Hydrogen Sulfide Contingency Plan

Northwind Midstream, LLC
Titan Gathering System and Compressor Stations

Lea County, New Mexico

Northwind Midstream, LLC
811 Louisiana Street
Suite 2500
Houston, TX 77002

May 2024

Prepared by:

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The following check list is provided by NMOCD to ensure completeness and accuracy of the components of the H_2S Contingency Plan. Requirements, applicable regulations, and location within this document are provided for reference.

Contingency Plan Requirements Checklist *(19.15.11.9.B NMAC Requirements)*	**Applicable Regulation(s)**	**Included** *(Yes/No)*	**Document Page**
Emergency Procedures			
Responsibilities and duties of personnel during an emergency	19.15.11.9.B.2.a 19.15.11.9.B.2.d	Yes	Pg. 2-4 Fig: 11,12
Immediate action plan	19.15.11.9.B.2.a; 19.15.11.9.B.2.d; 12.15.11.12.D.2 (well control)	Yes	Pg. 4 Appx. B
Evacuation and shelter in place plan	19.15.11.9.B.2.a; 19.15.11.9.B.2.d	Yes	Pg. 4-6
Telephone Numbers: Emergency Responders	19.15.11.9.B.2.a 19.15.11.9.H	Yes	Appx. D
Telephone Numbers: Public Agencies	19.15.11.9.B.2.a; 19.15.11.9.H	Yes	Appx. D
Telephone Numbers: Local Government	19.15.11.9.B.2.a; 19.15.11.9.H	Yes	Appx. D
Telephone Numbers: Appropriate Public	19.15.11.9.B.2.a	Yes	Appx. D
Location of potentially affected public areas	19.15.11.7.H; 19.15.11.8.C.2; 19.15.11.8.D; 19.15.11.9.A; 19.15.11.9.B.2.a; 19.15.11.9.D.2; 19.15.11.11.D; 19.15.11.12.B.2.a; 19.15.11.12.D	Yes	Pg. 5-6 Fig. 4-10
Location of potentially affected public roads	19.15.11.7.H.2; 19.15.11.7.J; 19.15.11.9.B.2.a; 19.15.11.9.B.2.c; 19.15.11.9.C	Yes	Pg. 6 Fig. 6,8,10
Proposed evacuation routes including the locations of roadblocks	19.15.11.9.B.2.a; 19.15.11.9.B.2.d	Yes	Pg. 9-10 Fig. 3,6,8
Public notification procedures	19.15.11.9.B.2.a	Yes	Pg. 4-5 Appx. B
Availability and location of safety equipment and supplies	19.15.11.9.B.2.a; 19.15.11.11.C; 19.15.11.12.D	Yes	Pg. 7-9 Fig. 3
Characteristics of Hydrogen Sulfide and Sulfur Dioxide			
Discussion of characteristics	19.15.11.9.B.2.b	Yes	Pg. 10-12
Maps and Drawings			
Area(s) of exposure	19.15.11.7.B; 19.15.11.9.B.2.c	Yes	Pg. 13 Fig. 4 Appx. E
Public areas within area of exposure	19.15.11.7.B; 19.15.11.7.H; 19.15.11.7.I; 19.15.11.7.K.1-3; 19.15.11.8.C.1-2; 19.15.11.8.D; 19.15.11.9.B.2.c; 19.15.11.9.C; 19.15.11.9.D.2; 19.15.11.11.D; 19.15.11.11.E; 19.15.11.12.D; 19.15.11.12.D.	Yes	Pg. 5-6 Fig. 4,5,7,9
Public roads within area of exposure	19.15.11.9.B.2.a; 19.15.11.9.B.2.c; 19.15.11.9.C	Yes	Pg. 6 Fig. 6,8,10
Training and Drills			
Training of personnel to include responsibilities, duties, hazards, detection, personal protection and contingency procedure	19.15.11.9.B.2.a; 19.15.11.9.B.2.d; 19.15.11.12; 19.15.11.13	Yes	Pg. 15-17
Periodic drills or exercises that simulate a release	19.15.11.9.B.2.d	Yes	Pg. 15-16
Documentation of training, drills, and attendance	19.15.11.9.B.2.d	Yes	Pg. 17
Training of residents on protective measures	19.15.11.9.B.2.d	Yes	Pg. 15-16
Briefing of public officials on evacuation or shelter-in-place plans	19.15.11.9.B.2.a; 19.15.11.9.B.2.d	Yes	Pg. 15-16

Contingency Plan Requirements Checklist *(19.15.11.9.B NMAC Requirements)*	**Applicable Regulation(s)**	**Included** *(Yes/No)*	**Document Page**
Coordination With State Emergency Plans			
How emergency response actions will coordinate with the OCD and the State Police response plans	19.15.11.9.B.2.e	Yes	Pg. 17
Plan Activation Levels			
Activation levels and description of events which may lead to a release in excess of activation level	19.15.11.9.B.2.f; 19.15.11.9.C; 19.05.11.16	Yes	Pg. 18 Appx. B, C
Plan Activation			
Commitment to activate contingency plan whenever H_2S concentration of more than 100 ppm in a public area or 500 ppm at a public road	19.15.11.7.H & 19.15.11.7.I; 19.15.11.9.B.2.a; 19.15.11.9.B.2.c; 19.15.11.9.C	Yes	Pg. 18 Appx. B, C
Commitment to activate contingency plan whenever H_2S concentration of more than 100 ppm 3000 feet from the site of release	19.15.11.7.H; 19.15.11.9.C	Yes	Pg. 18 Appx. B, C
Acid Gas Injection Well Information			
Well name, API#, legal description, map location, figures and/or construction diagrams	API RP-49 Recommended Practice for Drilling & Well Servicing Operations Involving Hydrogen Sulfide; API RP-54 Recommended Practice for Occupational Safety for Oil & Gas Drilling & Servicing Operations	No	N/A
Compliance with OCD "Well" Regulations	19.15.11.7K(3); 19.15.11.9B(2); 19.15.11.9H; 19.15.11.10; 19.15.11.11; 19.15.11.12; 19.15.11.16	No	N/A
Compliance with applicable standards	API RP-49; API RP-54 (formerly RP-68); API RP-55; & NACE Standards for Sour Gas Wells	No	N/A
Adequate H_2S Detection Monitoring	19.15.11.11.B	Yes	Pg. 7-9 Fig. 2
Notification of contingency plan implementation with C-141 full report submitted to the OCD within 15-days of release	19.15.11.16	Yes	Pg. 17 Appx. H
Miscellaneous			
AGI Well Location	19.15.11.7K(3); 19.15.11.9B(2); 19.15.11.9H; 19.15.11.10; 19.15.11.11; 19.15.11.12; 19.15.11.16	No	N/A
Pipeline(s)	19.15.11.12; 19.15.11.12.B; 19.15.11.12.C	Yes	Pg. 14-15 Fig. 1, 4-10
Flare Stack	19.15.11.11.D	Yes	Pg. 7 Fig 2-3
Signs	19.15.11.10	Yes	Pg. 8 Fig. 13
Emergency Shut Down (ESD)	19.15.11.12.D.1	Yes	Pg. 6-7 Fig. 2
Hazards	19.15.11.13	Yes	Pg. 2
AGI Wells	19.15.11.7.D.2-4; 19.15.11.7K(3); 19.15.11.9B(2);19.15.11.9H; 19.15.11.10; 19.15.11.11; 19.15.11.12; 19.15.11.16	No	N/A
Maps & Drawings	19.15.11.9.B.2.c	Yes	Pg. 15

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Location of Northwind Midstream Titan Gathering System Compressor Stations and Pipelines

The Titan Natural Gas Gathering System is an approximate 100-mile-long pipeline, to be constructed, owned, and operated by Northwind Midstream, LLC (Northwind), for the purpose to gather and transport natural gas and natural gas liquids containing hydrogen sulfide (H_2S). The pipeline will be primarily located within Lea County, New Mexico, originating from Township 22 South, Range 34 East and terminating at the Titan Gas Treatment Plant, located in Section 21 of Township 26 South, Range 36 East. The pipeline gathering system will incorporate three compressor stations, including the Flight, Siege, and Pelican facilities located respectively in Section 2, Township 22S, Range 34E (Flight), Section 29, Township 23S, Range 35E (Siege), and Section 3, Township 25S, Range 35E (Pelican). The path of the pipeline will primarily extend across rural and unpopulated areas of Lea County and all sections of the pipeline are being installed at a minimum depth of 36 inches below grade. As designed, the pipeline will cross multiple lease roads where design considerations will include specialty coatings to resist abrasion and additional wall thickness. A map of the Pipeline in its entirety is included in Figure 1, and a generalized plot plan of the Siege, Flight, and Pelican Compressor Stations, which are part of the pipeline system, is included in Figures 2 and 3.

Titan Gas Treatment Plant Mailing Address

811 Louisiana Street
Suite 2500
Houston, TX 77002

Driving Directions From Jal, NM to Titan Treating Facility

From Jal, NM (intersection of 3rd Street and W. Kansas Avenue), drive south on 3rd Street for 1.3 miles. Continue south on Frying Pan Rd for 6.8 miles. After, turn right onto Beckham Rd, continuing for 1.4 miles before turning right. After 0.8 miles, make another right. Last, turn right and follow the road for 0.3 miles before approaching the entrance to the treating facility on the left.

Location of Associated Compressor Stations

Flight Compressor Station	Section 2, T22S, R34E LAT: 32.425787 (NAD83) LONG: -103.448194 (NAD83)
Siege Compressor Station	Section 29, T23S, R35E LAT: 32.282264 (NAD83) LONG: -103.383367 (NAD83)
Pelican Compressor Station	Section 3, T25 R35E LAT: 32.163385 (NAD83) LONG: -103.362091 (NAD83)

Northwind Midstream Corporate Address

Northwind Midstream, LLC
811 Louisiana Street
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Houston, TX 77002

GLOSSARY OF ACRONYMS UTILIZED IN THE H_2S CONTINGENCY PLAN

ACGIH	American Conference of Governmental Industrial Hygienists
AGI	Acid Gas Injection
ANSI	American National Standards Institute
API	American Petroleum Institute
CO_2	Carbon Dioxide
DCS	Distributed Control System
DOT	Department of Transportation
ERO	Emergency Response Officer
ESD	Emergency Shutdown
H_2S	Hydrogen Sulfide
IC	Incident Commander
ICS	Incident Command System
ICC	Incident Command Center
IDLH	Immediately Dangerous to Life or Health
LEL	Lower Explosive Limit
LEPC	Local Emergency Planning Committee
MSDS	Materials Safety Data Sheets
NACE	National Association of Corrosion Engineers
NCP	National Contingency Plan
NIIMS	National Interagency Incident Management System
NIOSH	National Institute of Occupational Safety and Health
NGL	Natural Gas Liquid
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMOCC	New Mexico Oil Conservation Commission
OCD	Oil Conservation Division
OSHA	Occupational Safety and Health Administration
PLC	Programmable Logic Controller
PPE	Personal Protective Equipment
PPM	Parts Per Million
ROE	Radius of Exposure
SCBA	Self-Contained Breathing Apparatus
SERC	State Emergency Response Commission
SO2	Sulfur Dioxide
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average

1.0 Introduction

[NMAC 19.15.11 ET SEQ.] [API RP-55 7.1, RP-49,RP-68]

This project is an expansion of the existing 50 MMSCFD Amine Treating Facility, previously operated by Salt Creek Midstream. Northwind Midstream will construct a 150 MMSCFD Amine Treating Facility Plant equipped with an acid-gas injection well for the disposal of treated acid gas. The Titan Gathering System encompasses three Compressor Stations (hereafter the "Booster Stations" or "Stations") and a sour gas treatment facility with a permitted Right-of-Way (ROW) that transports sour natural gas from gathering systems to the Titan Treatment Plant (the "Plant"). The pipeline will range between six to twenty inches in diameter and spans over 100 miles throughout Lea County, New Mexico.

The sour natural gas will be sweetened within the Titan Treatment Plant and the associated waste gases (H_2S and CO_2) will be permanently sequestered in deep geologic reservoirs via the acid-gas injection (AGI) wells. The natural gas being transported by the Titan Gathering System contains hydrogen sulfide (H_2S) therefore, this H_2S Contingency Plan (the "Plan") is being submitted to document procedures that are to be followed in the event of an unintended release of H_2S that occurs anywhere at the Plant, AGI processing area where the injection wells are, or will be located, or at the wells themselves. A separate H_2S Contingency Plan has been developed that covers the gathering system and compressor stations.

The Hydrogen Sulfide Contingency Plan fully complies with New Mexico Oil Conservation Division (NMOCD) Rule 11(§19.15.11 et. seq. NMAC). The plan and operation of the Titan Gas Treatment Plant conform to standards set forth in API RP-55 *"Recommended Practice for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide"* as well as applicable NACE standards for sour gas service and current best industry practices.

Safety precautions in the event of a release may include placement of roadblocks, designated evacuation routes, or shelter-in-place instructions. When the term "shelter-in-place" is used in this Plan, it indicates that individuals should go inside homes, businesses, and turn off heating and air-conditioning systems, close windows and doors, seal the frames, and wait for further instruction from the Incident Commander.

2.0 Scope

[API RP-55 7.2]

The terms used in this plan are used as defined in Title 19, Chapter 15, Part 11 of the New Mexico Administrative Code (19.15.11.7 NMAC), unless otherwise defined herein. The term "Pipeline" as used in this plan may refer to all parts of those physical facilities through which gas moves during transportation, including pipe, valves, and other appurtenances attached to pipe compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies, including the Compressor Stations. The term Right-of-Way (ROW) as used in this plan means an area three feet wide on either side of the Pipeline for a total ROW width of six feet with the pipeline at its center.

The Titan Gathering System is being constructed in accordance with and fully meets the requirements of NACE MR0175 and API 5L, Annex H. The pipeline has been designed such that installation includes burial of the line to a minimum of three (3) feet below the ground surface and operation of the pipeline is to be conducted in a manner to protect the public from exposure to its contents, including H_2S.

Additionally, the Pipeline Contingency Plan developed is fully compliant with New Mexico Oil Conservation Division (OCD) Rule 11 (§ 19.15.11 NMAC) and the Plan and operation of the pipeline conform to standards set forth in API-55 "Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide", as well as API RP 1162 "Public Awareness Programs for Pipeline Operators". At no location along the Pipeline are there any storage tanks in which H_2S or other gas or gas products are stored, and thus, API regulations and OCD regulations (specifically 19.15.11.12.E NMAC) relative to those types of storage facilities are not applicable for this Plan.

This Plan is specific to the Pipeline and the Compression Stations. It contains procedures to provide an organized response to an unplanned release of H_2S from the Pipeline and/or the Flight, Siege, or Pelican Booster Stations and documents procedures that would be followed to alert and protect any members of the public, residents in surrounding areas, and/or contractors working on or within the ROW of the Pipeline in the event of an unplanned release. Although the Pipeline transports natural gas and natural gas liquids to the Titan Gas Treatment Plant, this Plan does not include the Plant or the associated acid

gas injection well(s). Those facilities have their own distinct H_2S plan which has been previously submitted to NMOCD.

