Area by the office personnel as they proceed to that area.
- B. After an Incident Commander is designated, at the IC's direction, the emergency responder will don a 30-minute SCBA and take immediate measures to control the presence of or potential H₂S discharge and to eliminate possible ignition sources. Emergency shutdown procedures should be initiated as deemed necessary to correct or control the specific situation.
- C. The Incident Commander is responsible for all notifications including government agencies and the effected parties that may be working in the area. There are no public areas, businesses or parties within the 100 and 500 ppm ROE's. The IC may designate

another Targa employee to make these notifications to initiate the evacuation of those within the exposure area.

- D. The IC will contact the Area Manager or first available person on the Appendix E Targa Saunders notification 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 on the Appendix E 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 (Appendix C).
- F. IC or designee will notify, as required, state and local officials and the National Response Center to comply with release reporting requirements. See Appendix F.
- G. First Aid Kits are located in the Assembly Area 1 (Break Room), Plant Office building, Control Room, and in Targa Field Operator vehicles (See Appendix D). Field Operator vehicles will be used for roadblocks. H₂S monitors will be brought from the control room by the operators and from the field office by the field operators to any roadblocks or Assembly Areas being used. Monitoring will occur continuously at these sites to ensure H₂S is less than 10 ppm.
- H. If alarms have ceased, monitor the ambient air in the area of exposure for 10 ppm or greater (after following abatement measures) to determine when it is safe for re-entry.
- I. Return the situation to normal. Normal conditions are those in which the ambient air quality is below 10 ppm of hydrogen sulfide and sustained without fluctuation to higher levels and the alarms and sirens have ceased. The IC will determine when safe entry conditions are reached for re-entry into the area.

3. 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.

3.1 Objective

All Area employees shall be prepared to respond to an H_2S or SO_2 emergency at the facility. Emergency response actions may be taken for a variety of situations that may occur. The Plan is activated in based on the concentration of H_2S that has been released. The hydrogen sulfide concentration of 10 ppm or greater alerts any Targa employee via their personal monitor as well as H_2S fixed monitors/detectors. Ten ppm or greater activates the Plan Level 1 response and the situation is assessed immediately by the hydrogen sulfide concentration reported to the control room.

- Emergency alarm sounded and are activated for H₂S at 10 ppm or greater,
- Plan activation in 100 ppm in any public area, or
- Plan activation in 500 ppm at any public road, or
- Plan activation when a 100 ppm concentration of H₂S exceeds 3,000 feet from the site of the release.

Definitions:

19.15.11.7. I NMAC "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. There are no Public areas, businesses or parties within the 100 and 500 ppm ROE's.

19.15.11.7.J NMAC "Public road" means a federal, state, municipal or county road or highway.

As soon as the Plan has been activated based on the criteria above, the Area Manager, or their designee, shall be notified. In the absence of the Area Manager or their relief the Targa employee (first responder) at the site shall assume the role of Incident Commander. It is the responsibility of the Incident Commander to ensure control of the emergency response management system and if necessary to coordinate these efforts with any state or local emergency plans. As Identified in Appendix C, State Road 457 falls into the 100 PPM ROE.

3.2 Response Levels

There are two response levels for the facility described in the Flow Diagrams provided at the beginning of the Plan (Section 1). Any individual encountering a situation where their personal

H₂S monitors are alarming or hears the Plant Siren must evacuate the affected area immediately. The individual must move upwind and out of low lying areas to safety per evacuation route arrows shown on Appendix D to the appropriate Assembly Area as directed by the Incident Commander. See Appendix C. Once safety is ensured the Levels 1 and 2 discussed in the Flow Diagrams (Section 1) should be followed which entail alerting the supervisor of your current situation and whereabouts and pertinent information regarding the release area. This allows the supervisor to account for you and the other individuals whom are evacuating and assembling to Assembly Area 1 (Plant Break Room, Appendix C). If a release cannot be controlled and is more the 10 PPM, then level 2 will be initiated.

In summary, the Levels provide for immediate action to be taken in an organized fashion in the event of a release of H_2S at a level of 10 ppm or greater and are conducted to mitigate negative impact to the welfare of individuals and the environment.

