Hydrogen Sulfide (H_2S) Contingency Plan

DGP Gas Processing, Inc.

DECEMBER 2023

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1. INTRODUCTION

The Denton Compressor Station is a gathering station that compresses unprocessed sour gas. This facility handles hydrogen sulfide and thus this Hydrogen Sulfide Contingency Plan (H_2S Plan) has been developed to:

a. Protect DGP employees, contractors, and the public by alerting personnel of the presence of H2S in order for the person to take immediate action to remove themselves from the exposure.
b. Establishes procedures for response to an H2S event and personnel exposure.
c. Complies with New Mexico Oil Conservation Division (OCD) Rule 11 and API Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide (RP) 55.

2. SCOPE

The Denton Compressor Station (CS) is a gathering station that compresses unprocessed natural gas and sends it for processing to a downstream gas processing plant and encompasses 82.93 acres. The site is owned by Davis Gas Processing, Inc.

2.1 Overview

The CS is located in Section 2, Township 15S, Range 37 E in Lea County, New Mexico (NM) approximately 11 miles east of Lovington. Additional specifics are:

a. The CS coordinates are Latitude 33.043869 N and Longitude -103.169989 W.
b. The physical address is 625 E US Highway 82, Lovington, NM 88260.
c. The mailing address is P.O. Box 51670, Midland, TX 79710.
d. Driving directions from Lovington, New Mexico to the CS:
    i. Travel North on Main St. to E US HWY 82 for 7.5 miles after the overpass and the site is on your left. The site is located between mile marker 184 and 185.

3. DEFINITIONS

- ***Addendum.***
  An item of additional material, typically supplementations or omissions, is added at the end of a procedure.

- ***Airline Respirator.***
  A device that uses a source of breathing air that is remote or separate from the contaminated atmosphere surrounding the wearer. The airline limits the wearer to a fixed distance from the air supply.

- ***American Conference of Governmental Industrial Hygienists (ACGIH).***
  A professional association of Industrial Hygienists and practitioners of related professions to advance worker protection by providing timely, objective, scientific information to occupational and environmental health professionals. ACGIH establishes Threshold Limit Values (TLV) using a Time Weighted Average (TWA).

- ***American National Standards Institute (ANSI).***
  An organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States.

- ***American Society of Safety Professionals (ASSP).***
  Formerly American Society of Safety Engineers (ASSE). A global organization of occupational safety and health professional members who manage, supervise, research and consult on work-related occupational safety and health concerns in all industries, government and education.

- ***Breathing Zone.***
  An area approximately one square foot around the mouth and nose.

- ***Bump Test.***
  The process verifies the performance of a gas detector and ensures that sensors are responding to the target gas. A bump test does not calibrate the sensors.

- ***Calibration.***
  An instrument's measuring accuracy relative to a known traceable concentration of test gas.

- ***Classified Area.***
  The 50-foot radius around an Acid Gas Compressor.

- ***Exposure Limit.***
  The extent to which a person may be safely exposed to a hazardous substance (typically a gas or solvent vapor) without endangering his or her health.

- ***Hazardous Atmosphere.***
  Any atmosphere, either immediately dangerous to life or health (IDLH) or not, which is oxygen deficient, or that contains a toxic contaminant exceeding an established permissible exposure limit (PEL).

- ***Health Effects of H_2S.***
  Causes irritation of eyes, nose, and respiratory system and chemical asphyxia. Severity of effect depends on concentration and duration of exposure. At low concentration, it causes irritation of eyes, nose, throat, and respiratory system, resulting in burning and watering of eyes, cough, and asthmatics may experience difficulty in breathing. Repeated exposures to low concentration may cause redness of eyes, headache, and fatigue. Exposure at moderate concentration can cause more severe eye and respiratory irritation including cough, difficulty in breathing, headache, dizziness, and vomiting. Exposure to high concentration can result in difficulty in breathing, unconsciousness, convulsions, and death within a few breaths.

- ***Hydrogen Sulfide (H_2S).***
  A colorless, flammable and extremely toxic gas with a "rotten egg" odor. It forms an extremely flammable mixture with air in range from 4.3% to 46%. It occurs naturally in crude petroleum and natural gas and by bacterial breakdown of organic materials and human and animal waste (e.g., sewage). H2S is heavier than air and collects in low-lying, enclosed and poorly ventilated areas such as basements, manholes, and confined spaces. The primary route of exposure is inhalation. Absorption through the skin is minimal. Detection of H_2S by odor is unreliable since it rapidly deadens the sense of smell and the exposed person loses the ability to smell the gas, while the exposure continues. (Refer to APPENDIX A: Physical Effects of H_2S)

- ***H_2S Facilities.***
  Facilities with H_2S concentrations at 10 ppm or greater.

- ***Immediately Dangerous to Life or Health (IDLH).***
  An atmospheric concentration of any toxic, corrosive, or asphyxiant substance that poses an immediate threat to life or that would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.

- ***National Institute of Occupational Safety and Health (NIOSH).***
  A United States federal agency that conducts research and makes recommendations to prevent worker injury and illness.