This Plan has been prepared to minimize the hazard resulting from an H_2S release at any location along the Pipeline. It will be used to inform company personnel, local emergency responders, and the public of actions to be taken before, during, and after an H_2S release. All operations shall be performed with safety as the primary goal. The primary objective of Northwind, should an H_2S release occur, is to protect the public, contractors, and Northwind company employees; the secondary objective is to minimize the damage to Northwind property and other adverse effects of the emergency. In the event of a release, any part of the Pipeline operation that might compromise the safety of potentially affected parties will cease until the operation can be re-evaluated and the proper engineering controls instituted to assure safety of all concerned.

⚠	**WARNING:** No individual should place the protection of the Plant property above his or her own personal safety.

In a serious situation involving an H_2S release not only Northwind personnel are involved, but local Fire Departments, Law Enforcement, City, County, and even State of New Mexico agencies may be interested parties. Cooperation will expedite all decisions. In any emergency involving a H_2S release, delegation of duties will be made to appropriate employees and groups. These duties and procedures are to be reviewed on an annual basis to ensure complete understanding and facilitate a well-coordinated response by all involved personnel to the emergency situation.

2.1 Compressor Station and Pipeline Hazard Summary

Several potential hazards are associated with the Northwind pipeline and compressor stations are addressed by Northwind. The hazards associated with operating the facilities include fire, related to the flammable material being transported, explosion from compression, and exposure to toxic materials such as sour gas or acid gas. With such hazards present, Northwind has developed procedures necessary during an emergency, descriptions of toxic chemical characteristics, potentially impacted areas, and training drills to inform personnel and the public of such hazards.

3.0 Plan Availability

[API RP-55 7.3]

The H_2S Plan shall be available to all personnel responsible for implementation, regardless of their normal location assignment. A copy of the Plan will be maintained at the Titan Treating Plant Facility Control Room, in the Plant Manager's office at the plant, and on the Northwind corporate intranet website. See Appendix F for the complete H_2S Plan Distribution List, which lists all the additional entities and agencies that will be provided with a copy of the approved H_2S Plan.

4.0 Emergency Procedures

[NMAC 19.15.11.9.B(2)(A)], [API RP-55 7.4A]

4.1 Responsibility and Duties of Personnel During an Emergency

It is the responsibility of all on-site personnel to follow the safety and emergency procedures outlined within this H_2S Contingency Plan, as well as any facility-specific safety plans retained by Northwind. Northwind uses the Incident Command System (ICS) for emergency response (see Figure 11 for a diagram of the command structure and Figure 12 for detailed information). The ICS structure used is based on the National Interagency Incident Management System (NIIMS) and is consistent with the National Contingency Plan (NCP). All Northwind employees, on-site, along the pipeline ROW, at the Compressor Stations, or at the Titan Treating Plant, shall be prepared to respond to an H_2S emergency as part of the Operations Response Team (ORT).

All on-site employees must be H_2S certified, and that certification must be renewed on an annual basis. In the event that an unplanned release is detected, the first person to discover the problem or his designee, by default, will be the on-scene Incident Commander (IC in this Plan) until the responsibility is transferred to appropriate facility personnel. This responsibility should be formally transferred to the Plant Manager as soon as practical. All personnel will be evacuated out of the affected area, and the IC

will contact and coordinate with Northwind management if an H_2S emergency occurs. Northwind personnel will immediately respond to the emergency, as detailed in Appendices B and C of this plan, and the IC will contact and coordinate with Northwind's management team.

The Plant Manager/IC or designee shall determine the need for, and implement as necessary:

1. Total Facility Shutdowns
2. Isolation of pipelines or pipeline segments
3. Repairs, tests, or restarts as required

If an emergency occurs, the Plant Manager or their designee shall be notified first, and that individual will notify the Chief Operating Officer who will activate the Corporate Emergency Response Plan. If any person in this chain of command is unavailable, the individual making the call will elevate the communication to the next level. The intention of this process is to allow the IC to make one phone call and then be able to focus on the incident response.

4.1.1 *Site Security*

[NMAC 19.15.11.12.b]

In order to have an accurate listing of all personnel on-site in the event of an emergency, a daily sign-in log sheet will be utilized. The sign-in log sheet will include, at a minimum, the name of the individual entering the plant, the company name, time of arrival, and time of departure. All personnel are required to sign in at the facility office. In compliance with 19.15.11.12.B NMAC, unattended facilities are contained within a secure fenced area with locking gates.

4.1.2 *Discovery and Internal Reporting*

All personnel, including contractors who perform operations, maintenance and/or repair work on the Booster Stations or Pipeline must wear personal H_2S monitoring devices to assist them in detecting the presence of H_2S. Fixed H_2S monitors are also located within each Booster Station and along the pipeline system around various process units and custody transfer locations. Both personal and fixed monitoring devices will alarm (audible) at 10 ppm.

Personnel discovering a leak or emissions release should first attempt to resolve the issue if they are safely able to do so and H2S levels remain below 10 ppm. If the person discovering the leak is not trained and/or authorized to perform mitigative actions, or the response required to resolve the issue calls for invasive actions (i.e., more than valve manipulation, pug installation, etc.) the individual shall notify the Control Room Operator. The Operator will contact the Plant Manager or his designee so that the person can activate the H2S Contingency Plan, if necessary. The Control Room Operator will also initiate and maintain a Chronologic Record of Events Log (see Appendix G) which records the time, date, and summary of events.

The record will include, at a minimum, the following information:

- Name, telephone number, and location of person reporting the situation
- Type and severity of the emergency
- Location of the emergency and distance to surrounding equipment and/or structures
- The cause of the spill or leak, name, and quantity of material released, and extent of the affected area including the degree of environmental hazard
- Description of injuries (if any) and report of damage to property and structures

If any person detects H_2S levels of 10 ppm or greater, either as a result of an alarm from their personal monitoring device or one of the facility's fixed monitors, they must immediately report this to the Control Room Operator who will contact the Plant Manager for assistance.

If the alarm persists, the responding Operator will don a 30-minute Self Contained Breathing Apparatus (SCBA) and notify the Plant Manager or his designee so that the H_2S Contingency Plan can be activated, if necessary. Additionally, all non-essential persons shall be notified of the release and evacuated from the area. The responding Operator, wearing the SCBA, will first help any persons requiring assistance during the evacuation prior to attempting to resolve the issue.

Once the Plant Manager/IC is contacted, they or their designee must contact the appropriate Northwind management and Titan Gathering System emergency response personnel (Figure 12 and Appendix D) and notify them of the existing situation. Local emergency response providers will also be contacted as

deemed necessary by the IC. As necessary, the Control Room Operator will then conduct the notifications of federal and state regulatory agencies including the BLM Field Office in Carlsbad (if applicable), the NMOCD District Office in Hobbs, and emergency response agencies listed in Appendix D. Northwind personnel will instruct any contractor and all others attempting to enter the vicinity of the area that the H_2S Contingency Plan has been activated and that they must follow the direction of the IC

4.2 Immediate Action Plan

Immediate Action Plans outlining procedures and decision processes to be used in the event of an H_2S release are contained in Appendix B. These procedures and decision processes have been designed 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.

Emergency response actions may be taken for a variety of situations that may occur. The Plan is activated in progressive levels (Level 1, Level 2 and Level 3), based on the concentration and duration of the H_2S release. Response Flow Diagrams illustrating these Immediate Action Plans are contained in Appendix C.

	ATTENTION: Northwind on-site personnel or Control Room Operators are authorized to elevate the level of response, based upon observed conditions, if they feel a lower-level response may not be effective in protecting personnel, the public, or the environment.

Additional or long-term response actions will be determined on a case-by-case basis once the Incident Command Center (ICC) and System (ICS) are established following the immediate response.

4.3 Telephone Numbers, Communication Methods, and Media Site

4.3.1 *Telephone Numbers and Communication Methods*

In the event of activation of the Plan at Level 3, emergency responders, public agencies, local government, and other appropriate public authorities must be contacted. Public awareness and communication are a primary function of this Plan. As such, Northwind has compiled a list of various public, private, federal, state, and local contacts (Appendix D) that are to be notified at various phases during the activation of the Plan. The Level 1, Level 2, and Level 3 *Immediate Action Plans* and the *Response Flow Diagrams*, contained in Appendices B and C, indicate when certain entities are to be contacted in the event of activation of this Plan. Northwind will contact, by telephone, all potentially affected parties as well as state and local response organizations if the H_2S Plan is activated. All entities contacted will be advised of the following:

- The nature, location, and extent of the release/emergency at the Booster Station or Pipeline and recommendations for protective actions, such as evacuation or shelter-in-place orders
- Any other event-specific information that is necessary to protect the public
- Updated 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

In the event of activation of the Plan, in addition to notifying individuals, businesses, and operators (listed in Appendix D), Northwind on-site personnel, as designated by the IC, will make a visual inspection of the potentially impacted area to ensure that no individuals are seen inside. If any are observed, they will be advised to immediately evacuate to a designated Emergency Evacuation Area.

4.3.2 *Media Site*

During all Level 2 and Level 3 events, a media site will be established adjacent to relevant assembly areas. The IC will designate a Media Site adjacent to each Emergency Assembly Area, which may be relocated should ambient environmental conditions become unsuitable. The IC will also designate an individual to assume the duties of Media Liaison Officer. Under no circumstances will media personnel be allowed inside the warm or hot zone (road blocked area). Media personnel will only be allowed inside the road blocked area once the area has been monitored and restored to a cold zone (i.e., less than 10 ppm H_2S) and the IC has approved their entry. Under no circumstances will media personnel be allowed to enter into any Compressor Station property or damaged Pipeline vicinity without the approval of the Northwind Plant Manager or his designee and shall be escorted by Northwind personnel at all times

4.4 Location of Nearby Residences, Medical Facilities, Roads, Businesses, Public Receptors, and Producers

4.4.1 *Residencies and Medical Facilities*

There are four residential properties and no medical facilities within the 100-ppm radius of exposure of the Pipeline and Compressor Stations. Upon activation of the Plan (see Appendix B for activation levels), the IC, or designee, shall notify all individuals within the 100-ppm ROE of the nature of the release and status of containment. Depending on the nature of the release and the prevailing wind conditions, individuals will be instructed to shelter in place or evacuate. Contact information for nearby residences can be found in Appendix D.

4.4.2 *Roads*

The Titan Gathering System occupies predominantly rural areas of Lea County, New Mexico in areas containing multiple oil and gas lease roads, well locations, and oil and gas facilities. There are, however, four (4) major public roads that the pipeline system crosses or that fall within the ROE of the pipeline and/or compressor stations. These include the NM State Highway 128, Delaware Basin Road (State Road 21), NM-176, and Frying Pan Road (County Road J-3). In the event of activation of this Plan, on-site Northwind personnel will be dispatched to establish roadblocks on applicable roads to prevent entrance into either the 500- or 100-ppm ROE (1.31 and 2.86 miles, respectively), as determined for the location of the point of release, depending on the response level and as designated by the IC (Figure 11). The Siege Compressor Station will have roadblocks and hydrogen sulfide warning signs on Delaware Basin Road outside of the 500-ppm ROE and County Road 11 (Teague Switch Rd) outside the 100-ppm radius. The Pelican Compressor Station will have a roadblock for the 500-ppm ROE on NM-128 and County Road 2 for the 100-ppm ROE. The Flight Compressor Station will have roadblocks for both the 500-ppm and 100-ppm ROEs on County Road 32.

Roadblocks will be established, if necessary, regardless of wind direction in anticipation that variations in wind conditions can occur. There are emergency trailers or equivalent vehicles, equipped with flashing lights, windsocks, and roadblock signs for use in alerting the public of hazardous conditions on the road. Signs, warning of the potential presence of H_2S, will be installed where the 100-ppm ROEs of the Pipeline and Compressor Stations intersect the above referenced roads. (See Figures 6, 8, 10 for the location of these signs; Figure 13 depicts a sample photograph of one of these signs).

4.4.3 *Businesses or Other Public Receptors*

In addition to what is stated above, there are ten (10) businesses within the 100-ppm ROE of the Pipeline or Booster Stations. These include Pitchfork Land & Cattle Co., Merchant Livestock Co. (two locations within ROE), Beckham Ranch Inc., Dinwiddie Cattle Co., C&O's Burritos, Lucid Energy, Tap Rock Resources, DCP Midstream, and Pinon Midstream. The Jal Cooper Cemetery is another public receptor located within the 100-ppm ROE, and current contact information is located within Appendix D.

The Westfield Facility and associated water wells, operated by the City of Jal, are also located within the 100-ppm ROE and are frequently occupied by city employees or contractors. The facility is a booster station which sends water, via pipeline, to the City of Jal. Depending on the nature of the release, available shelter, and the prevailing wind conditions, individuals will be instructed to shelter in place or evacuate. Contact information for the identified businesses and the City of Jal Westfield Facility is located in Appendix D. Aside from what is described above, there are no additional areas in which it may be reasonable for members of the public to be present (referred to as "public areas" or "public receptors").

4.4.4 *Producers*

There are one hundred (100) producers of active wells within the 100-ppm ROE for the Pipeline and Compressor Stations. Contact information and approximate locations for all nearby active producers is within Appendix D.

4.5 Public, State, and Local Authority Awareness and Communication

As protecting the public is a key objective in executing this plan, details of the plan are shared with state and local officials as well as with individuals who may be present in public areas, including businesses, within the ROE of the Compressor Station and Pipeline. A full list of entities with whom

information is given can be found in Appendix F. By collaborating with such entities, questions and concerns are addressed and used to update the plan. Every effort is also made to ensure that contact information for all entities is correct and up to date, to achieve effective communication with all parties in the event of an unplanned release that requires a Plan activation.

4.6 Evacuation Routes, Emergency Assembly Areas, and Roadblock Locations

4.6.1 *Evacuation Routes and Emergency Assembly Areas*

Figure 2 shows the Booster Station design schematic intended for all associated stations, which illustrates the locations of emergency notification equipment. Pre-determined evacuation routes and emergency assembly areas exist for the Compressor Stations and are shown in Figure 3.

Evacuation and assembly areas for a release along the Pipeline system will be dependent upon the location of the release and will be determined at the time of the incident by the IC.

	ATTENTION: Notification of evacuation for all visitors and non-essential personnel shall begin with the 10 ppm H_2S control room alarm notification and activation of amber beacons (see Appendix B).

The responding Northwind personnel are to put on the 30-minute SCBA and first determine if any personnel are in distress and assist any such personnel to evacuate to the designated Emergency Assembly Area. Emergency services (911) will be contacted if there are injuries or as otherwise deemed necessary. Responding operators, wearing the SCBAs, will then investigate the cause of the release. At the sound of the alarm and activation of amber beacons, all personnel at the Booster Station, or along the Pipeline ROW are to stop work, check the prevailing wind direction (using visible windsocks) and immediately proceed along designated evacuation routes and/or upwind to the IC-determined Emergency Assembly Areas and await instruction from the IC. Prevailing winds for the area are from the south-southwest. Personnel should evacuate along the designated route unless that route is downwind of the release, based on the wind directions observed at the windsocks at the compressor station, which will be visible from any point on the facility property. In that event, all evacuees should proceed along a route that is perpendicular to the release and then upwind to the designated Emergency Assembly Area. Depending on the location of the leak, nearby individuals within the ROE may be advised to shelter-in-place, close windows and doors and turn off air conditioning and stay inside until further notice.

Roll call shall be conducted at the Emergency Assembly Area to ensure all personnel (including contractors and visitors) are accounted for and have evacuated safely. At each Emergency Assembly Area, the ambient air quality will be monitored for H_2S concentration to ensure the area remains at less than 10 ppm. If the H_2S concentration rises to 10 ppm or greater, the assembly area will be relocated as instructed by the IC (see Appendix B).