3.3 Evacuation and Emergency Assembly Areas

When the emergency alarm or siren is activated all Targa personnel, contractors, and any visitors in the facility are to stop work, check the prevailing wind direction by looking at the nearest wind sock and immediately proceed along designated evacuation routes (Appendix D) and/or upwind to the pre-designated Emergency Assembly Area 1 (Plant Break Room) as shown in Appendix C. Monitoring at Assembly Area 1 will be conducted to determine if it is safe to remain (10 ppm or less) or if the concentration of H_2S is increasing at the plant requiring movement to Assembly Area 2. All personnel will check in at the Assembly Area and be accounted for using the daily sign-in log. The sign-in log is brought to the Assembly Area by the office personnel as they proceed to that area. The Incident Commander then determines if any personnel are not accounted for and if immediate rescue is needed and directs any rescue personnel to don 30-minute SCBA's and respond. Emergency services (911) will be contacted if there are injuries or as otherwise deemed necessary. The IC will direct operations to don 30-minute SCBA's and investigate the cause of the release. The recommended sequence of actions is: move away from source, don PPE, alert others, assist the distressed, evacuate to designated Assembly Area, monitor for H_2S (10ppm or greater), and account for personnel.

Emergency Assembly Area 1 -Plant Break Room-(Appendix C)

Emergency Assembly Area 2 One mile south of the intersection of State Rd. 457 and Warren Road (Appendix C)

3.4 Emergency Shut-down

The Plant has emergency shutdown stations (ESD's) designed to isolate gas, and systems to depressurize by routing gas to flares. Note: Burning the H_2S in the flare will generate SO_2 so monitor for both H2S and SO_2 to determine if it is safe to return. These ESD's can be activated by plant operator in the control room or by remote ESD Stations located in the facility (See Appendix D). Inlet gas could be shut in from entering the plant at the inlet scrubbers by manually blocking the scrubber valves. This action would be implemented by the Incident Commander as warranted in an emergency. The inlet gas would then be automatically routed to a plant flare for safe disposal. These valves and the ESD Stations are depicted on Appendix D. All H_2S alarms are activated at 10 ppm.

3.5 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:

- Ensure all previously notified or evacuated persons have been advised that the emergency condition has ended.
- Ensure all agency notifications have been completed and follow-up with any written notification requirements.
- Clean up, recharge, restock, repair, and replace emergency equipment, as necessary, and return it to its original location.
- Review the cause of the emergency and modify operating maintenance and other surveillance procedures, if needed.
- Critique all actions and procedures, providing additional training to employees if need is indicated. Modify the contingency plan as provided in the NMAC rulings if there is any change in plant operations which require a new ROE to be established, changes to the plant facilities, training requirements, contact information, equipment lists, assembly area or roadblocks, and the public areas including roads, businesses, or residents. The plan will be redistributed to those persons/entities provided in the "Distribution List" of Appendix A.

3.6 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 which is detection of 10 ppm or greater H_2S . 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 (Appendix G).

The Incident Commander or their designee will conduct required notifications based on the situation (Appendix E and F). After the Area Manager or their designee is contacted, they will notify the appropriate Targa Corporate Management, EHS personnel, Plant emergency response personnel, and advise them of the existing emergency condition of 10 ppm or greater.

3.7 Response Details

Plan activation (10 ppm or greater).

Any employee who finds her or himself in an emergency situation involving the escape of hydrogen sulfide gas of 10 ppm or greater shall notify the Control Room Operator by the fastest means. The Control Room Operator becomes the Incident Commander until relieved by someone else, which may be an Area Manager, Plant Supervisor, or Public Official.

The IC will refer to flow diagram for Level Responses (Section 1). The Incident Commander is responsible to direct the alerting of all persons who are within the exposure areas which are areas of 10 ppm or greater. See Appendix C for the 100 and 500 ppm ROE locations. The IC will also contact and advise the Area Manager, or alternate, of the location and nature of the emergency and if assistance is needed (Appendix E). The Area Manager or their designee will assist in requesting additional assistance if necessary (Appendix E).