- ***Occupational Safety and Health Administration (OSHA).***
  An agency of the United States Department of Labor whose mission is to "assure safe and healthy working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance ".

- ***Parts Per Million (ppm).***
  One part of solute per one million parts solvent.

- ***Permissible Exposure Limit (PEL).***
  The airborne concentration of a chemical substance to which nearly all workers may be repeatedly exposed, day after day, over a working lifetime, without adverse health effect.

- ***Radius of Exposure (R.O.E.).***
  Distance from release to where H2S concentration in air will dilute to below 100 ppm or 500 ppm. R.O.E. for pipeline will be parallel lines.

- ***Respirator.***
  A device designed to protect the wearer from inhaling harmful atmospheres and has been approved by the National Institute for Occupational Safety and Health (NIOSH). A self-contained breathing apparatus (SCBA) or supplied breathing air units are the only respirators approved for confined space entry and working in an H_2S environment.

- ***Safe Area.***
  A distant location upwind or crosswind from a release where the H_2S level is below 10 ppm.

- ***Self-Contained Breathing Apparatus (SCBA).***
  A device with at least 30-minutes service life that provides breathing air to the wearer independent of any other source. The device is carried by the wearer and is limited in usage time by the amount of air carried in the device.

- ***Short Term Exposure Limit (STEL).***
  Average workplace exposure to a toxic or irritant agent up to 15 minutes, no more than 4 times a day with a gap of one hour between two exposures a day, which causes no adverse health effect to workers.

- ***Sour Gas.***
  Natural gas or any other gas containing significant amounts of H_2S, which is >4 ppm by volume under standard temperature and pressure.

- ***Sour Gas (pipeline).***
  A gas pipeline that carries gas >100 ppm by volume of H_2S.

- ***Standby Person.***
  An employee located in a safe area and with the same personal protective equipment and respiratory protection as an employee inside a hazardous area. Standby people are for immediate emergency notification purposes only.

- ***Sulfur Dioxide (SO_2)***
  Sulfur dioxide is found in gas form when fossil fuels that contain Sulfur are burned. Sulfur dioxide presence is identifiable by the smell. Sulfur dioxide produces the smell when a match is lit. Sulfur dioxide is severely irritating to the eyes, mucous membranes, skin, and respiratory tract.
  Standards and Guidelines
  OSHA PEL (permissible exposure limit) = 5 ppm (averaged over an 8-hour work shift)
  NIOSH IDLH (immediately dangerous to life or health) = 100 ppm
  AIHA ERPG-2 (maximum airborne concentration below which it is believed that nearly all persons could be exposed for up to 1 hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair their abilities to take protective action) = 3 ppm

- ***Supervisor.***
  A person who directs the work of others, regardless of personnel reporting structure. Other titles may include Lead person, Foreman, or Manager.

- ***Sweet Gas.***
  Natural gas (pipeline grade) that contains very little or no H_2S, usually <4 ppm and no carbon dioxide (CO_2).

- ***Threshold Limit Value (TLV).***
  A level to which a worker can be exposed day after day for a working lifetime without adverse effects.

- ***Time Weighted Average (TWA).***
  Average workplace exposure to any hazardous contaminant or agent using the baseline of an 8-hour workday and a 40-hour workweek.

4. RESPONSIBILITIES

It is the responsibility of all personnel on-site to follow the safety and emergency procedures outlined in the H_2S Contingency Plan.

4.1 Employees, Visitors and Contractors

4.1.1 Understand the requirements of the H_2S Contingency Plan to ensure continued conformance.

4.1.2 Accept accountability for proper execution of this Standard.

4.1.3 Wear a personal H2S monitor at all times where minimum PPE is required.

4.1.3.1 A personal H2S monitor may be removed by personnel utilizing appropriate breathing equipment.

4.1.4 Take proper care of the personal monitor.

4.1.4.1 Report all malfunctions and replace the personal monitor if it is not working properly.

4.1.4.2 Take precautions to prevent loss, theft, or damage to the personal monitor.

4.1.4.3 Perform bump test on personal H2S monitors in accordance with manufacturer's recommendations, typically before each use.

4.1.4.4 Quad Gas monitors are to be calibrated every 180 days or as needed to ensure accuracy.

4.1.5 Notify supervisor of any non-conformances regarding the H_2S Monitor and Alarm Response Standard.

4.1.6 Report all hazards.

4.2 Supervisors

4.2.1 Ensure that employees and contractors are properly trained to apply the required elements of the H_2S Monitor and Alarm Response Standard.

4.2.2 Engage third party to perform “All Clear” notifications in the event of a release.

4.3 Safety Management

4.3.1 Responsible for H_2S Monitor and Alarm Response Standard issuance, updates, publication, and distribution.

4.3.2 Ensure that adequate resources are committed to comply with the H_2S Monitor and Alarm Response Standard.

4.3.3 Ensure that the appropriate processes are in place to train authorized and affected employees.

4.3.4 Schedule and allocate the time necessary to ensure that the H_2S Monitor and Alarm Response Standard is being effectively executed and assessed to ensure continuous compliance.