4.6.2 *Roadblock Locations*

Pre-planned roadblock locations, which could be utilized in the event of a Level 2 or 3 response when the release occurs within 1.31 miles (500 ppm ROE radius) or 2.86 miles (100 ppm ROE radius), respectively, of a road, are shown on the ROE maps for each of the booster stations (Figures 6, 8, 10).

Each location will have portable road barriers, flashing lights, and warning signs. The IC will designate representatives to staff each of the roadblocks. If deemed necessary by the IC, the State or Local Police will be asked to assist with maintaining the roadblocks and directing traffic through alternate routes outside of the ROE, however, Northwind will assume full responsibility to maintain these roadblocks in the event local emergency response personnel area unable to provide support.

4.7 Monitoring Equipment, Emergency Shutdown Systems, Alarm Systems, Safety Equipment, and Supplies

4.7.1 *Monitoring Equipment*

Pipeline valves are configured with high/low pressure alarms and will be monitored 24-hours/day, 7-days/week via a Supervisory Control and Data Acquisition industrial control system (SCADA) at the Titan Facility. The valves have a low-pressure alarm set at 750 psi and a high-pressure alarm set at 1200 psi. Operation of the pipeline within the ranges of the alarm is considered to be normal operation. The valves

are also automated with an Emergency Shutdown (ESD) that can be controlled at the Titan Plant Control Rooms or activated in the field when the alarm indicates a high/low level situation.

The SCADA system is designed to monitor specific operating metrics along the pipeline route such as pump pressures, pipeline volume pressures and other specific data relative to pipeline operations. The system is dependent both on human intervention and telemetry. The SCADA system is a highly integrated system developed to maintain proficient pipeline operations and to assist in the control of transmission activities along the pipeline.

4.7.2 *Emergency Shut Down Systems*

[NMAC 19.15.11.12.D(1)]

In the event of a discrepancy in volumes or pressures within the pipeline, Northwind Midstream Operators will immediately initiate an internal response to identify the nature and location of the discrepancy. This response includes, but is not limited to, meter verifications, pipeline surveys (foot, vehicle, or aerial), and pipeline shutdown. If necessary, based upon Northwind's best professional judgment, the pipeline can be isolated at valves located along the pipeline, at the Titan Facility, and at any of the three Compressor Stations (see Figure 4). The Titan Facility also has an ESD valve to isolate incoming and out-going gas and product streams. This system can be automatically or manually initiated, depending on pipeline operating conditions. The Compressor Stations and Pipeline have ESD systems designed to isolate pipeline segments to contain hydrocarbon and H_2S releases. This system is automatically and/or manually initiated from the Plant Control Room depending on process conditions. The ESD system is designed to prevent a Level 3 response. Locations of ESD stations are shown in Figure 2.

Additional Safeguards:

- Compressors have high and low-pressure shutdowns. This information is transmitted to the Titan Facility Control Room via SCADA and to Field Operators. There are fixed H_2S monitors/alarms that provide information to the DCS which can initiate an automatic shutdown along the pipeline and/or associated compressor stations. Additionally, the booster stations area equipped with flares to handle emergencies (see Figure 2 or Figure 3).
- Fire extinguishers and respiratory equipment are available at each location
- All compressor stations are fenced and gated.
- If a leak that requires the line to be shut in and depressurized is detected on the pipeline, the pipeline contents will be routed to emergency flares so repairs can be made safely. Figure 2 and Figure 3 show the location of compressor stations and emergency flares.
- The pipeline has high/low pressure monitoring. The lines are monitored 24-hours a day by the Northwind DCS through SCADA.
- The majority of Titan Gathering System pipeline segments have 0.500-inch wall thickness, and segments crossing roads have a 0.625-inch wall thickness, built to NACE MRO-175 and API 5L, Annex H standards. In addition to the increased wall thickness, the pipeline used in the road crossings will be coated to increase resistance to scratch and abrasion damage during the installation process.
- Along the pipeline ROW, the pipe is buried a minimum of 3 feet in depth to aid in preventing accidental excavation incidents. The pipe is at least 3 feet deeper than the lowest point of any road crossing.
- Corrosion protection may be utilized to ensure the integrity of the pipeline, if necessary. Corrosion protection chemicals would be injected into the pipeline and monitored for effectiveness with corrosion coupons.

	**ATTENTION:** The gathering system ESD can be activated at any time by the Northwind Operators and is to be activated if efforts to control a release have failed, or if a catastrophic release has occurred.

4.8 Alarms, Visible Beacons, and Wind Indicators

Colored beacons, horns, wind direction indicators, and ESD stations are installed in various locations throughout the Titan Gathering System facilities and are shown in Figure 2 and Figure 3. At 10 ppm

H_2S, all amber beacons within the Plant are illuminated and an audible alarm is initiated within the Control Room notifying the Control Room Operator. The facility-wide audible signal indicating an escalated H_2S emergency response within the plant are 4-second pulsating tones that sound at 20 ppm H_2S. Amber beacons remain illuminated throughout the Plant. The pulsating audible alarm will switch to a continuous tone (horn) when a concentration of 90 ppm H2S or higher is detected, and full evacuation of the Plant will be initiated. As per NMAC 19.15.11.12.C, wind direction indicators which are visible night and day are installed at all Northwind facilities as shown in Figure 3. At least one wind direction indicator can be seen from any location on the subject Northwind Facilities, as well as from any point on the perimeter.

4.9 Signs and Markers

The Pipeline and Booster Stations have readily readable warning, caution, and notice signs which conform to the current ANSI standard Z535.1-2002 (Safety Color Code). These signs contain language warnings about the presence of H_2S/Poisonous Gas and high-pressure gas; they are posted at the Booster Station entrances and around the perimeter. The signs are of sufficient size to be readable at a distance of 50 feet and contain the words "Caution Poison Gas". Emergency response phone numbers are also posted at the Entrance to the Booster Stations. Northwind does not have the authority to require individual operators who send gas to the Booster Station for transportation to the Titan Treatment Facility to conform to OCD and/or Department of Transportation (DOT) regulations relative to placement of warning signs at individual wells or on gathering lines. It is the responsibility of these individual operators to conform to appropriate regulations and to certify compliance with those regulations to those regulating agencies, as required. Signs warning of the potential presence of H_2S will be installed where the 100-ppm ROE of the Pipeline and Booster Stations intersect public roads. (See Figures 6, 8, 10 for the location of these signs; and see Figure 13 for a sample photograph of one of these signs). Line markers indicating the presence of the Pipeline will be placed, at minimum, every 250 feet and at road crossings.

4.10 Emergency Equipment

4.10.1 *Emergency Trailers*

Emergency trailers or equivalent emergency vehicles, equipped with flashing lights and windsocks will be utilized at public road locations to establish roadblocks (as shown in Figures 6, 8, 10) to alert the public in the event of hazardous conditions. While local authorities will be notified of any Level 3 plan activation requiring roadblocks, it is the responsibility of the Northwind Midstream response team to maintain and deploy the Emergency Trailers.

4.10.2 *First Aid Equipment*

First aid equipment is located within all Booster Stations (see Figure 3), the Titan Treatment Facility control room, company vehicles, and within the emergency trailers. An emergency eye wash stations are also present at all facilities. Eye-wash bottles may be transported from the Plant or external control room to the location of the emergency.

4.11 Gap Detection Equipment

4.11.1 *Fixed Monitors*

The Flight, Pelican, and Siege Booster Stations have numerous fixed-point hydrogen sulfide detectors strategically placed throughout the Plant to detect possible leaks. The sensors are connected to the Control Room alarm panel's Programmable Logic Controllers (PLCs), and then to the Distributed Control System (DCS). Upon local detection of hydrogen sulfide at 10 ppm at any detector, visible amber beacons are activated, and an alarm (control room and/or Plant-wide) is sounded. Upon detection of hydrogen sulfide at 90 ppm at any detector, an evacuation alarm is sounded throughout the Plant at which time all personnel will proceed immediately to a designated evacuation area. The amber beacon is activated at 10 ppm. The facility-wide audible alarms (including AGI Well horns, as applicable) are activated with repeating 4 second horn at 20 ppm and a continuous horn at 90 ppm.

The Plant will monitor the inlet gas stream concentrations at the Flight, Siege, and Pelican compressor stations via H_2S analyzers. The AGI system monitors can also be viewed on the PLC displays located at

the Plant and the locations of ambient H_2S sensors are shown on the plot plan (Figure 2). Immediate action is required for any alarm occurrence or malfunction. All H_2S sensors are to be calibrated monthly.

4.11.2 *Personal and Handheld H_2S Monitors*

All personnel working at the Plant wear required personal H_2S monitors, which alarm and vibrate when concentrations of 10 ppm H_2S are detected. Handheld gas detection monitors are available so that personnel can check specific areas and equipment prior to initiating maintenance or other work. The handheld gas detectors, at minimum, have sensors for oxygen, LEL (explosive hydrocarbon atmospheres), H_2S, and carbon dioxide (CO_2).

4.12 Respirators

The on-site control building (denoted on Figure 2 & 3 as 'office') at any one of the three Booster Stations has a portable 30-minute SCBA, and the Titan Facility has portable 30-minute SCBAs that can be transported as required in response to a Booster Station or Pipeline emergency. Cascade hose reel systems are available for transport from the Titan Plant in the event of a need for long-term compressed air supply during pipeline repairs. All Plant personnel are trained and fit tested annually for use of the SCBA respirators.

4.13 Process Purge System

All vessels, pumps, compression equipment, and piping in the sour gas transportation process are designed and equipped to allow purging to decrease the pressure of the equipment prior to conducting maintenance or inspection work. The purged gas stream is routed safely into the gas flares located at the Titan Facility or Booster Stations. All flares are equipped with auto-ignition fuel assist devices in compliance with 19.15.11.11(D) NMAC. See Figure 2 and Figure 3 for location of flares at the Compressor Stations. Operating procedures include purging of all equipment to avoid sour gas exposure to personnel and to prevent sour gas from escaping to the environment.

4.14 Fire Fighting Equipment

Field personnel are trained only for insipient stage firefighting. Fire extinguishers, typically 20# dry chemical, are installed at the Flight, Siege, and Pelican compressor stations, and are mounted within each company vehicle. Extinguishers may be transported from the Titan Facility or compressor stations if needed along the gathering system.

5.0 Characteristics of Hydrogen Sulfide, Sulfur Dioxide, Carbon Dioxide

[NMAC 19.15.11.9.B(2)(b)]

5.1 Hydrogen Sulfide (H_2S)

The projected gas streams in the Pipeline contain approximately 15,000 ppm (or 1.5 mole percent) of H_2S based on data generated from the modeling of the combined gas gathering streams. H_2S is a colorless, toxic, and flammable gas with the odor of rotten eggs. It is heavier than air and presents a significant health hazard by paralyzing the respiratory system resulting in serious injury or death.

Table 1: Hydrogen Sulfide Properties and Characteristics

Hydrogen Sulfide Properties and Characteristics	
CAS No.	7783-06-4
Molecular Formula	H_2S
Molecular Weight	34.082 g/mol
Ceiling Concentration	20 ppm (OSHA)
Ceiling Peak Concentration	50 ppm (OSHA)
Threshold Limit Value (TLV)	15 ppm (ACGIH)
Time Weighted Average (TWA)	10 ppm (NIOSH)
Short Term Exposure Level (STEL)	15 ppm (ACGIH)
Immediately Dangerous to Life or Health (IDLH)	100 ppm
Specific Gravity Relative to Air (Air=1.0)	1.189
Boiling Point	-76.5F
Freezing Point	-121.8F
Vapor Pressure	396 psia
Auto-ignition Temperature	518F
Lower Flammability Limit	4.3%
Upper Flammability Limit	46.0%
Stability	Stable
pH in water	3
Corrosivity	Reacts with metals, plastics, tissues, and nerves

Physical Effects of Hydrogen Sulfide		
Concentration		**Physical Effects**
ppm	**%**	
1	0.00010	Can be smelled (rotten egg odor)
10	0.0010	Obvious & unpleasant odor; Permissible exposure level; safe for 8-hour exposure
20	0.0020	Acceptable ceiling concentration
15	.005	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 and 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
1000	0.1000	Instant unconsciousness; followed by death within minutes

5.2 Sulfur Dioxide (SO_2)

SO_2 is a by-product of H_2S combustion. The waste gas stream consisting of H_2S and CO_2 is routed to the plant acid gas flare during abnormal conditions when the acid gas injection equipment is out of service. Waste gas is also routed to the acid gas flare during maintenance operations that require equipment to be blown down.

Sulfur Dioxide is colorless, transparent, and non-flammable gas with a pungent odor associated with burning sulfur. SO_2 is heavier than air but can be picked up by a breeze and carried downwind at elevated temperatures. It can be extremely irritating to the eyes and mucous membranes of the upper respiratory tract.

Table 2: Hydrogen Sulfide Properties and Characteristics

Sulfur Dioxide Properties & Characteristics	
CAS No.	7446-09-5
Molecular Formula	SO2
Molecular Weight	64.07 g/mol
Permissible Exposure Limit (PEL)	5 ppm (OSHA)
Time Weighted Average (TWA)	2 ppm (ACGIH)
Short Term Exposure Level (STEL)	5 ppm (ACGIH)
Immediately Dangerous to Life and Health (IDLH)	100 ppm
Specific Gravity Relative to Air (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 (ppm)	**Physical Effects**
1	Pungent odor, may cause respiratory changes
2	Permissible exposure limit; Safe for an 8-hour exposure
3-5	Pungent odor; normally a person can detect SO_2 in this range
5	Short Term Exposure Limit (STEL); Safe for 15 minutes of exposure
12	Throat irritation, coughing, chest constriction, eyes tear and burn
100	Immediately Dangerous to Life & Health (IDLH)
150	Severely irritating; May only be endured for a few minutes
500	Causes a sense of suffocation, even with first breath
1,000	Death may result unless rescued promptly

5.3 Carbon Dioxide (CO_2)

The CO2 concentration in the pipeline is projected to be 85,000 ppm (8.5%). Carbon dioxide is a colorless, odorless, and non-flammable gas that is heavier than air. At concentrations above 10% CO2 can cause asphyxiation with prolonged exposure.