The recommended sequence of actions is: move away from source, don PPE, alert others, assist the distressed, evacuate to designated Assembly Area and monitor for H₂S (10ppm or greater), and account for personnel.

Stop the Escape of Hydrogen Sulfide

After the plan is activated so all personnel are evacuated and accounted for, the IC should take the necessary steps to stop the escape of hydrogen sulfide by activating the block valves and ESD shutdown stations that are accessible using SCBA's and other proper protective equipment as necessary.

Cordon off the Exposure Area to Prevent Entry and/or Make Roadblocks and Evacuation Recommendations

Place roadblocks outside the area of exposure on all routes to prevent entry into the area. The Targa Saunders Plant will be road blocked one mile south of the cattle guard to prevent entry as the condition warrants based on the Level 1 response (Section 1). Recommended roadblock locations for Targa and law enforcement personnel to prevent entry are provided in Appendix C. As the IC assigns personnel to set-up roadblocks he or she will give the assigned persons their phone or radio contact information so they can communicate with the IC. The persons manning the roadblocks must be equipped with hydrogen sulfide measuring devices and two-

way radios or cell phones to be able to communicate with the IC. Roadblocks should be placed a safe distance away from the potential exposure area and should be monitored for Hydrogen Sulfide to ensure levels are less than 10 ppm. Roadblocks can consist of a vehicle blocking the path with hazard signals, emergency responders motioning to stop, orange cones, emergency tape, or any other equipment device which blockades the area in a manner sufficient of notifying an individual to not pass. Monitor for H₂S at roadblocks and if levels are 10 ppm or greater notify IC and relocate to next Roadblock (Appendix C) and update the Incident Commander.

Based on all information available and the calculated potential exposure information listed in Appendix B and C, public officials are notified of the suggested locations of roadblocks to keep the public from entering a potentially hazardous area. Proper caution should be used for shifting changes in wind direction. Refer to Appendix C.

Complete Notifications as Required

Incident Commander will initiate notification of Affected Parties, Emergency Responders, Targa Management, and Government Agencies (Appendix E, and F).

The IC or their designee shall contact OCD no later than 4 hours after plan activation (the first detection of 10 ppm or greater) at the facility. The Area Manager or their designee shall submit a full report of the incident to the division on form C-141 (Appendix G) no later than 15 days following the release.

Monitor for Safe Re-entry

Ensure complete and permanent stoppage of the release is supported by verification that the fixed monitors and alarms have ceased alerting/sounding at the release site. Allow time for residual H_2S to leave the area and at the direction of the IC begin monitoring evacuated areas for hydrogen sulfide and combustible gas concentrations of less than 10 ppm (with multimeter). Monitor wind direction by using the nearest wind sock. Monitor safely using a 30-minute SCBA if situation dictates) the ambient air in the area of exposure only after following abatement measures, to determine when it is safe for re-entry. Re-entry is established when hydrogen sulfide concentrations are below 10 ppm and are confirmed to remain at this level without fluctuation to a level above 10 ppm. Note: Burning the H_2S in the flare will generate SO_2 so if flaring monitor for both H_2S and SO_2 to determine if it is safe to return.

Return of the Situation to Normal

No re-entry will be allowed until ambient conditions have been assessed and verified that levels are less than 10 ppm. Communications for re-entry will be coordinated through the Incident Commander (IC). When total absence of hydrogen sulfide and combustible gas is confirmed throughout the evacuated area, notify any public official or emergency responders participating so that they may be informed of the situation. Advise all parties previously notified that the emergency has ended. Remove any roadblocks that were set up.

4. SCOPE

The Saunders Gas Plant is a natural gas processing plant which processes gas that contains hydrogen sulfide and/or sulfur dioxide. This Hydrogen Sulfide Contingency Plan (Plan) has been developed to serve as a guidance document to protect the welfare of individuals and the environment in the event of a hazardous hydrogen sulfide release. The Plan satisfies and conforms to promulgated New Mexico Administrative Code rules and industry standards of facility handling of hydrogen sulfide:

- New Mexico Oil Conservation Division Rule 11 (NMAC, 2008);
- American Petroleum Institute's "Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide," Recommended Practice 55 (API, 2007).