4.3.5 Ensure that individuals who will be performing the activities outlined in this Standard are consulted during the development of site-specific work practices that are implemented to achieve compliance.

4.3.6 Schedule third party to calibrate fixed systems every 30 days.

5. REQUIREMENTS

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

1) The emergency procedures to be followed in the event of a H_2S release that may pose a threat to the Site, public or public areas,
2) Characteristics of H_2S,
3) Personnel requirements for H_2S monitoring,
4) Information regarding training and drills to be conducted related to this Plan.

5.1 Characteristics of H_2S

The current streams that flow into the Denton CS contain approximately 9,000 ppm (0.9 mole percent) of hydrogen sulfide based on data generated from the sampling of all the gas streams (average of samples taken September 2022) feeding into the pipelines that transport gas to the Denton CS.

Hydrogen sulfide (H_2S) is a colorless, toxic, and flammable gas, and at low concentrations, has the odor of rotten eggs. H_2S gas is heavier than air and presents a significant health hazard by paralyzing the respiratory system resulting in serious injury or death.

H_2S Properties and Characteristics

CAS No.	7783-06-04
Molecular Formula	H2S
Molecular Weight	34.082
PEL	20 ppm
TWA	10 ppm
STEL	15 ppm
IDLH	100 ppm
Specific Gravity (air -1.0)	1.189
Boiling Point	-76.5^{0}F
Freezing Point	-121.8^{0}F
Vapor Pressure	396 psia
Auto Ignition Temperature	518^{0}F
Lower Flammability Limit	4.3%
Upper Flammability Limit	46.0%
Stability	Stable
pH in water	3
Corrosivity	Reacts with metal, plastic, tissues and nerves

Physical Effects of H_2S

PPM	PHYSICAL EFFECTS
0.00011 — 0.00033	Typical background concentrations.
0.01 — 1.5	Odor threshold (when rotten egg smell is first noticeable to some). Odor becomes more offensive at 3-5 ppm.
2 - 5	Prolonged exposure may cause nausea, tearing of the eyes, headaches, or loss of sleep. Airway problems (bronchial constriction) in some asthma patients.
15	Short Term Exposure Limit (STEL); Safe for 15 minutes of exposure without respirator
20	Possible fatigue, loss of appetite, headache, irritability, poor memory, dizziness. Above 30 ppm, odor described as sweet or sickeningly sweet
50-100	Slight conjunctivitis ("gas eye") and respiratory tract irritation after 1 hour. May cause digestive upset and loss of appetite.
100	Immediately dangerous to life and health (IDLH); Coughing, eye irritation, loss of smell after 2-15 minutes (olfactory fatigue). Altered breathing, drowsiness after 15-30 minutes. Throat irritation after 1 hour. Gradual increase in severity of symptoms over several hours. Death may occur after 48 hours.
100-150	Loss of smell (olfactory fatigue or paralysis).
200 - 300	Marked conjunctivitis and respiratory tract irritation after 1 hour. Pulmonary edema may occur from prolonged exposure.

PPM	PHYSICAL EFFECTS
500 - 700	Staggering and collapse in 5 minutes. Serious damage to the eyes in 30 minutes. Death after 30-60 minutes.
700 - 1000	Rapid unconsciousness, "knockdown" or immediate collapse within 1 to 2 breaths, breathing stops, death within minutes.
1000 - 2000	Instant unconsciousness

5.2 H_2S Occupational Exposure Limit

5.2.1 The following occupational exposure limits are established for H_2S:

5.2.1.1 OSHA Exposure Limit:

- Permissible Exposure Limit (PEL) = 20 ppm
- Ceiling Limit = 50 ppm (limited to no more than 10 minutes once per 8-hour shift with no other measurable exposures during the shift)

5.2.1.2 NIOSH Recommended Exposure Limit (REL):

- 8-hour Time Weighted Average (TWA) = 10 ppm
- 15-minute Short Term Exposure Limit (STEL) = 15 ppm

5.2.1.3 NIOSH Immediately Dangerous to Life and Health (IDLH) = 100 ppm

5.2.2 Along with general industry practice, the Company will use NIOSH REL of 10 ppm as the safe 8-hour exposure limit and 15 ppm for 15-minute STEL.

5.3 Personal H_2S Gas Monitors

5.3.1 Do not rely on sense of smell to indicate the presence or concentration of H_2S as Hydrogen Sulfide can be smelled at low levels; however, with continuous low-level exposure, or at high concentrations, the ability to smell the gas is lost even though the gas is still present.

5.3.2 Each employee assigned to work in our facilities shall wear a personal H_2S gas monitoring device as part of basic PPE requirements.

5.3.2.1 Visitors and/or non-assigned company employees without personal H_2S monitors shall not be permitted in H_2S Facilities (facilities with potential exposure of 10 ppm (NIOSH REL).