Table 3: Hydrogen Sulfide Properties and Characteristics

Carbon Dioxide Properties & Characteristics	
CAS No.	124-38-9
Molecular Formula	CO_2
Molecular Weight	44.010 g/mol
Time Weighted Average (TWA)	5,000 ppm
Short Term Exposure Level (STEL)	30,000 ppm
Immediately Dangerous to Life and Health (IDLH)	40,000 ppm
Specific Gravity Relative to Air (Air = 1.0)	1.5197
Boiling Point	-109.12°F
Freezing Point	-109.12°F
Vapor Pressure	830 psia
Auto-ignition Temperature	N/A
Lower Flammability Limit	N/A
Upper Flammability Limit	N/A
Stability	Stable
Corrosivity	Dry gas is relatively inert & non-corrosive; can be corrosive to mild steels in aqueous solutions

Physical Effects of Carbon Dioxide	
Concentration (%)	**Physical Effects**
1.0	Breathing rate increases slightly
2.0	Breathing rate increases to 50% above normal level. Prolonged exposure can cause headache, tiredness
3.0	Breathing rate increases to twice normal rate and becomes labored. Weak narcotic effect. Impaired hearing, headache, increased blood pressure and pulse rate
4.0 - 5.0	Breathing increases to approximately four times normal rate, symptoms of intoxication become evident, and slight choking may be felt
5.0 – 10.0	Characteristic sharp odor noticeable. Very labored breathing, headache, visual impairment, and ringing in the ears. Judgement may be impaired, followed within minutes by loss of consciousness
10.0 -100.0	Unconsciousness occurs more rapidly above 10% level. Prolonged exposure to high concentrations may eventually result in death from asphyxiation

6.0 Radii of Exposure

[NMAC 19.15.11.7.K]

6.1 Worst Case Scenarios

See Appendix E for actual ROE calculations. The basis for worst case scenario calculations are as follows:

- The worst-case ROE for this Plan has been calculated utilizing the expected sour gas flow rates (24-hour rate) and composition expected from the Booster Stations, which is 200 MMSCFD. The ROE Calculation in this Plan utilizes the Booster Station/Pipeline flow rate and an H_2S concentration of 1.5 mole percent. The calculated ROE for the gas is shown within Appendix E.
- The worst-case scenario ROE assumes an uncontrolled instantaneous release of a 24-hour volume of gas at the Booster Station or anywhere along the Pipeline. Because the facility operates as a throughput process, it is impossible that the entire 24-hour throughput volume of the system could be released instantaneously as is assumed in the worst-case scenario calculations of the ROE. Furthermore, the Booster Station or Pipeline ESD systems would be activated in the event of a catastrophic emergency and would prevent the flow of gas through the Pipeline, isolate segments and equipment, and route the acid-gas safely to the injection wells. To comply with NMAC 19.15.11, the worst-case scenario calculations (assuming an instantaneous release of the 24-hour processing and/or TAG volume) are utilized here (see Appendix E for the actual calculations).

The formulas for calculating the radius of exposure (ROE) are as follows:

- **100 ppm ROE Calculation (as per NMAC 19.15.11.7.K.1):**
  $X = [(1.589)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$
- **500 ppm ROE Calculation (as per NMAC 19.15.11.7.K.1):**
  $X = [(0.4546)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$

Where:

X	= Radius of exposure in feet
hydrogen sulfide concentration	= The decimal equivalent of the 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)

ROE for Titan Gas Treatment Plant worst-case-scenario:

100 ppm ROE = 15,199 feet = 2.86 miles
500 ppm ROE = 6,904 = 1.31 miles

The ROE for the Compressor Stations and Pipeline are shown in Figure 4, with details about public receptors in the ROE in Figures 5, 7, 9. This ROE Pattern is designed to include the 100 ppm and 500 ppm radii for a potential worst-case failure at any point in the system.

7.0 Facility Description, Maps, and Drawings

[NMAC 19.15.11.9.B(2)(C)]

7.1 Description of Pipeline Operations and Design

The Titan Gathering System Pipeline is an approximately 126-mile pipeline that will transport natural gas from the Flight (S2, T22S, R34E), Siege (S29, T23S, R35E), and Pelican (S3, T25S, R35E) Compressor Stations to the Titan Treating Facility (S21, T26S, R36E) in Lea County, New Mexico. The pipeline exists entirely within Lea County, New Mexico and will transport natural gas resources containing hydrogen sulfide to be treated at the Titan Facility. The Pipeline is buried at minimum depth 36 inches below grade, and the normal operating pressure is within 900-1,100 psig; the maximum allowable operating pressure (MAOP) is 1,440 psig with a daily volume of approximately 200 MMSCF, of which 1.5% is H_2S.

The high- and low-pressure pipelines vary in size between six to twenty inches and have a standard 0.5- inch wall thickness. The Pipeline is steel and is constructed to be in accordance with NACE MR0175, and API 5L PSL 2 DRL, Annex H design and construction requirements. The metal components of the steel pipe have been selected and manufactured to be resistant to H_2S stress cracking under the operating conditions for which their use is intended. The low-pressure gathering systems (8”, 10”, 12”, 16”) will have a 1/6” corrosion allowance and the high-pressure gathering systems (16”, 20”) will have a 1/10” corrosion allowance. The handling and installation of materials and equipment used are performed in such a manner so as not to induce susceptibility to sulfide stress cracking.

At critical locations along the pipeline path (e.g., road crossings), tubular materials will be coated with fusion-bonded epoxy (FBE) for corrosion prevention. Additionally, the pipe will contain an abrasion resistant overlay (ARO) in places where installation will occur through a boring or horizontal directional drilling (HDD). All valves, flanges, etc. are constructed of those same or equivalent metals, which have been selected and manufactured so as to be resistant to H_2S stress cracking under normal operating conditions.

7.2 Description of Compressor Stations

The three Compressor Stations (Flight, Siege, and Pelican) have been designed and constructed to receive sour natural gas from gathering systems within Lea County, New Mexico. The gathering systems supplying the various stations are from third-party operators. Hydrogen sulfide concentrations at the stations will be the same as those transported through the Pipeline. As such, the radius of exposure calculations for the Compressor Stations are the same as those for the Pipeline.

Operation of the Flight, Siege, and Pelican Compressor Stations will be conducted by Titan Gas Treatment Facility Plant personnel and monitoring systems. The facility will be fully integrated into the Plants monitoring systems and can be automatically or manually isolated in the event of an unplanned release of H_2S, or during the completion of maintenance operations. The Booster Stations respective locations within Lea County, New Mexico are as follows:

- Flight Compressor Station: Section 2, Township 22 South, Range 34 East
  - LAT: 32.425787 (NAD83)
  - LONG: -103.448194 (NAD83)
- Siege Compressor Station: Section 29, Township 23 South, Range 35 East
  - LAT: 32.282264 (NAD83)
  - LONG: -103.383367 (NAD83)
- Pelican Compressor Station: Section 3, Township 25 South, Range 35 East
  - LAT: 32.163385 (NAD83)
  - LONG: -103.362091 (NAD83)

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7.3 Maps and Figures

Figure 1 shows the location of the Compressor Stations and Pipeline. Figures 2 and 3 show detailed compressor station schematics and the evacuation routes for them. Figure 4 depicts the 100- and 500-ppm ROE around the Pipeline. Figures 5 and 6 show the details for the ROE around the Pelican Compressor Station, Figures 7 and 8 show the details for the ROE around the Siege Compressor Station, and Figures 9 and 10 show the detailed ROE for the Flight Compressor Station. Figure 11 is the Incident Command Structure and Figure 12 is the detailed Incident Command Structure. Figure 13 is an example of an H_2S warning sign that will be placed along roadblocks outside of the ROE. Per request of the NMOCD, Northwind will notify all operators that feed the gathering line that they may be subject to additional oversight and H_2S regulation regarding sour gas operations. Through review of Figures 1 and 4, the isolation of the Pipeline and Compressor Station areas of interest from inhabitants and public receptors are evident. While not included as supplemental materials in this document, a review of USGS quadrangle maps of the area shows no additional points of interest or public areas of concern.

8.0 Training and Drills

[NMAC 19.15.11.9.B(2)(D)], [API RP-55 7.4D]

Northwind will conduct annual training for its own personnel as well as for the public and emergency responders as detailed below. Training will include:

- Characteristics of H_2S safety precautions
- An overview of the Booster Stations and Pipeline operations
- A review of their roles in responding to activation of the H_2S Contingency Plan
- Location of the ROE and how to protect the public within the radius of exposure.
- Potential roadblock locations, potential evacuation routes, and how they can assist in implementing the Plan.

8.1 Training of Essential Personnel

Annual training for Northwind personnel shall include plant and pipeline operators, mechanics, instrument and electrical technicians, and maintenance support personnel. Plant Operators will be responsible for initiating and implementing the H_2S Contingency Plan. In addition, all Northwind personnel will receive:

- Annual training on the H_2S Contingency Plan. This training will include a review of all aspects of the Plan and will include, at minimum, one tabletop drill involving activation of the Plan.
- Plant, Compressor Station, and Pipeline Orientation Training: All Northwind personnel, visitors, and contractors must attend an overview orientation prior to obtaining permission to enter the Plant, Compressor Station, or Pipeline ROW.
  - A refresher course on this training is required annually for all people. Included as part of this orientation is how to respond and evacuate safely in the event of an H_2S alarm or release. This training also complies with the requirements of Northwind and its Plant Process Safety Management Program and Procedures Manuals.
- All Northwind field personnel are also trained annually on the Corporate Emergency Response Plan.
- H_2S and SO_2 training: All Northwind personnel must be H_2S certified and must also receive annual refresher training on H_2S and SO_2, which is conducted by accredited Northwind personnel. Individuals must maintain their H_2S certification to work at the Plant, Compressor Station, or Pipeline ROW.
  - If an individual is unable to attend, they may be required to attend a third-party training session from an outside provider. All contract employees are required to have had H_2S training and to provide the Plant with a copy of their certification card prior to obtaining permission to enter the Plant, Compressor Station, or Pipeline ROW.
- Respirators: all Northwind personnel are trained annually on the proper use of respirators. In addition to the annual training, all Northwind personnel are fit-tested annually on the respirators. All Northwind personnel must have medical clearance for respirator use.

- Hazard Communication: all Plant personnel are trained annually on Hazard Communication. The annual training includes, at minimum, the use of material safety data sheets (MSDS) for those materials that are present at the Plant.
- Personal Protective Equipment (PPE): all personnel are trained annually on the Northwind requirements for PPE. The training includes, at minimum, a review of all the types and levels of PPE and how to select the correct equipment for the job.

8.2 On-Site or Classroom Emergency Response Drills

- Northwind will conduct, at least, a tabletop drill annually, and multiple drills during the year may be scheduled at the discretion of the Plant Manager
- The annual drill will execute this Plan and include, at minimum, the Public Officials and Local Emergency Response Agencies listed in Section 8.4 below
- Annual training will also include contacting the interested parties, including all entities that have been identified as being within the 500 ppm and 100 ppm ROE (Appendix E) to ensure contact information for them is current. Appendix D will be verified and updated annually by Northwind to be sure any changes of occupancy, ownership, or new commercial and/or residential buildings are reflected, and all owners/occupants receive training on protective measures
- The drills will also include briefing of public officials on issues such as evacuation or shelter-in-place plans

8.3 Notification and Training of Producers Located Within the ROE

Northwind will provide annual training to the producers listed in Appendix D that includes:

- An overview of Compressor Station and Pipeline operations
- Design and operating safety features of the facilities
- A review of the H_2S alarms and significance
- Notification procedures
- Roadblock locations
- Potential evacuation routes
- Procedures for sheltering in place
- Radii of exposure

8.4 Training of Public Officials and Emergency Response Agencies

All the Emergency Response Agencies listed in Appendix D will have copies of the H_2S Contingency Plan and will receive training from qualified Northwind personnel:

- Jal Emergency Medical Services – Fire, Police, Ambulance
- Jal City Manager
- Hobbs Emergency Medical Services – Fire, Police, Ambulance
- Lea County 911 emergency response
- Lea County Emergency Planning Committee
- Lea County Sheriff's Department
- NMOCD – Hobbs District Office
- NM State Police – Hobbs, NM Office

Training for emergency response agencies will include:

- An overview of the Compressor Station and Pipeline operations
- Design and operating safety features on the facilities
- A review of the H_2S alarms and significance
- Notification procedures
- Roadblock locations
- Potential evacuation routes
- Procedures for sheltering in place
- Radii of exposure

Northwind will also conduct, at minimum, one annual tabletop drill involving the emergency response organizations listed above on the activation of the H_2S Contingency Plan.

8.5 Training Attendance and Documentation

Pursuant to NMAC 19.15.11.9(B)2(D), drills and training pertaining to the Plant, Pipeline, and Compressor Station will be documented by plant personnel, and those records shall be maintained for a minimum of five (5) years at the Plant and will be made available to a NMOCD representative upon request.

The documentation shall include at minimum the following:

- Description of the training or scope of the drill
- Attendees and Participants in the training or drill
- Summary of the activities and/or responses
- Post-drill debriefing and reviews

9.0 Coordination with State Emergency Plans

[NMAC 19.15.11.9.B(2)(E)]

9.1 Notification and Reports

Northwind has various notification and reporting obligations. Some are related to its state air quality permit that is overseen by NMED as well as state and federal spill reporting obligations. In addition to the regulatory obligations noted above, Northwind personnel also have internal and external notification and reporting obligations associated with the activation of this Plan at Level 3, in which a Potentially Hazardous Volume (PHV) is released. Reporting obligations are as follows:

9.1.1 *New Mexico Oil Conservation Division (NMOCD)*

[NMAC 19.15.11.16]

As soon as possible, but no later than four hours after plan activation, (recognizing that a prompt response should supersede notification), OCD will be notified by the IC or the IC's designee via email or fax to the District I Office of the activation of the H_2S Contingency Plan. In the event of a power failure, a phone call will be made within four hours. A full report of the incident to the OCD, utilizing Form C-141 shall be made no later than 15 days following the release, if greater than 20 MSCFD (see Appendix H).

9.1.2 *New Mexico State Police/ New Mexico Hazardous Materials Emergency Response Plan*

The New Mexico State Police will only be notified for a Level 3 plan activation. They have authority to take control of the scene management and coordination of all resources, though limited availability of personnel may inhibit any intervention. Should the State Police assume control, a designated Emergency Response Officer (ERO) will establish the National Interagency Incident Management System (NIIMS) Incident Command System (ICS) as the Incident Commander (IC) and be responsible for management of all response resources on scene. Off-scene coordination of response resources will be handled through designated Headquarters Emergency Response Officers. Law enforcement-related activities will be coordinated by State Police if necessary.

10.0 Plan Activation Levels

[NMAC 19.15.11.9.C], [API RP-55 7.4 D]

10.1 Activation Levels

Northwind commits to implement this Plan in response to the three activation thresholds that are described in the Immediate Action Plan and Response Flow Diagrams in Appendices B and C.

Level 1 Operator conducting monthly visual inspection detects H_2S of 10 ppm or greater; Northwind employee or other 3rd party reports gas leak; leak not resolved rapidly

Level 2 Level 1 response unsuccessful. H2S ≥ 10 ppm at Compressor Station or along Pipeline and increasing; H_2S ≥ 40 ppm detected; pipeline leak visible

Level 3 Level 2 response unsuccessful. Catastrophic release; fire; explosion; a continuous release of maximum volume for 24 hours; or Rule 11 mandatory activation for a PHV, in which 100 ppm in any defined public area; 500 ppm at any public road; or 100 ppm at a distance greater than 3,000 feet from the site or the release; (see Appendices B and C: Level 3 for details)

As soon as the Plan has been activated based on the criteria above, the plant manager or their designee, will be notified.

10.2 Events That Could Lead to a Release of H_2S

- Inlet piping or pig catcher seal failure
- Flange/gasket leaks at Booster Station or on exposed Pipeline sections
- Valve or seal failure or physical damage to the Booster Station or Pipeline
- Catastrophic damage to Pipeline as a result of inappropriate excavation

11.0 Submission of H_2S Contingency Plans

[NMAC 19.15.11.9.D]

Northwind has submitted this H_2S contingency plan to the NMOCD for review and approval. Northwind shall maintain a copy of the contingency plan at their corporate office. The plan, as approved by the OCD, will be readily accessible for review by the OCD at the facility upon request.