Specifically, the Plan details, site-specific hydrogen sulfide release 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 11 of the New Mexico Administrative Code (19.15.11.7- Definitions) unless otherwise defined herein.

4.1 PLANT LOCATION

The Saunders Gas Plant is located 11 miles west on Highway 82 and 11 miles north on Highway 457 from Lovington, Lea County, New Mexico. It is owned by Versado Gas Processors, LLC and operated by Targa Midstream Services, Limited Partnership.

More specifically, the Plant is located in Section 34, Township 14S, Range 33E in NMPM, Lea County, New Mexico.

- 1. Plant approximate coordinates are: Latitude: N33.057324 Longitude: W103.607739
- Plant physical address is:
 11 miles W on Hwy 82 and 11 miles N on Hwy 457 Lovington, New Mexico
- 3. Plant mailing address is:P. O. Box 1689Lovington, New Mexico 88260

4. Driving Directions from Lovington, New Mexico to the Plant:

From the intersection of Main Street and Avenue D (Highway US 82), travel west on Highway 82 (approximately 11 miles) to the intersection of US 82 and State Road 457. Travel north on State Road 457 (approximately 11 miles). Turn left onto County Road 117 (Warren Road) and travel west approximately 0.5 mile to the entrance to the Saunders Gas Plant.

The location of the Plant is illustrated herein on Figure 1.





4.3 DESCRIPTION OF PLANT OPERATIONS AND PROCESSES

The Plant operations include gas processing, and compression, as well as gathering lines and storage tanks. The Plant gathers and processes produced natural gas from the surrounding area. 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 shipped to various customers.

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 (H₂S) stream that is removed from the natural gas in the amine treating process is routed (directed) to the sulfur recovery unit. The raw field inlet gas enters the Saunders Plant at a flow rate up to 47 mmcfd.

Signs are present at the Saunders Plant which warn of hydrogen sulfide gas stating "poison gas" and complies with current ANSI standard Z535.1-2002 for safety color coding.

Wind direction indicators known as wind socks are located at the Plant site so that one or more are visible from all principal working areas at all times (Appendix D).

4.5 FUNCTION OF SIGN-IN LOG SHEET

- In order to have an accurate listing of all Targa personnel, contractors, and vendors on-site a daily sign-in log sheet located in the Plant Office is used. The sign-in log sheet includes at a minimum the person's name, the company name, the time of arrival, and the time of departure.
- Signs are located at the Plant gate entrances indicating that all visitors are to sign in on the daily sign-in log sheet located in at the Plant office.
- Anytime the Plan is activated (10 ppm or greater) this sign-in log sheet will be used by the IC to account for all people that maybe in the facility. This accounting for on-site personnel will be directed by the Incident Commander using the daily sign-in log at Assembly Area 1, and 2, on the "Level Response" outline beginning on Section 1 Flow Diagrams. The sign-in log is brought to the initial Assembly Area by the office personnel as they proceed to that area.

1.6 SIGNS & MARKERS

The facility entrances and storage tanks that contain H₂S within the facility have warning signs indicating the presence of H₂S/Poisonous Gas and high pressure gas (which comply with ANSI standard Z525.1-2002) Emergency phone numbers are posted at the entrance to the Plant.

5. 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 Pasquill-Gifford derived equation, as defined by NMAC, which uses the maximum daily rate of the gaseous mixture that is handled by the Saunders Gas 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	1175 feet
100 ppm ROE – public area	2,572 feet

6. TRAINING/DRILLS/EDUCATION

6.1 TRAINING

A critical portion of this plan is the emergency procedures and preparedness. To ensure the most effective implementation of these procedures, pre-emergency measures are taken to maintain a state of preparedness. These actions are as follows:

- As part of training an annual mock emergency drill is held annually. Saunders emergency responders and public officials listed in Appendix E and F will be invited to participate in the drill. These drills will include a briefing on issues such as evacuation measures to be taken in the event of a release.
- 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 SCBA's are maintained and ready for use.
- This Plan is made available to appropriate public response officials for discussion with the Saunders area emergency response officials.