5.3.2.2 A bump test of portable gas monitors must be conducted before each day's use or in accordance with the manufacturer's instructions. If an instrument fails a bump test, the operator must perform a full calibration on it before using it.

5.3.2.3 Users must perform a monthly calibration by utilizing calibration stations in accordance with the manufacturer's instructions. If the instrument

fails the full calibration, the device must be removed from service until it can be properly calibrated.

5.4 Respiratory Protection

5.4.1 All persons assigned to work in an H_2S environment that exceeds the REL (10 ppm) must meet the medical and fit testing requirements of the DGP Respiratory Protection Program.

5.4.2 Supplied air respiratory equipment is required when performing special tasks such as:

5.4.2.1 Work in any environment where H_2S exposure reaches a level of 10 ppm or greater,

5.4.2.2 Opening process lines or equipment in H_2S service where the internal atmosphere cannot be tested or H_2S levels are unknown,

5.4.2.3 Responding to, or checking for, leaks in a potentially hazardous atmosphere.

5.4.3 Emergency escape respirators with 5-minute bottles will be used for escape purposes only. Emergency escape bottles are not to be used for any other purposes including rescue, leak response or any other non-escape activities.

5.5 Buddy System

5.5.1 At any time, while working in any area where H_2S is over the IDLH (in concentrations of 100 ppm or higher, or in unknown concentrations), a second employee is required to be on standby in a Safe Area with the same personal protective equipment and respiratory protection.

5.5.1.1 Standby persons are for immediate emergency notification purposes only. No entry rescue may be attempted other than by trained rescue personnel.

5.6 Response to Known H_2S Release or If an H_2S Monitor Alarm is Sounded

5.6.1 Using site windsocks for wind direction, all persons will immediately evacuate the area by moving upwind/crosswind of the release. Use breathing air equipment, if necessary, and seek a safe area.

5.6.1.1 H_2S Alarm Levels

- 10 PPM to 100 PPM– Follow 5.6.2
- Above 100 PPM Follow 5.6.2.1

5.6.2 Account for all persons on site utilizing paper or electronic ledger.

5.6.2.1 H_2S Alarm Levels above 100 PPM on Public Roadway

- Make call to Lea County Sheriff's Office to request roadblocks to be set up at East and West locations indicated on attached map (see contact list for numbers)
- Contact OCD and National Response Center (see contact list for numbers APPENDIX “F”)
- Contact Producers on the South Denton Line to shut in production. (see contact list for numbers APPEMDIX “F”)
- Mobilize Personnel to confirm Producers are shut in and Shut In Meters on South Denton Line.
- Shut in South Denton Meter Block Valve
- Shut in North Denton Meter Block Valve
- Shut in High Plains Meter Block Valve
- Shut in Inlet Block Valve
- Shut in Outlet Block Valve
- Trip Compressor Breaker

5.6.3 Report the release to the supervisor.

5.6.3.1 The alarm event must be logged by the end of the work shift on the H_2S/LEL Alarm Event Loge.

5.6.4 With standby personnel, don respiratory protection and locate the leak source.

5.6.4.1 Person(s) entering the potentially hazardous area will maintain communication with standby personnel while investigating the alarm event.

5.6.4.1 Atmospheric tests for the presence and concentration of H_2S will be conducted using direct-reading portable equipment (4-gas monitor or color metric tubes). An H_2S-specific gas monitor may be used if it has direct-reading capabilities.

5.7 Persons Exposed to H_2S

5.7.1 With an emergency medical situation, immediately notify emergency services to ensure additional rescue and medical assistance is in route.

5.7.2 If no trained rescue personnel are on site, only non-entry rescue using lifeline equipment may be performed. No rescue may be attempted other than by trained personnel. DGP Personnel are not trained to or authorized to perform rescue operations.

5.7.2.1 Personnel must await the arrival of emergency services for downed individual(s) to be entry rescued.

5.7.3 Immediately move the exposed individual to a safe area and assess.

5.7.4 If breathing has stopped, trained personnel should begin artificial respiration.

5.7.5 If the heart has stopped, trained personnel should start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED). Artificial respiration should only be administered using one-way mouth guards or shields.

5.7.6 Keep individual at rest in a position comfortable for breathing.

5.7.6.1 Do not allow victim to move about unnecessarily. Symptoms of pulmonary edema may be delayed.

5.7.6.2 If eyes are affected rinse with clean water or approved solution.

5.7.6.3 Transport individual for emergency medical evaluation and treatment.

5.8 RADII OF EXPOSURE (ROE)

For the Denton CS, the "Radius of Exposure" for both 100-ppm and 500-ppm of H_2S gas was determined using the maximum daily rate of the gaseous mixture that is handled by the site. The rates and other variables used to calculate the ROE are discussed in greater detail in Appendix A. Appendix B explains the ROE locations and contains a map showing the 100-ppm and 500-ppm radii.

100-ppm ROE	**500-ppm ROE**
299 ft	137 ft

6. EMERGENCY ACTION PROCEDURES

In the event of an accidental release that results in the activation of Denton's H_2S Plan and all personnel have been evacuated out of the area, the Site Supervisor will be the On-Scene Incident Commander (IC). The IC will contact and coordinate with DGP's Operations Manager.