11.1 Revisions to the Plan

The H_2S Plan will be reviewed annually and revised at that time 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 and AGI well, specifically, those within the radii of exposure.

11.2 Annual Inventory of Contingency Plans

Northwind Midstream will file an annual inventory of wells, facilities, and operations for which H_2S Contingency Plans are on file with the NMOCD with the appropriate local emergency planning committee (LEPC) and the state emergency response commission as per NMAC 19.15.11.9H. The inventory shall include the name, address, telephone number, and point of contact for all operations in which H_2S Contingency Plans are on file with the OCD.

12.0 Figures – Titan Gathering Plan

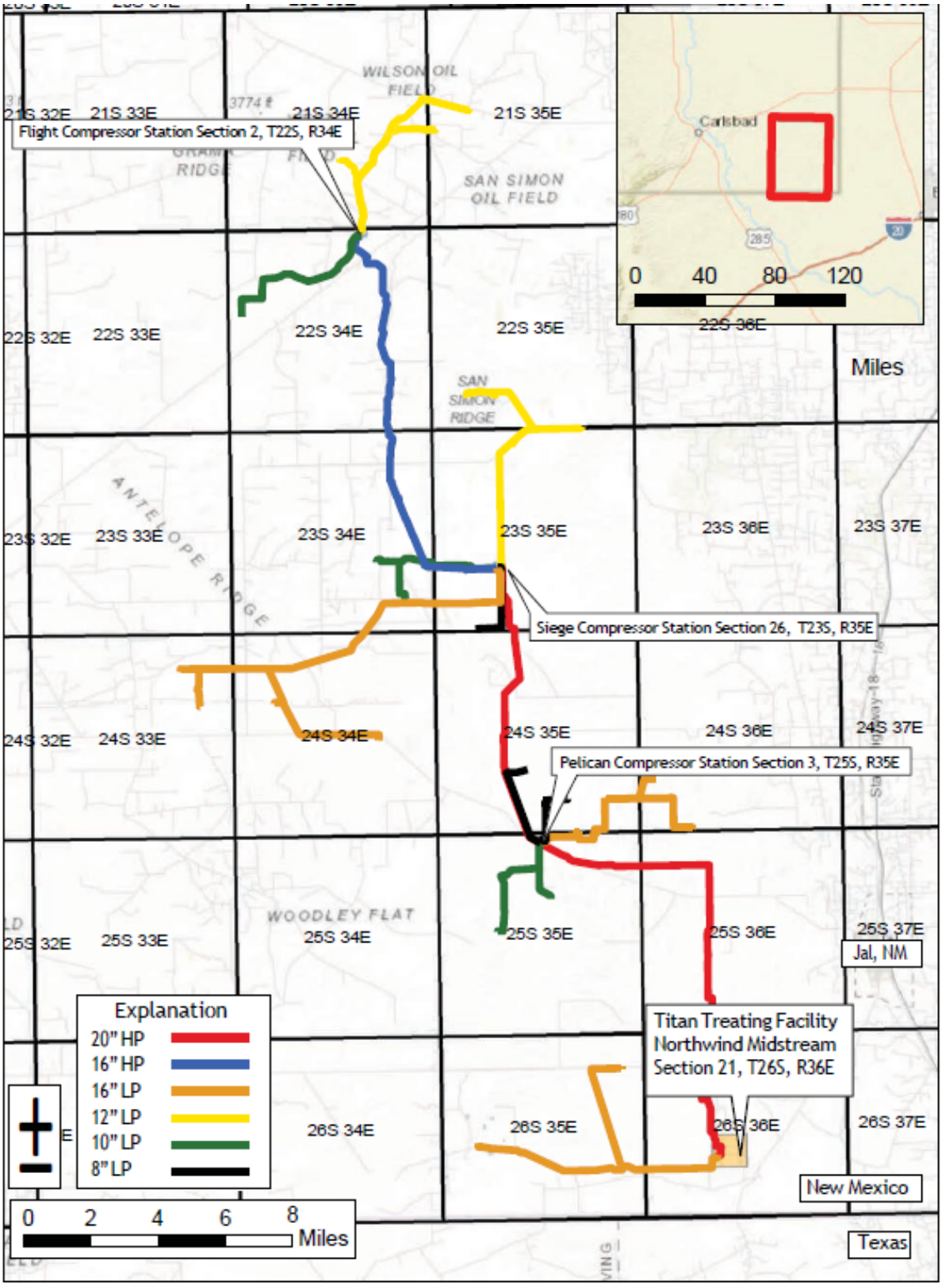


Figure 1. General location map illustrating the surface lands to be occupied by the Titan Gas Treatment Facility, the Flight, Siege, and Pelican Compressor Stations, and Pipeline operated by Northwind Midstream.

NORTHWIND MIDSTREAM

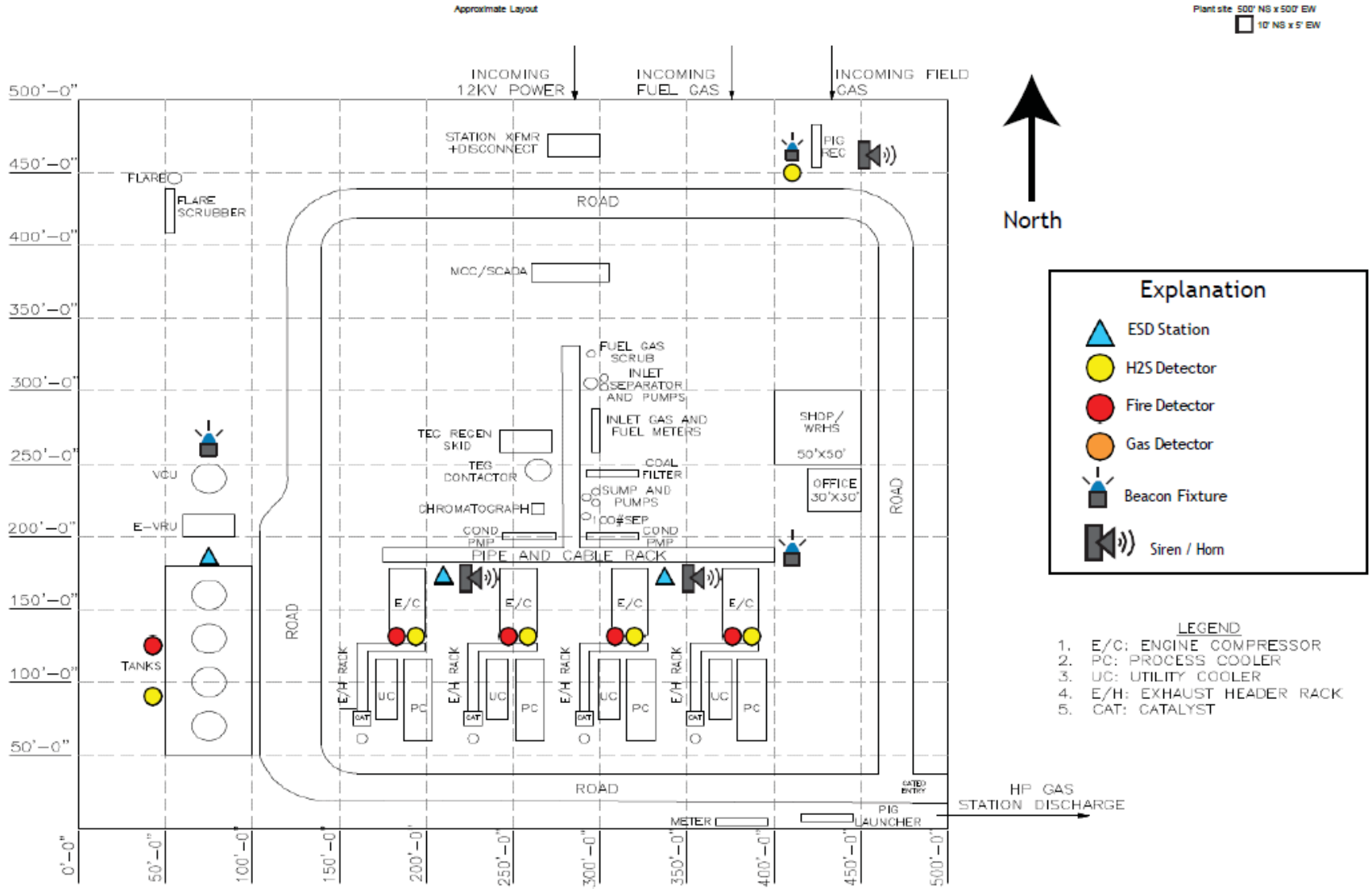


Figure 2. Detailed compressor station schematic for all compressor station layouts, showing the approximate locations of emergency notification components, such as H_2S, fire, and gas detection sensors, sirens, and beacons.

NORTHWIND MIDSTREAM

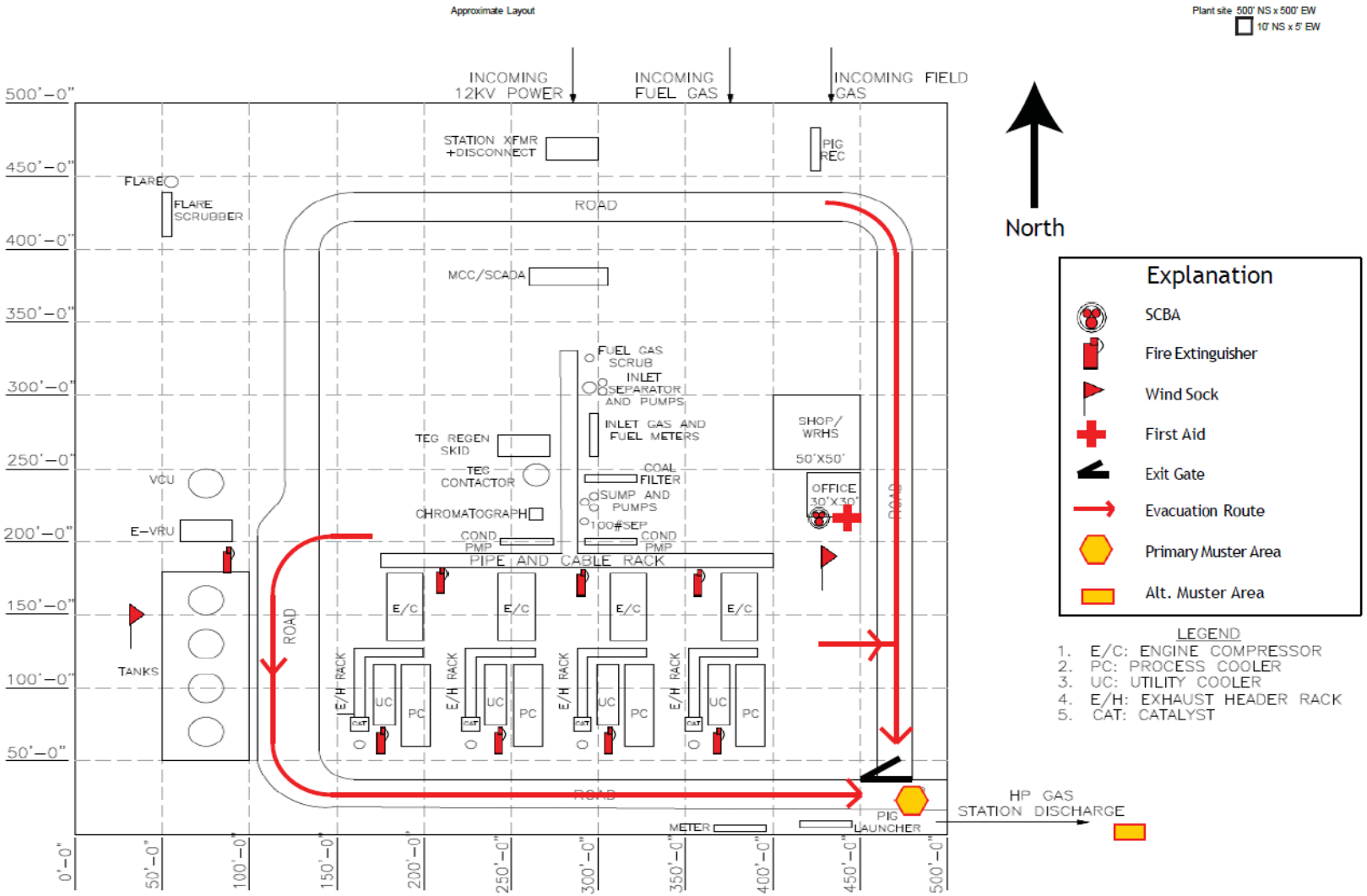


Figure 3. Detailed compressor station schematic for all compressor stations illustrating potential evacuation routes, muster areas, exit gates, and locations of emergency equipment. Note: Optimal evacuation routes may vary depending on the nature of the emergency and environmental conditions at the time. Predominant annual wind direction is from the southwest.

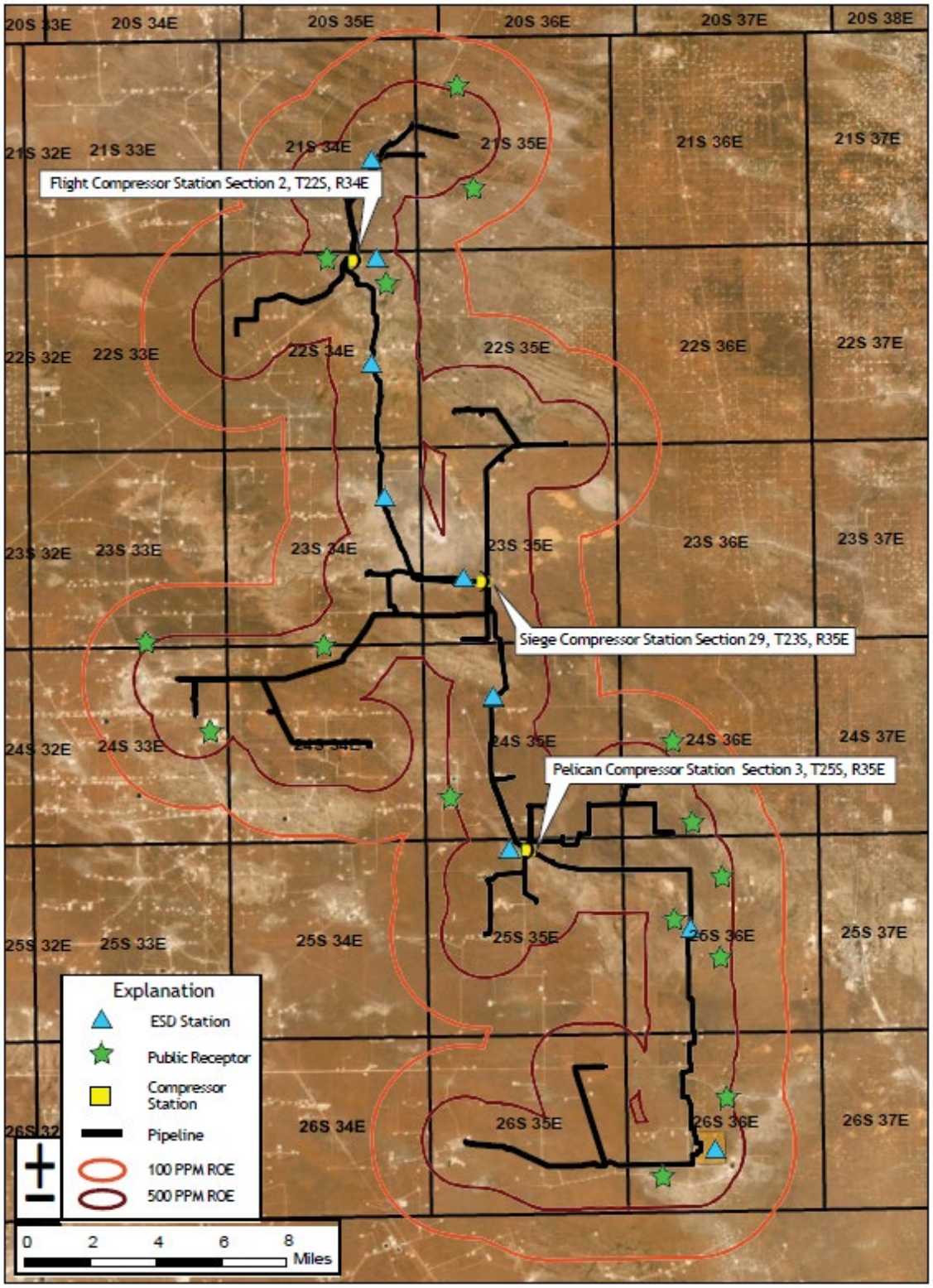


Figure 4. ROE for the proposed Northwind gathering system, showing ESD equipment locations along the pipeline. Public receptors potentially affected by an unplanned release of H_2S will be notified according to the contact information listed in Appendix D. Detailed locations of escape routes, roadblocks, and public receptors around each compressor station can be found in the following Figures 5-10.