• Targa will use brochures, public notices, or other means, as deemed appropriate and practical, to alert, educate and train the public officials (Appendix F).

All training records for the Plant are maintained at the Plant. Training is documented on training forms as in Appendix H. The following is a limited list and summary of the training programs that relate to the H₂S 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.

Respirator Training and Mask Fit Testing - All Plant personnel will receive annual training for proper selection and operation of respirators, per OSHA regulations and standards.

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.

Fire Extinguishers - All Plant personnel are trained annually on fire extinguisher selection and use.

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 (SDS) 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 task.

6.2 EMERGENCY RESPONSE DRILLS

A critical portion of this plan is the emergency procedures and preparedness. To ensure the most effective implementation of these procedures, pre-emergency measures are taken to maintain a state of preparedness. The Plant conducts emergency drills. Multiple drills during the year may be scheduled at the discretion of the Area Manager or Public Emergency Response Agencies.

These emergency drills are designed to exercise this Plan. Area Public Emergency Response Agencies (Appendix F) are notified and invited to participate in the drills. The drills will also include briefing of public officials on Saunders facility operations.

Drill training will be documented per a documentation form as in Appendix H 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-briefs and reviews to determine effectiveness and follow up to correct any deficiencies and/or ways to improve the response procedures.
- Surveillance and preventative maintenance to minimize the possibility of an accidental release of gas.

6.3 RESPONSIBILITY FOR CONFORMANCE WITH THE H₂S 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, Saunders Plant Emergency Response and Oil Spill Contingency Plan; and
- Targa Midstream Environmental Policies and Programs.

6.4 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. If any revisions are made to the plan, redistribute the revised plan per Appendix A.

6.5 AVALABILITY OF THE H₂S PLAN

The H₂S 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 Plant Manager's office, Assembly Area 1 (Break Room), Control Room, all Plant Supervisors, and Field

Operator vehicles. 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.

6.6 EMERGENCY RESPONSE ORGANIZATION

The Plant uses the Incident Command System (ICS) for emergency response. The ICS structure used is based on the National Incident Management System (NIMS), 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 (10 ppm or greater) The Plant Operator will be the On-Scene Incident Commander (IC). Under certain conditions, the Area Manager or New Mexico State Police responding to the emergency may elect to assume the position of IC or they may establish a Unified Command of which the Targa employees may be key members. The responsibility of the IC is to ensure control of the emergency incident.

6.7 CHARACTERISTICS OF H₂S, SO₂ AND CARBON DIOXIDE

6.7.1 Hydrogen Sulfide (H₂S)

Saunders Plant

The proposed inlet gas streams into the Plant will contain approximately 2,567 ppm (or 0.26 mole percent) of hydrogen sulfide based on data generated from the sampling of the inlet gas on August 16, 2017. The gas flow rate for the inlet to the plant is up to 47 mmcfd.

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 ₂ S
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

6.7.2 Sulfur Dioxide (SO₂)

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 Propert	ies & 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.

6.7.3 Carbon Dioxide

The current inlet gas streams to the Plant contain approximately 2.63% carbon dioxide based on an inlet sample collected on August 17, 2017.

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

	Phys	ical Effects of Carbon Dioxide
Concentration	Concentration	Effect
1.0 %	10,000 ppm	Breathing rate increases slightly
2.0 %	20,000 ppm	Breathing rate increases to 50% above
		normal level. Prolonged exposure can
		cause headache, tiredness
3.0 %	30,000 ppm	Breathing rate increases to twice normal
		rate and becomes labored. Weak narcotic
		effect. Impaired hearing, headache,
		increased blood pressure and pulse rate
4 – 5 %	40,000 - 50,000	Breathing increases to approximately four
	ppm	times normal rate, symptoms of
		intoxication become evident, and slight
		choking may be felt
5 – 10 %	50,000 - 100,000	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 %	100,000 -	Unconsciousness occurs more rapidly
	1,000,000 ppm	above 10% level. Prolonged exposure to
		high concentrations may eventually result
		in death from asphyxiation

7. PUBLIC AWARENESS AND COMMUNICATION

Public awareness and communication is a primary function of the H_2S Plan. The Company has compiled a list of contacts that are to be notified at various phases during the activation of the Plan. Refer to the lists in Appendix F.