The Site Supervisor, or his designee, will act as IC until the New Mexico Sheriff Department or State Police arrive. Once the New Mexico Sheriff or Police arrive, the ranking Officer will assume the duties of the IC.

The Site Supervisor, or his designee, shall determine the shutdown of the site, isolation of pipeline segments and repairs, tests, or restarts as required.

The Plan has three (3) activation levels:

- Level 1 – Activation of personal alarms greater than 10 ppm for H2S.
- Level 2 – Activation of personal alarms greater than 20 ppm for H2S.
- Level 3 – Catastrophic release; fire; explosion; a continuous release of maximum volume for more than 1 hour; or Rule 11 Mandatory Activation for 100 ppm in any defined public area; 500 ppm at any public road; or 100 ppm at a distance greater than 3000 feet from the site or the release. Operator(s) activate the emergency shutdown system (ESD) of the site and notification of public receptors and State agencies is initiated.

  As soon as the Plan has been activated based on the criteria above, the Site Supervisor must be notified.

6.1 Evacuation and Emergency Assembly Areas

Evacuation for all visitors and all personnel that are not operators begins at 10 ppm H_2S alarm. The responding Site operator(s) are to put on the 30-min Self Contained Breathing Apparatus (SCBA) and first determine if any personnel are in distress and assist any distressed personnel to evacuate to the closest muster point. Emergency services (911) will be contacted if there are injuries or as otherwise deemed necessary. The operators, wearing the SCBA, will investigate the cause of the release.

Prevailing winds for the area are from the southwest. Personnel should evacuate along the designated route unless the designated evacuation route is downwind of the release (based on windsock), then all evacuees should proceed perpendicular and then upwind to the muster areas.

The site evacuation routes are shown in Appendix C.

Roll call shall be conducted at the muster points to ensure all site personnel (including contractors and visitors) are accounted for and have evacuated safely. Ambient air quality of the muster point will be monitored for H_2S concentrations to ensure the area remains at less than 10 ppm. If the H_2S concentration rises to 10 ppm or greater, the muster area will be relocated.

6.2 Level 1 Response

A level 1 response occurs when 10 ppm of H_2S or greater is detected on a personal monitor, or a fixed monitor. At the initial sound of the alarm, personnel need to remove themselves from the area and notify the site supervisor. If any other personnel are within the site boundaries, they are to immediately evacuate the site using the evacuation routes (see Appendix C). At the assembly area, all personnel will be accounted for using the plant sign in sheet and the air quality will be monitored to ensure it remains less than 10 ppm H_2S. If H_2S rises to 10 ppm, all personnel will move to the muster point upwind of the release.

The responding site operator will don the 30-minute SCBA and first assist any persons in distress to evacuate to the appropriate muster location. If determined necessary, local emergency providers will be contacted by the Site Supervisor or any personnel designated by the responding operator. The Site Supervisor or his designee will contact the OCD District Office within 4 hours of the release.

Should the release not be resolved and H_2S levels continue to increase, Level 2 Response is initiated.

6.3 Level 2 Response

A Level 2 response occurs when 20 ppm of H2S or greater is detected on a personal monitor, or fixed monitor and/or corrective actions at Level 1 are unsuccessful.

The responding operator will don a 30-minute SCBA and will first aid any persons in distress to evacuate to the most appropriate muster location. If deemed necessary, local emergency response service providers will be contacted by site personnel.

Wearing the SCBA, the responding operator will determine the source of the release and if possible, take corrective actions. If corrective actions are successful and the release is resolved, and the monitored H_2S levels in the plant return to less than 10 ppm, the Site Supervisor or his designee will signal all clear and personnel will be allowed to sign in and reenter the site to resume work. The Site Supervisor or his designee will contact the OCD District Office within 4 hours of the release.

Should the release not be resolved and H_2S levels continue to increase, Level 2 Response is initiated.

6.4 Level 3 Response

A Level 3 response occurs when corrective actions at Level 2 are unsuccessful, a catastrophic release; fire; explosion; a continuous release of maximum volume for more than 1 hour; or Rule 11 Mandatory Activation for 100 ppm in any defined public area; 500 ppm at any public road; or 100 ppm at a distance greater than 3000 feet from the site or the release.

Site operators will activate the site's emergency shutdown system. DGP Operations Manager will be notified, and an Incident Command Center will be initiated. All personnel will be accounted for using the plant sign-in sheet. A chronological event tracking log will be initiated.

Contact the Lea County Sheriff's Office to request support and roadblocks to be set up at East and West locations indicated on ROE Roadblock Map, Appendix D. Site personnel with H_2S monitors will move to the designated roadblock areas, monitor air quality and mover further if H_2S reaches 10 ppm. Notify the IC of the new roadblock location.