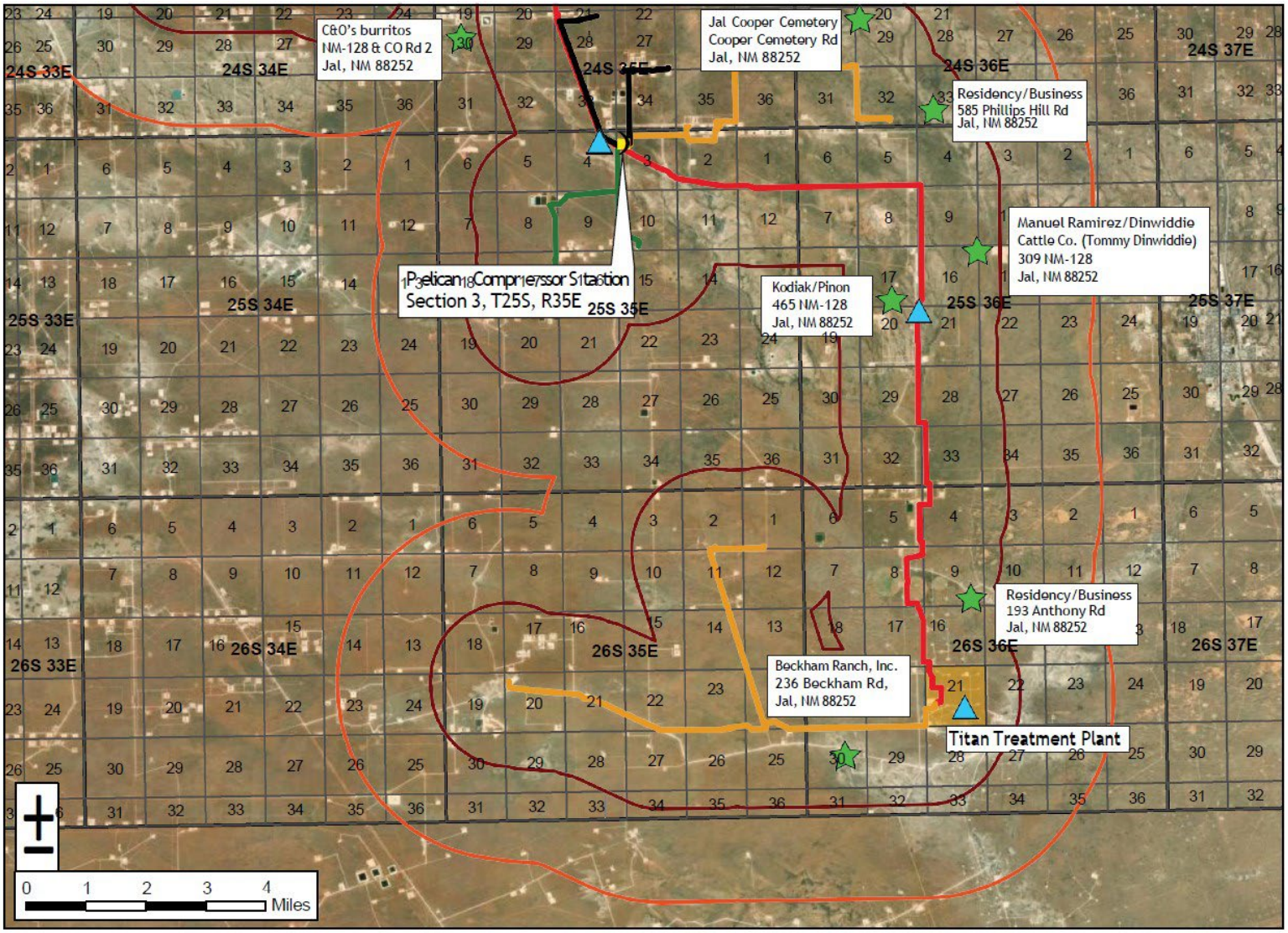


Figure 5. Pelican Compressor Station and associated pipeline ROE, showing potentially affected public receptors (green stars). ESD stations, shown as blue triangles, are placed along pipeline valves and at booster stations in the event of an unplanned release of H_2S

NORTHWIND MIDSTREAM

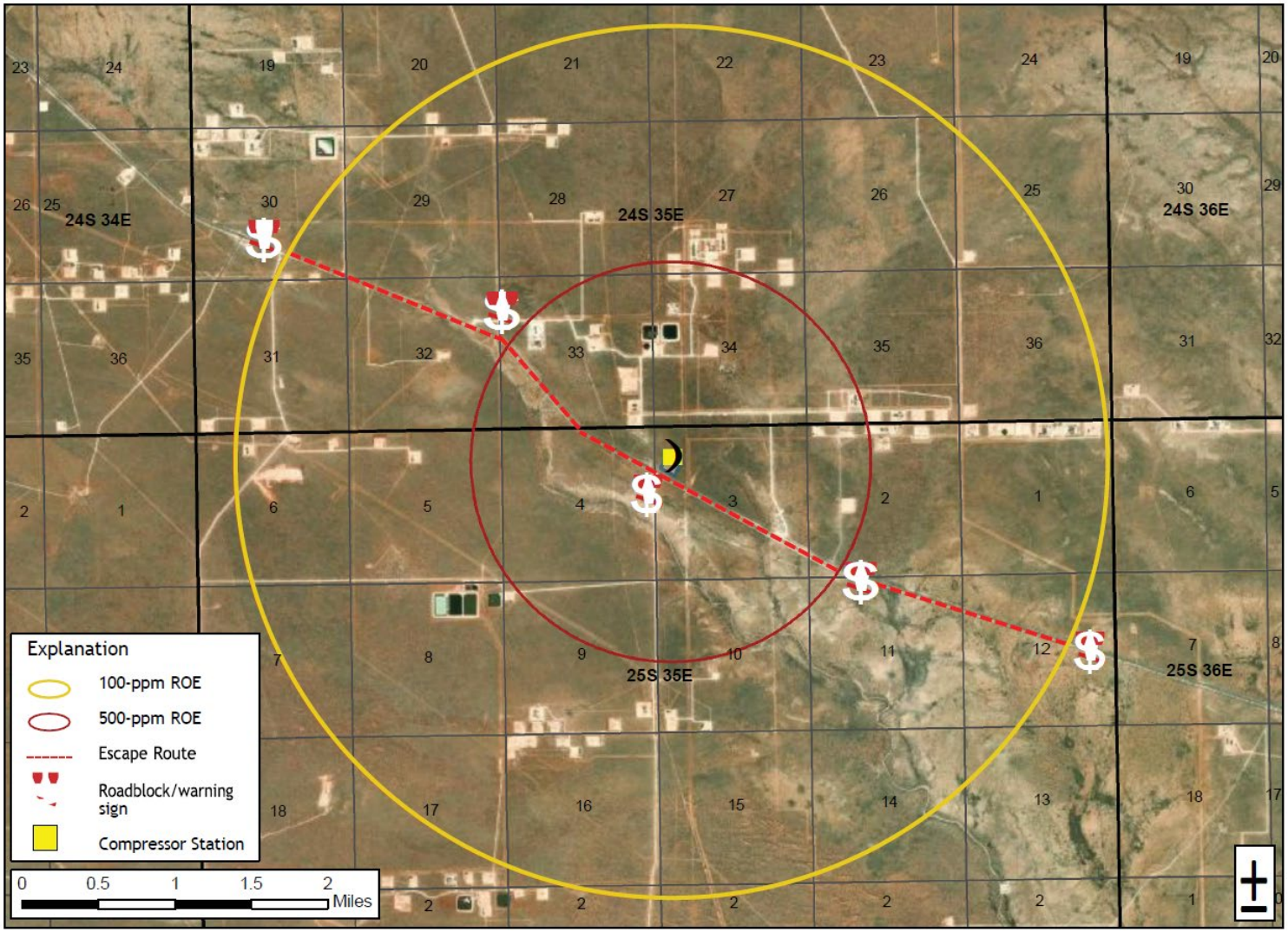


Figure 6. Radius of exposure for Pelican Compressor Station (32.163385, -103.362091 NAD83). Suggested escape routes are along NM-128 with locations of roadblocks and H_2S warning signs outside the 500-ppm radius (1.31 mi) and 100-ppm radius (2.86 mi).

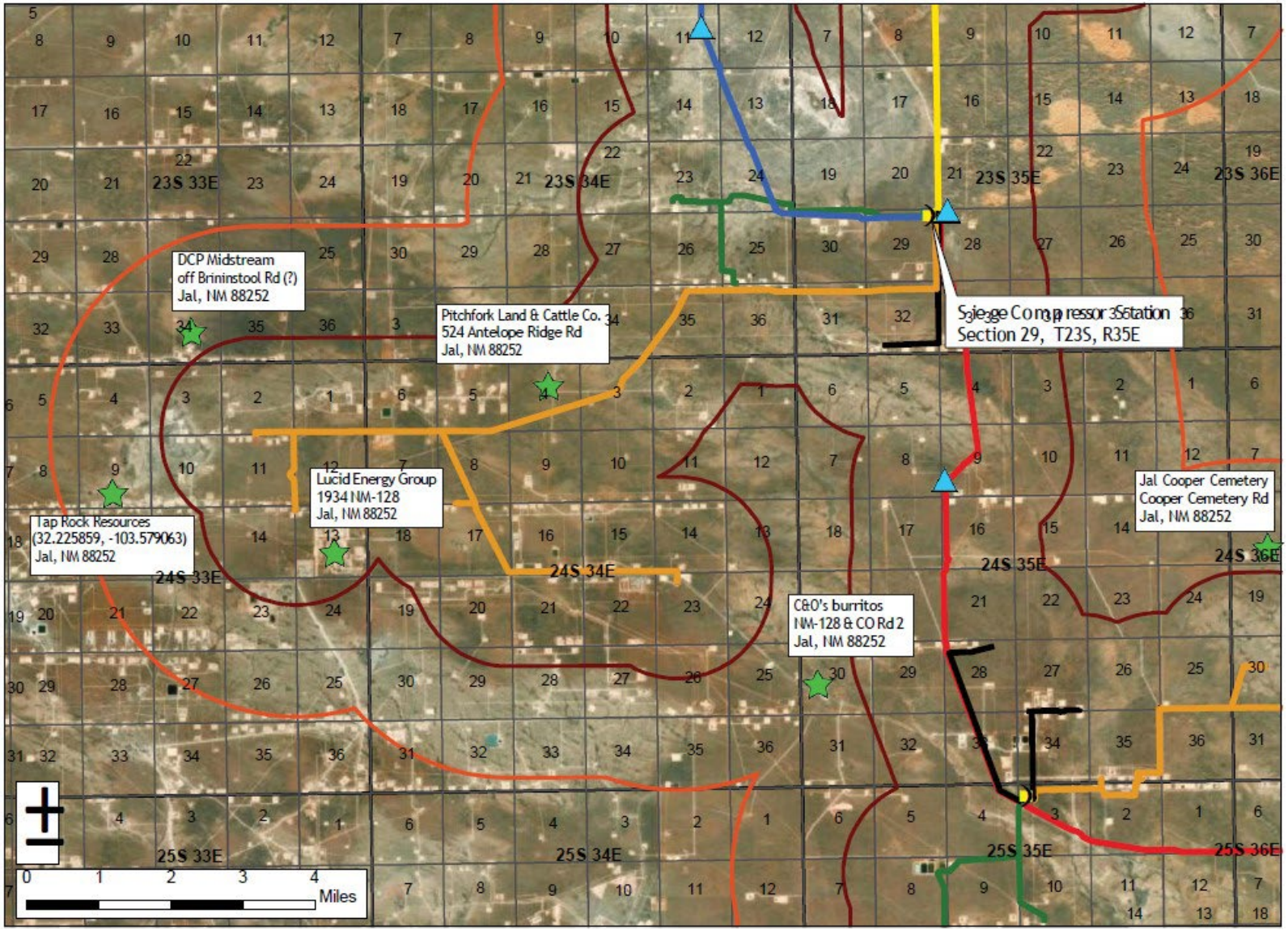


Figure 7. Siege Compressor Station and associated pipeline ROE, showing potentially affected public receptors (green stars). ESD stations (blue triangles) are placed along pipeline valves and at booster stations to contain the gas in the event of an unplanned release of H_2S.