7.1 MEDIA

At no time shall any representative from the media be allowed any closer to the facility than the designated safe (by monitoring) Assembly Areas 2.

If possible assemble all Media in a group in a safe area away from the emergency so Corporate Communications (Houston) can issue a statement.

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

7.2 PUBLIC AREAS, BUSINESSES, AND RESIDENTS

There are no Public areas, businesses or parties within the 100 and 500 ppm ROE's. The contact information for local and state agencies is contained in Appendix F. The IC is responsible for all required notifications.

19.15.11.7.I NMAC "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.

Contact notification will include:

- The nature and extent of the release/emergency at the facility 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. A safe return would be directed by the Incident Commander after alarms have ceased and on ambient air condition sampling of less than 10 ppm.

7.3 PUBLIC ROADS

Depending on the level of response, roadblocks will be established pursuant to Section 1 Flow Charts and Appendix D locations.

19.15.11.7.I NMAC "Public road" means a federal, state, municipal or county road or highway. As Identified in Appendix C, State Road 457 falls into the 100 PPM ROE.

Appendix A

H2S Plan Distribution List

New Mexico Oil & Gas Conservation Division – Santa Fe, New Mexico New Mexico Oil & Gas Conservation Division – Hobbs, New Mexico New Mexico State Police Lovington Fire Department Lea County Local Emergency Planning Committee Lea County Sheriff Department Saunders Gas Plant Manager and Supervisors Targa Saunders Plant Control Room, Assembly Area 1, Field Operator Vehicles Targa Midstream Office (Midland, TX) The formulas for calculating the ROEs for the Saunders Plant were calculated in accordance with the rulings as specified by the New Mexico Adminstrative Code Pasquill-Gifford Equation:

500-ppm RADIUS OF EXPOSURE CACULATION

(0.6258) X = [(0.4546)(hydrogen sulfide conc.)(Q)]

100-ppm RADIUS OF EXPOSURE CACULATION

(0.6258) X = [(1.589)(hydrogen sulfide conc.)(Q)]

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.

0 O

'n

_

The volume used for the ROE calculation is 47 mmcfd as the inlet to the Plant with a hydrogen sulfide concentration of 3770 ppm:

Using flow rate Q = 47 mmcfd and H_2S concentration = 2,567 ppm

500 ppm ROE – public road

100 ppm ROE – public area

2,572 feet

1,175feet





ļ

<u>Appendix E</u>

Targa Notification List

TARGA SAUNDERS NOTIFICATION LIST

COMPANY PERSONNEL

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

Area Management

Saunders Plant

Randy Duncan, Saunders Plant Manager Office: (575) 396-3221, ext. 31 Home: (575) 396-3744 Mobile: (575) 631-7065

Alternate:

Frank Brainard, Saunders Plant Supervisor Office: (575) 396-3221, ext. 27 Home: (575) 631-0420 Mobile: (575) 631-0420

Alternate: Chuck Tolsma, Field Supervisor Mobile: (575) 631--5424 Home: (575) 631-6026

Alternate: Ralph England, Construction Supervisor Office: (575) 396-3221, ext. 224 Home: (575) 760-3407 Mobile: (575) 441-4653

Alternate: Chris Price, Eunice Plant Area Manger (Eunice, NM) Office: (575) 394-2534, Ext. 226 Home: (575) 602-6005 Mobile: (575) 602-6005

Alternate: Jimmy Oxford, Vice President, Operations Office: (940) 220-2493 Home: (940) 627-6455 Mobile: (940) 577-1061

ES&H Group

Cal Wrangham, ES&H Manager Office: (432) 688-0542 Midland, TX Mobile: (432) 425-7072

Cindy Klein, ES&H Supervisor Office: (575) 396-3221, ext. 238 Home: (575) 398-6670 Mobile: (575) 631-7093