Notifications to area businesses, both manned and unmanned, will include the nature of the release and status of containment. All will be instructed to immediately alert all company personnel, third party contractors and/or service companies working in the area and those imminently scheduled to work in the area, of the release and evacuation status of the site. They should all be instructed to immediately leave the area and not re-enter the vicinity until further instructions. All shall be informed of the roadblocks on Highway 82.

If escaping vapors have been ignited, the vapors should be allowed to continue to burn unless the fire endangers personnel, the public, other property, or other equipment.

Operations personnel may be directed to close valves at field locations to ensure incoming gas is shut off. Steps to be followed for this are found in Appendix E, Public Road Leak Notification steps.

Once release is resolved and monitored levels of H_2S in the area and the site are less than 10 ppm, the Site Supervisor or his designee may authorize personnel to return to the site. All businesses, public receptors, and producers previously notified will be informed that the release has been resolved and advise of the current monitored H_2S levels at the Site.

Highway traffic will be restored.

7. Notifications and Reports

The Site has various notification and reporting obligations, some related to New Mexico Environmental Department (NMED) requirements as well as federal spill reporting obligations. DGP has internal notification and reporting obligations associated with the activation of this Plan. Additionally, NMOCD will be notified as soon as possible but no later than 4 hours following the release of H_2S requiring the activation of this plan.

8. Public Awareness and Communication

Public awareness and communication are a primary function of the H_2S Plan. DGP has reviewed various public, private, and local contacts within a half mile radius to be contacted and are shown in Appendix F. There are no residences located within the 500 ppm and 100 ppm radius of exposure. DGP will inform all State and Local response organizations on its Plan as well as those businesses and residences that fall within its 500-ppm and 100-ppm ROE.

9. Training and Drills

9.1 Initial Training

9.1.1 Employees working on sites where H_2S is present will receive initial training on the hazards before beginning assignment. This training will include the following:

- The training will be of a sufficient duration and no less than 3 hours in length,
- The training content will include:
  - Facility sources of H_2S
    - Properties and characteristics of H_2S
  - Physical and health hazards of H_2S
    - Symptoms of overexposure
  - Methods to detect the presence or release of H_2S.
  - Locations of safety equipment including H_2S alarms, monitors, and respiratory protective equipment
  - Proper work practices and precautions to minimize exposure:
    - Routes of egress
    - Wind indicators
    - Muster areas
    - Warning signals
    - PPE
    - Hands-on training using the specific H_2S monitor to be used
  - Use of respiratory protective equipment for protection from H_2S exposure
  - Emergency response, designated rescuer and first aid procedures for H_2S
  - Effects of H_2S on metal components in the system

9.1.2 Each student will:

- Perform written competency testing.
- Upon successful completion of competency testing, receive a Certification Card of successful completion and stating that the training conforms to ANSI/ASSP Z390.1

9.2 Refresher Training Schedule

9.2.1 Refresher training on the hazards of H_2S will be given:

- annually, and

- when the program changes or if identified as needed by verification, inspection, incident, or audit.
- Site training for response to incidents over 100 PPM to be done annually with Local Agencies.

9.3 Emergency Response Drills

9.3.1 The Site will conduct a tabletop drill annually. The drill will execute the Plan and include, at a minimum, the Local Emergency Response Agency listed in Appendix G. The drills will include issues on roadblocks, evacuations and shelter in place. DGP will retain documentation of the drill training and will include description or scope of the drill, including date and time; attendees and participants, summary of activities and responses and post-drill debriefing and reviews.

10. REFERENCES

8.1 DGP Respiratory Protection Program

8.2 DGP First Aid Policy

8.3 API Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations (RP-55)

8.4 ANSI/ASSP Z390.1 2017 Accepted Practices for Hydrogen Sulfide (H_2S) Training Programs

8.5 OSHA Safety and Health Information Bulletin SHIB 09-30-2013 for Calibrating and Testing Direct-Reading Portable Gas Monitors

8.6 New Mexico (NM) 19.15.11 NMAC

11. REVISION HISTORY AND FILE LOCATION

REVISION	CHANGED BY	MODIFICATION(S)	DATE
0		Initial Issue	11/1/2023
Revision 1	JAH	Update Requirements	12/5/2023

11.1 File Locations

11.1.1 An electronic copy of the H_2S Monitor and Alarm Response Standard to be maintained on the DGP Company server.

11.1.2 A printed controlled copy of the H_2S Monitor and Alarm Response Standard to be maintained at all facility office/Control Room locations.

11.2 Review, Amendment

11.2.1 Operations Manager will review the H_2S contingency plan monthly or any time a gas well is added, or gas sample is taken to determine if the current plan is adequate. If the plan is found to be inadequate or changed materially, modifications will be addressed in a timely fashion.

11.2.2 Operations Manager will review the H_2S contingency plan annually and file said plan with the appropriate local emergency planning committee and the state emergency response commission an inventory of the facilities and operations.