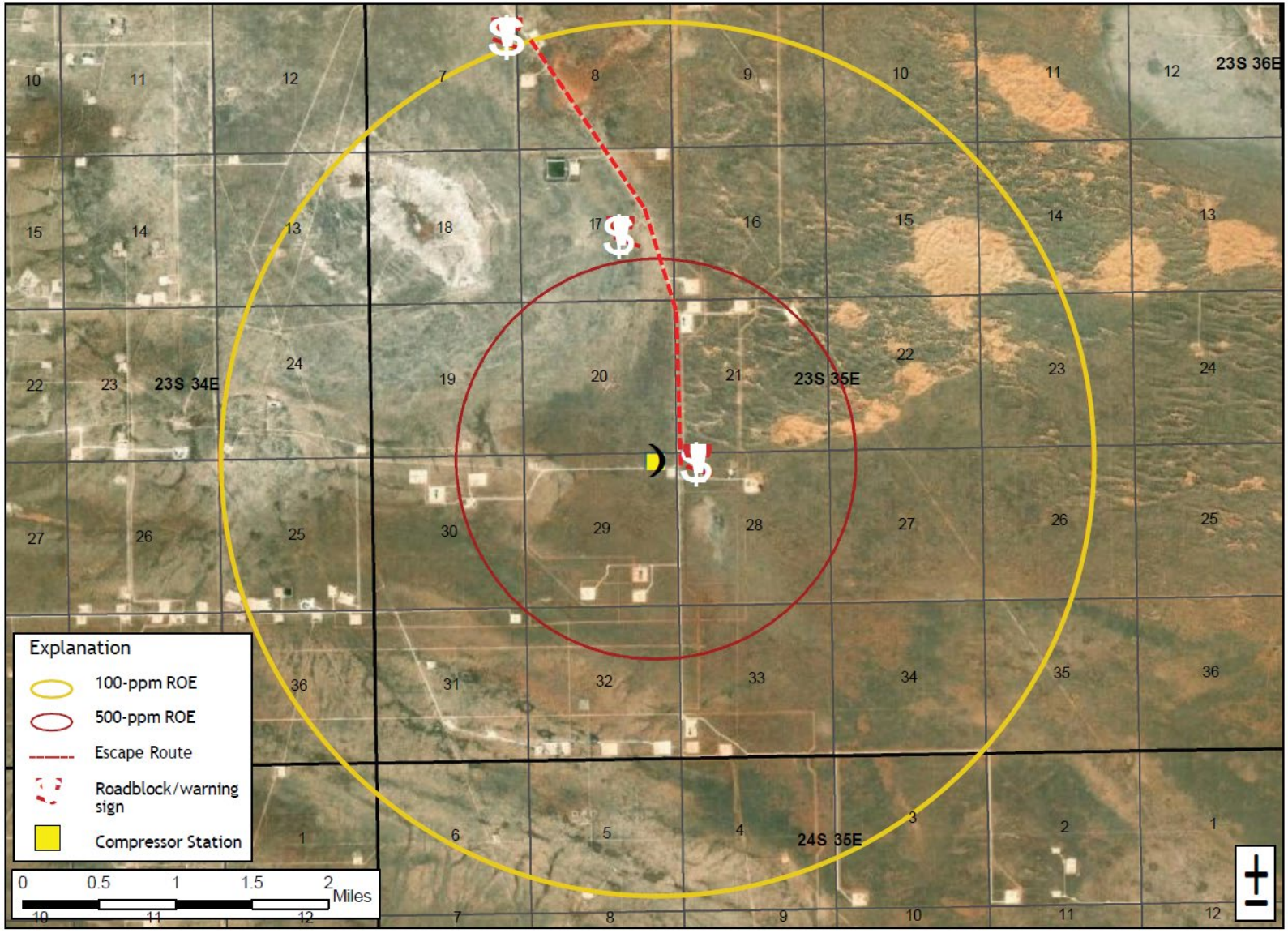


Figure 8. Siege Compressor Station and associated pipeline ROE, showing potentially affected public receptors (green stars). ESD stations (blue triangles) are placed along pipeline valves and at booster stations to contain the gas in the event of an unplanned release of H_2S.

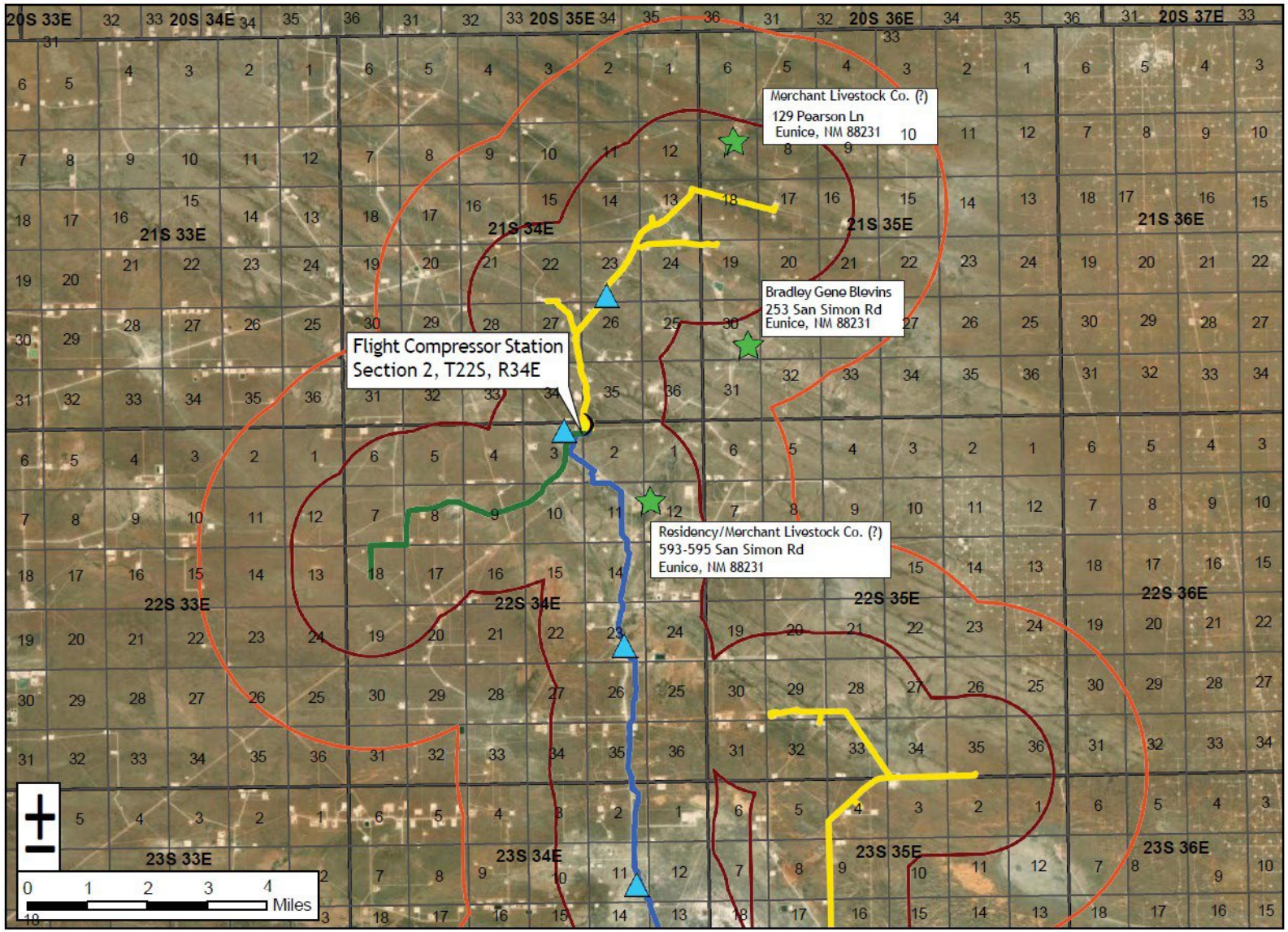


Figure 9. Flight Compressor Station and associated Pipeline ROE showing potentially affected public receptors (green stars). ESD stations, shown as blue triangles, are placed along pipeline valves and booster stations to contain the gas in the event of an unplanned release of H_2S.

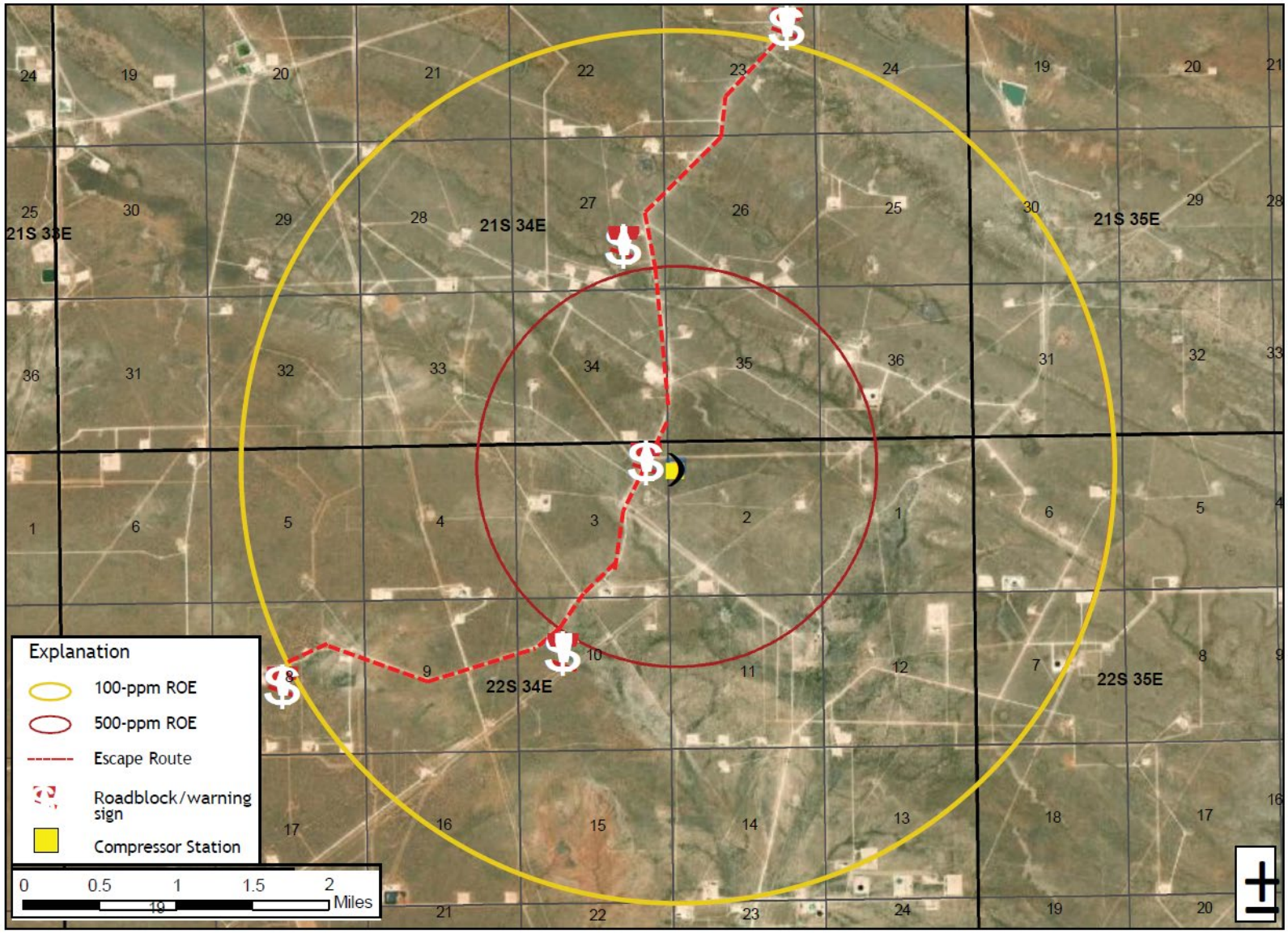


Figure 10. Flight Compressor Station and associated Pipeline ROE showing potentially affected public receptors (green stars). ESD stations, shown as blue triangles, are placed along pipeline valves and booster stations to contain the gas in the event of an unplanned release of H_2S.

NORTHWIND MIDSTREAM

Titan Gas Treatment Facility Incident Command System Structure: Duties and Responsibilities

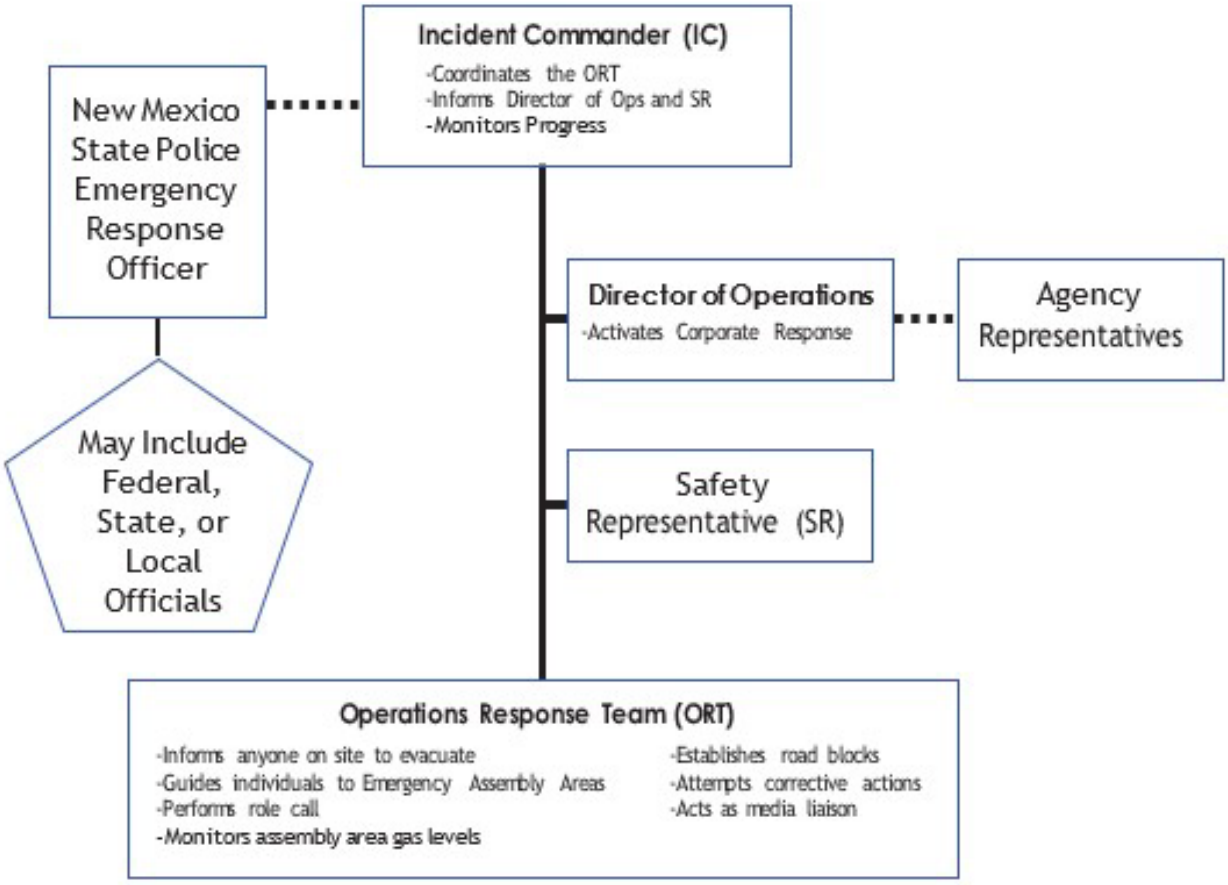


Figure 11. Incident Command System Structure for the Titan Gas Treatment Plant and Titan Gathering System

NORTHWIND MIDSTREAM

Flight, Siege, and Pelican Compressor Stations & Pipeline
Detailed Incident Command System Structure

Name	Title	Phone Number
Alonzo Villalobos	Plant Manager	432-287-4033
Reagan Register	Director of Operations	432-250-5888
David Barton	Director of EHS&R	817-266-8865
Operations Response Team	Includes plant manager, plant/pipeline operators, and technicians	432-250-5888 432-287-4033
2 Individuals	Plant/Pipeline Operators	432-250-5888
Multiple	Maintenance Technicians	432-250-5888

Employee Information	Phone Number	Responsibilities & Duties
Plant Manager: Alonzo Villalobos	432-287-4033	• Assumes role of Incident Commander (IC) Coordinates ORT (Plant operators & Technicians • Informs the Director of Operations and Safety Coordinator • Monitors Progress
Operators: Multiple contracted through "Midstream Operators"	432-250-5888	• Assumes Role in Operations Response Team (ORT) • Informs anyone on site to evacuate Guides individuals to Emergency Assembly • Areas Performs role call • Monitors assembly area gas levels Establishes roadblocks • Attempts corrective actions • Acts as media liaison
Maintenance Technicians: Multiple contracted through "Kodiak Gas Services"	432-250-5888	

Facility Main Office Phone Number	**432-250-5888**
Control Room Phone Number	**432-250-5888**

Figure 12. Detailed Incident Command Structure, responsibilities, and duties for the Titan Gas Treatment Plant for Northwind Midstream. All Operations Response Team personnel will be ready to perform any of the duties outlined in the table above, as directed by the Incident Commander. *Note: Facility is currently undergoing construction and staffing may change. Contact lists will be updated, as necessary, and will be provided to NMOCD and other interested parties.