Rebecca Woodell, ES&H Specialist Office: (575) 394-2534, ext. 239 Home: (575) 394-2280 Mobile: (575) 631-7085

Region Manager

Francis Foret, Sr. Vice President, Operations Office: (713) 584-1138 Houston, TX

Field Operator

Alfredo Corral Mobile: (575) 631-1432 Home: (575) 396-2960

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

Jessica Keiser, Sr. Vice President Office: (713) 584-1084 Cell Phone: (713) 818-8209

Corporate Security Weldon Green Office: (713) 584-1301 Cell Phone: (281) 802-5351

AGENCY/EMERGENCY RESPONDERS NOTIFICATION LIST

<u>Call 911</u>

State Police	575-392-5588
Lovington Fire Dept.	575-396-7318
Hobbs - Sheriff	575-396-3611
Hobbs – Police	575-397-9265
Hobbs – Fire Dept.	575-397-9265
Hobbs – Ambulance	575-397-9265
Eunice – Police	575-394-2112
Eunice – Fire Dept.	575-394-3258
Lovington – Sheriff	575-396-3611
Lovington – Police	575-396-2811
Lovington – Fire Dept	575-396-2359
Lovington - Ambulance	575-396-2811
	5,5 550 2011

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
National Response Center	800-424-8202
New Mexico Public Regulation Commission Of	ffice
of Public Safety (Pipeline Release)	505-476-0253/505-946-8314

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. Fran	cis Dr., Santa	a Fe, NM 87505	5	Sa	inta F	Fe, NM 875	05		
			Rele	ease Notific	catio	on and Co	orrective A	ction	
						OPERA'		_	l Report 🔲 Final Report
Name of Co	ompany					Contact			
Address	mpuny					Telephone I	No		
Facility Nat	ne					Facility Typ			
						V V 1			
Surface Ow	ner			Mineral C	Owner			API No.	
				LOCA	ATIO	ON OF RE	LEASE		
Unit Letter	Section	Township	Range	Feet from the	Nort	h/South Line	Feet from the	East/West Line	County
L			La	titude		Longitud	le	·	
				NAT	URF	E OF REL	EASE		
Type of Rele	ase					Volume of		Volume R	ecovered
Source of Re						Date and H	Iour of Occurrenc	ce Date and I	Hour of Discovery
Was Immedi	ate Notice (Ves] No 🔲 Not R	equired	If YES, To	Whom?		
			103		quita		T		
By Whom? Was a Water	aoursa Daa	had?				Date and H	olume Impacting t	the Watercourse	
was a water			Yes] No		II 1E5, VO	nume impacting t	me watercourse.	
If a Waterco	irse was Im	pacted, Descr	ibe Fullv.3	*					
		em and Reme							
		and Cleanup A							
regulations a public health should their o or the enviro	ll operators or the enviroperations h nment. In a	are required t ronment. The ave failed to a	o report an acceptance adequately OCD accept	nd/or file certain r ce of a C-141 report investigate and r	elease ort by t emedia	notifications a he NMOCD m ate contaminat	nd perform correct arked as "Final R on that pose a thr	ctive actions for rele eport" does not reli- eat to ground water	uant to NMOCD rules and eases which may endanger eve the operator of liability , surface water, human health ompliance with any other
							OIL CON	SERVATION	DIVISION
Signature:									
Printed Name	e:					Approved by	Environmental S	pecialist:	
Title:						Approval Da	te:	Expiration I	Date:
E-mail Addre	ess:					Conditions o	f Approval:		Attached
Date:			Phone						

* Attach Additional Sheets If Necessary

COUR	COURSE TITLE		VIDEO		DATE
CLASS	CLASS LENGTH (HRS) CLASS	CLASS LOCATION	TRAINERS		
VENDC	VENDOR TRAINING: COMPANY		ADDRESS		PHONE NO.
Grade Pass/Fail	Signature	Print Name	Social Security No. (Last 4 Numbers)	Job Title	Location
7					
2					
3					
4					
ŝ					
6					
7					
8					
6					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

TRAINING DOCUMENTATION FORM