APPENDICES

APPENDIX A: Radii of Exposure Calculations
APPENDIX B: H2S/LEL Locations and Map of Potential Affected Public Areas and Roads
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APPENDIX A
Radii of Exposure Calculations

The formulas for calculating the two radii of exposure are as follows:

500-ppm Radius of Exposure Calculation

$$X = [(0.4546)(H_2S \text{ concentration}(Q))]^{(0.6258)}$$

Where:

X =	Radius of exposure in feet
H_2S 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)

North Denton Check Meter

For existing facilities or operation, the escape rate (Q) is the maximum daily rate of the gaseous mixture produced or handled or the best estimate thereof. For the Denton CS, the North Denton Check Meter is somewhat variable and continuously metered. The volume of all meters that flow into the North Denton Check Meter for a total of 206.06 MCFD of field gas has been selected as the escape rate since it is the highest volume metered for this location.

The H_2S concentrations of this gas vary, but through routine sampling and calculating weighted averages for each gas well, the average concentration for 2023 of 276 ppm or 0.0276 mole percent is the worst-case scenario.

Q = 206,053
H_2S Concentration = 276 ppm of 0.0276 mol%

$$[(0.4546)*(0.0276)*(206,053)]^{0.6258}$$

500-ppm ROE = 137 feet

100-ppm Radius of Exposure Calculation

$$X = [(1.589)(H_2S \text{ concentration})*(\text{gas volume } (Q))]^{(0.6258)}$$

Where:

X =	Radius of exposure in feet
H_2S 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)

North Denton Check Meter

For existing facilities or operation, the escape rate (Q) is the maximum daily rate of the gaseous mixture produced or handled or the best estimate thereof. For the Denton CS, the North Denton Check Meter is somewhat variable and continuously metered. The volume of all meters that flow into the North Denton Check Meter for a total of 206.06 MCFD of field gas has been selected as the escape rate since it is the highest volume metered for this location.

The H_2S concentrations of this gas vary, but through routine sampling and calculating weighted averages for each gas well, the average concentration for 2023 of 276 ppm or 0.0276 mole percent is the worst-case scenario.

Q = 206,053
H_2S Concentration = 276 ppm of 0.0276 mol%

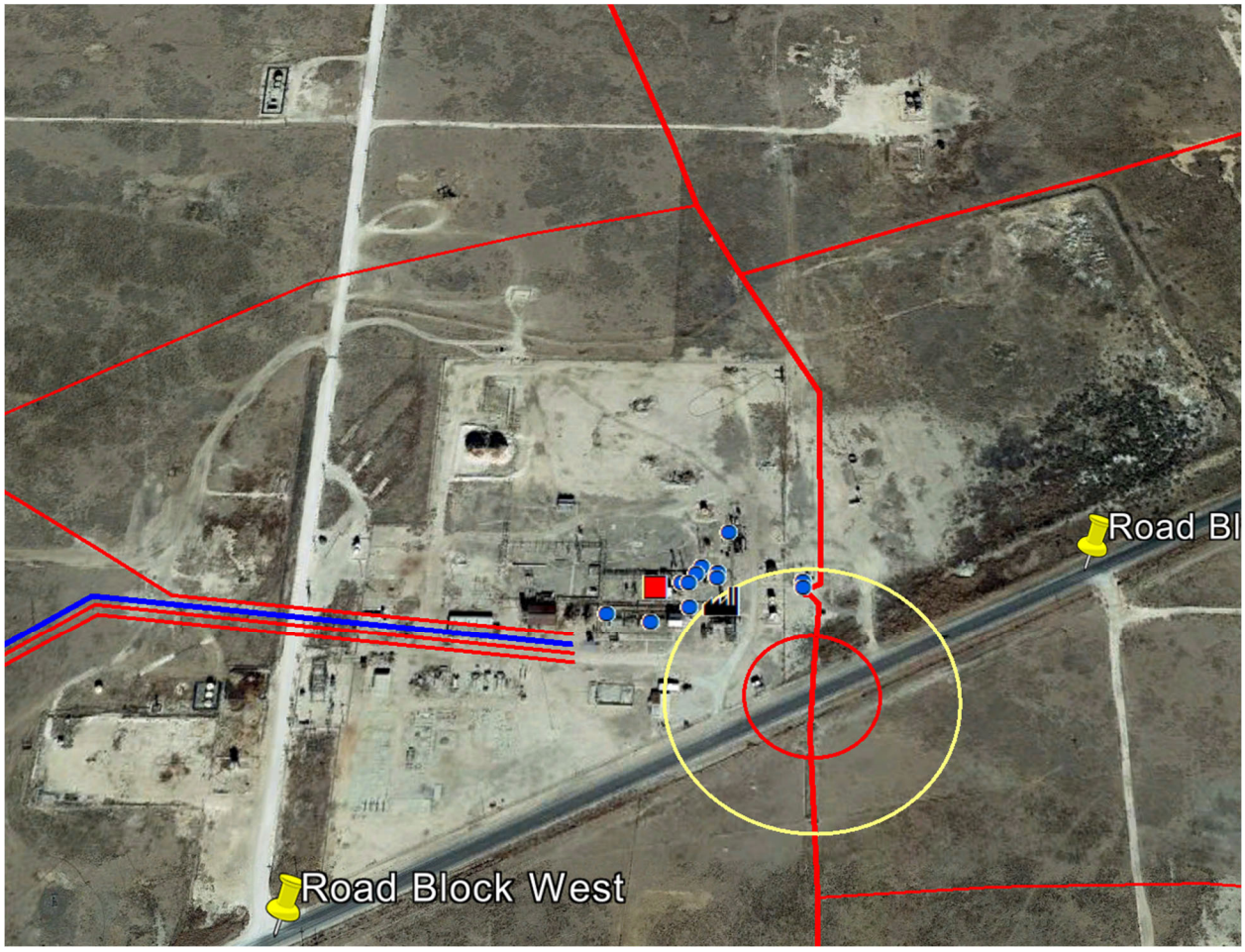
$$[(1.589)*(0.0276)*(206{,}053)]^{0.6258}$$

100-ppm ROE = 299 feet

APPENDIX B

H2S/LEL Locations of Potentially Affected Public Areas and Roads

- For the Denton Gathering System, the only qualifying location that has a potential to impact a Public Road with H2S levels at a 500 PPM levels is at the entrance to the Davis Gas Processing yard entrance located on Hwy 82 approximately 6.9 miles West of the New Mexico/Texas border. A complete and total line break would be required within 137 feet of the roadway for H2S PPM levels to reach 500.
- The following picture shows a RED Circle indicating a 500 PPM exposure level of H2S concentration as per 19.15.11.7.K. This circle has a 137' Radius. The center of this RED circle is show on the centerline of Hwy 82. This picture also indicates a 100 PPM exposure level in Yellow and has a 300' Radius.



APPENDIX C
Evacuation Routes & Roadblock Map

APPENDIX D

Leak Notification Procedure (Public Roads)

- In the case of a line rupture in or near Hwy 82 on the South Denton Line the following steps to Make Safe the area are required
  - Make call to Lea County Sheriff's Office to request roadblocks to be set up at East and West locations indicated on attached map.
  - Contact OCD and National Response Center (see contact list)
  - Contact Producers on the South Denton Line to shut in production.
  - Mobilize Personnel to confirm Producers are shut in and Shut In Meters on South Denton Line.
  - Shut in South Denton Meter Block Valve
  - Shut in North Denton Meter Block Valve
  - Shut in High Plains Meter Block Valve
  - Shut in Inlet Block Valve
  - Shut in Outlet Block Valve
  - Trip Compressor Breaker

Safety Equipment and Shut in valve locations

APPENDIX E

Landowners Within Half Mile Radius

County	Latitude	Longitude	Owner
Lea	33.031936	-103.170930	Angell #2 Family LTD Partnership
Lea	33.046275	-103.153674	Angell #2 Family LTD Partnership

APPENDIX F
Contact List

Title	Name	Phone
Lea County Sherriff		575-396-8200
DGP Operations Manager	Alan Hill	432-210-8647
Scorpion Operations	Eric Garcia	432-312-7150
Scorpion Operations	Kris Kowalsky	832-732-9750
Fasken	Scott	432-557-2976
Fasken	Trey	432-488-7038
Linx Energy	Joe Whitman	575-399-0498
Linx Energy	Rusty Lloyd	432-210-7686
Stanolind Oil	Shane Overton	575-390-9356
OCD	Mike Bratcher	575-626-0857
National Response Center		800-424-8802

State of New Mexico
Energy, Minerals and Natural Resources Department

BY ELECTRONIC MAIL ONLY

January 12, 2023

Elena Hofmann
Davis Gas Processing Co.
elena.hofmann@eosolutions.net

RE: Notice of a Complete Hydrogen Sulfide Contingency Plan, Denton Gas Plant

Dear Ms. Hofmann,

The New Mexico Energy, Minerals and Natural Resource Department's Oil Conservation Division (OCD) has reviewed the updated Hydrogen Sulfide (H_2S) Contingency Plan submitted to the OCD on December 6, 2023, by Davis Gas Processing, Inc. (DGP) for the Denton Gas Plant located in Lea County, New Mexico. The submitted H_2S Contingency Plan includes all content components as required by 19.15.11 NMAC; therefore, the OCD has determined that the submitted H_2S Contingency Plan is complete.

Please be advised that OCD's acceptance of this plan does not relieve DGP of responsibility should its operations fail to adequately detect, investigate, and/or undertake corrective actions to prevent or stop a hydrogen sulfide release. In addition, OCD's acceptance does not relieve DGP of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Please do not hesitate to contact me at (505) 709-5149 or via email should you have any questions.

Respectfully,

Joel Stone

Joel Stone
Environmental Scientist & Specialist
joel.stone@emnrd.nm.gov

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 291925

CONDITIONS

Operator: DAVIS GAS PROCESSING CO P.O. Box 51670 Midland, TX 79710	OGRID: 191566
	Action Number: 291925
	Action Type: [UF-H2S] H2S Contingency Plan (H2S Plan)

CONDITIONS

Created By	Condition	Condition Date
joel.stone	None	1/12/2024