Figure 13. An example of an H_2S warning sign placed at the treatment facility and critical junctures between public areas and the ROE.

Appendix A Revision History

Version	Date	MOC #	Author	Summary of Change
1-0	05/01/2024	N/A	Geolex. Inc Northwind Midstream	Initial Issue

Appendix B Immediate Action Plans

NORTHWIND MIDSTREAM

LEVEL 1 ACTIVATION PLAN

ACTIVATING CONDITIONS:

- H_2S of 10 ppm or greater detected at any fixed monitor.
- An Operator conducting monthly line patrol detects H_2S concentration of 10 ppm or greater.
- Other Northwind Employees or third party (contractor, etc.) report an H_2S gas leak (Odor Compliant).
- Leak is not rapidly resolved

ALARMS AND AUTOMATED ACTIVATIONS:

- Detection of H_2S at 10 ppm or greater:
  - Illumination of amber beacons within Booster Station
  - Activation of a "high" audible control room alarm to notify the Control Room Operator.
- Detection of H_2S at 20 ppm or greater:
  - Illumination of amber beacons within Booster Station
  - Activation of a "high-high" audible control room alarm to notify the Control Room Operator.
- Activation of intermittent audible horn (4 second pulses) if any fixed monitor senses H_2S at 20 ppm or greater.
- Localized horn and amber beacons are redundant systems which function independently of one another so that should one system fail, the other would remain active. These systems incorporate backup battery capabilities as recommended in API RP 55 which insure their operation in the event of a power failure.
- A computer in the Control Room and in the office of the Plant Manager establishes the location of the monitor(s), at the compressor station, that has activated the alarm and/or amber beacons.
- All employees also wear personal monitors that sound an audible alarm at 10 ppm H_2S or greater.

ACTIONS

1. The responding operator will return to a safe area and notify the Titan Treatment Plant control room operator of the release. Plant manager will be notified of the release, and they, or their designee will assume the role of Incident Commander (IC). The Control Room Operator will remain in the control room, identify the location(s) of the problem(s), and monitor H_2S concentrations throughout the facilities.
2. The control room operator will contact any Northwind personnel or contractors working along the pipeline ROW, inform them of the H_2S alarm, and direct them to monitor air quality, especially H_2S concentrations.
3. Appropriate operator dons SCBA and helps any persons in distress and evacuates any employees or contractors who may be working on or near the pipeline ROW to an Emergency Assembly Area, designated by the IC.
4. Any third parties observed working near the ROW will be advised verbally of the situation and instructed to leave the area and not return until further notice.
5. Responding personnel will don SCBA and help any persons in distress to evacuate, if not already done so, and will then assess the location of the alarm and attempt to make an initial determination of its cause and rule out potential false alarms based on sensor malfunction or other conditions. If the cause of the release is a minor problem such as a packing or seal leak, the Operator(s) will attempt to take the necessary steps to correct the situation and eliminate the source of the release.

6. If deemed necessary, local emergency response service providers (see Appendix D) will be contacted by Plant personnel designated by the operator.
7. IC will designate secondary re-entry teams in 30-minute SCBA's to re-enter and resolve the situation. Re-entry will occur in 15-minute increments at the direction of the IC until the problem is resolved or Operators activate ESD.
8. If corrective actions are successful, and the release is resolved and monitored H_2S levels return to less than 10 ppm, the IC or designee will signal all clear and personnel will be allowed to sign in and re-enter the ROW to resume work. If the release is not resolved and H_2S levels continue to rise, IC will initiate a Level 2 Response.
9. The IC will initiate and maintain a Chronologic Record of Events Log (see Appendix G).
10. The Plant Manager or designee will only contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan at Level 3.

	**NOTE:** Per 19.15.11.16 NMAC and 19.15.29 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of a release greater than 50 MSCF.

NORTHWIND MIDSTREAM

LEVEL 2 ACTIVATION PLAN

ACTIVATING CONDITIONS:

- Corrective actions at Level 1 are unsuccessful.
- H_2S concentration is increasing rapidly above 10 ppm
- Pipeline leak is visible

ALARMS AND AUTOMATED ACTIVATIONS:

- While activation occurs at 90 ppm, the automated ESD, Control Room Operator, or Plant Manager may proactively trigger a shutdown at 40 ppm to minimize Level 2 events and/or prevent the potential for Level 3 events.
- Continuous facility-wide horn and flashing yellow lights will occur if detection occurs at the Compressor Station. The horn and flashing lights are redundant systems which function independently of one another so that should one system fail, the other would remain active. These systems incorporate backup battery capabilities as recommended in API RP-55 which insure their operation in the event of a power failure.

ACTIONS

1. The responding operator, on detecting H_2S greater than or equal to 10 ppm, returns to safe area and immediately contacts the Titan Facility control room operator to shut down the pipeline.
2. The responding operator will don SCBA and will check the pipeline ROW, help any persons in distress, and evacuate any employees or contractors who may be working on or near the pipeline ROW to the Emergency Assembly Area designated by the IC. If deemed necessary, local emergency response service providers will be contacted by Pipeline personnel designated by the operator.
3. Pipeline personnel with H_2S monitors and emergency trailers will be dispatched to the pipeline release area. Personnel will monitor air quality and move further away if H_2S reaches 10 ppm and notify IC.
4. All personnel will be accounted for using the Plant sign-in list and air quality will continue to be monitored for H_2S at the Emergency Assembly Area.
5. The Plant ESD can be activated at any time by the Titan Treatment Plant Operators and is to be activated if efforts to control the release have failed, or if a catastrophic release has occurred.
6. An Incident Command Center will be established at a designated Emergency Assembly Area, and a media staging area will be established adjacent to Assembly Area and all media will be directed to it.
7. IC will designate personnel with H_2S monitors and emergency trailers to deploy to roadblock locations along State Road 128 (NM- 128), State Road 176 (NM-176), Frying Pan Road, and/or, Beckham Road to restrict entry within 1.31 (500 ppm ROE radius) of the location of the release, if necessary.
8. Designated personnel will notify anyone visibly near the ROW, individuals, and producers within the 500 and 100 ppm ROE (phone numbers provided in Appendix D) of the nature of the release and the status of containment. All will be instructed to evacuate, or shelter in place, depending on the nature of the release and the prevailing wind conditions. They 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 Plant evacuation status and advise them to leave and not enter or re-enter the Plant vicinity until further notice.

9. Notifications by designated personnel will commence as follows:
   - Anyone in immediate danger such as Northwind personal or contractors on site
   - All entities, individuals, and producers within in 500 and 100 ppm ROE
10. Re-entry will occur in full SCBA and at 15-minute increments at the direction of the IC until IC determines problem has been resolved or Operators activate ESD.
11. If release is resolved and monitored levels of H_2S in the Plant are less than 10 ppm, IC or designee may authorize personnel to return.
12. All entities and individuals previously notified will be informed that the release has been resolved and advised of the current monitored H_2S levels.
13. If monitored H_2S levels at the Emergency Assembly Area exceed 10 ppm, all personnel will evacuate to A new Emergency Assembly Area as designated by the IC (see Figure 4).
14. If the release is not resolved or H_2S levels continue to increase, the IC will initiate a Level 3 Response.
15. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix G)

The Plant Manager or designee will only contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan at Level 3.

	NOTE: Per 19.15.11.16 NMAC and 19.15.29 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of a release greater than 50 MSCF.

NORTHWIND MIDSTREAM

LEVEL 3 ACTIVATION PLAN

ACTIVATING CONDITIONS:

- Corrective actions at Level 2 are unsuccessful;
- A catastrophic release, fire, explosion;
- A continuous release of maximum volume for 24 hours occurs;
- As per NMAC 19.15.11 there is indication of a PHV, in which 100ppm H_2S in any defined public area, 500ppm at any public road, or 100 ppm at a distance greater than 3,000 feet from the site of the release.

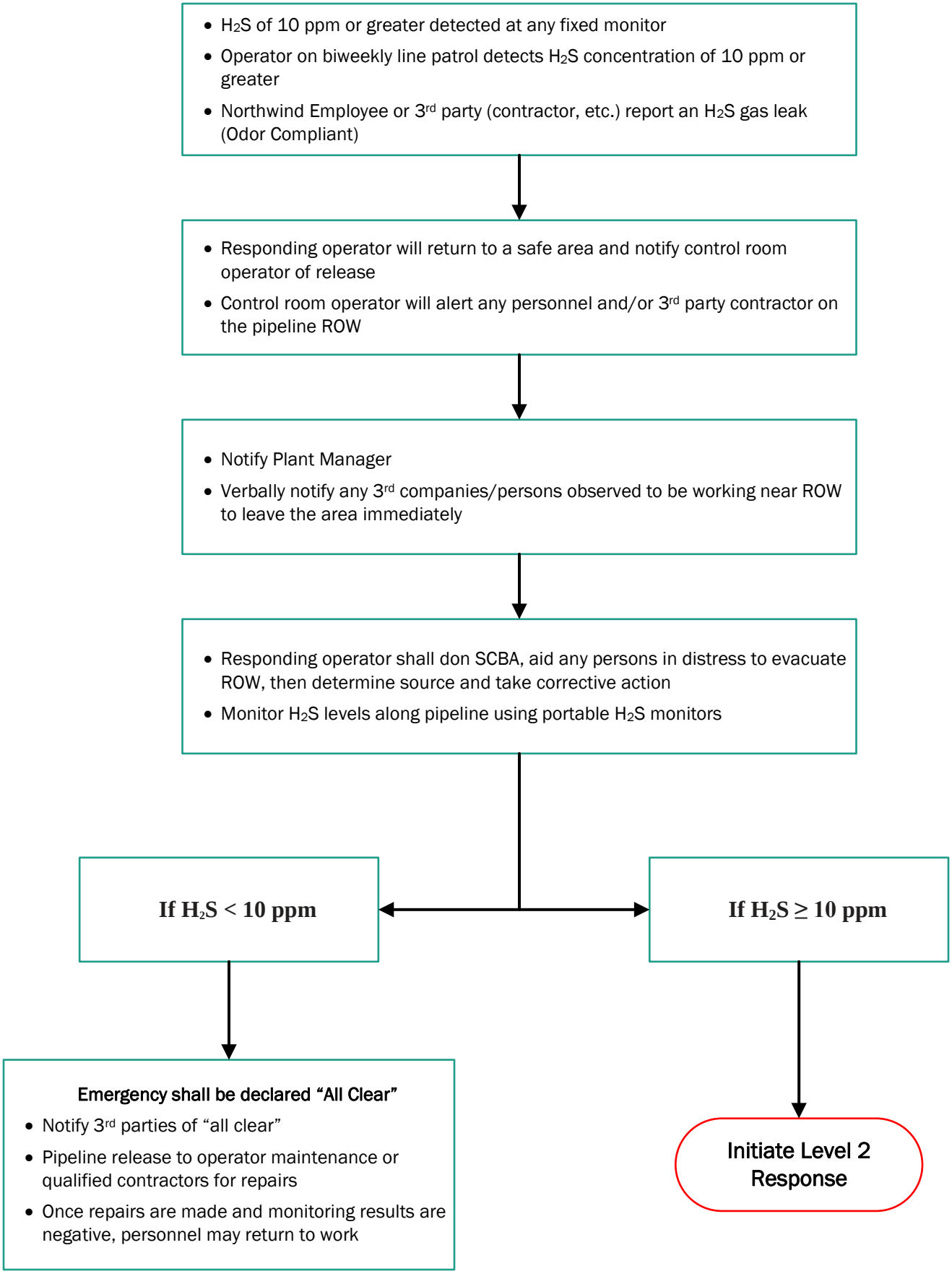
ACTIONS

1. All personnel shall have been or will immediately be evacuated to the Emergency Assembly Area (designated by the IC) and be accounted for using the Plant sign in sheet, and air quality will be monitored for H_2S concentrations.
2. IC shall have activated or will immediately activate the facility ESD.
3. The ICC and media staging area shall be established and/or moved to the designated Emergency Assembly Area.
4. Dispatch personnel with emergency trailers to move or establish designated Level 3 roadblocks on SR128, Frying Pan Road, and/or Beckham Road to prevent entry within a 1.65-mile radius (100 ppm ROE radius) of the release, if necessary. Monitor H_2S concentrations at the roadblocks.
5. Local emergency responders, state agencies, including the OCD District Office, will be notified of the release and status of containment (phone numbers provided in Appendix D).
6. All individuals and entities within the 100 ppm ROE will already have been or shall be notified to evacuate or shelter in place. IC will review the status of evacuation and make the final decision whether individuals within the 100 ppm ROE should evacuate or shelter in place based on, but not limited to H_2S concentration, wind conditions and whether a safe evacuation can be implemented. If individuals within the 100 ppm ROE are instructed to evacuate, IC will recommend an evacuation route. All entities 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 evacuation status and advise them to leave and not enter or re-enter the vicinity until further notice. All will be advised of the deployed road-blocks (if they were necessary).
7. 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.
8. Re-entry will occur in full SCBA and cascade breathing air systems at the direction of the IC until IC determines problem has been resolved.
9. Once release is resolved and monitored levels of H_2S along the ROW are less than 10 ppm, IC or designee may authorize personnel to sign in and return and resume work.
10. All entities and individuals previously notified will be informed that the release has been resolved and advised of the current monitored H_2S levels at the Plant. Roadblocks will be recalled, and traffic will be restored.
11. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix G)
12. The Plant Manager or designee will only contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan at Level 3.

	**NOTE:** Per 19.15.11.16 NMAC and 19.15.29 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of a release greater than 50 MSCF.

Appendix C Response Flow Diagrams

Pipeline Release – Level 1 Activation Response Flow



Pipeline Release – Level 2 Activation Response Flow

- Level 1 response actions are unsuccessful H_2S > 10 ppm along pipeline ROW and increasing
- H_2S > 40 ppm detected by any monitor Visible pipeline leak

↓

Responding operator shall return to a safe area and direct control room operator to activate pipeline shutdown

↓

- Control room operator shall direct personnel on pipeline ROW to leave and/or evacuate up-wind of the pipeline
- Provide verbal notification to any 3rd party companies or persons observed working near ROW to leave the area
- Notify Plant Manager

↓

- If necessary, Incident Command Center will set up an Assembly Area
- Plant personnel will be dispatched with emergency trailers to assist with monitoring wind direction and ambient H_2S concentrations and to block roads to restrict entry within 1.31 miles of the release if applicable

↓

If H_2S < 10 ppm

↓

Emergency shall be declared "All Clear"

- Notify 3rd parties of "all clear"
- Pipeline release to operator maintenance or qualified contractors for repairs
- Once repairs are made and monitoring results are negative, personnel may return to work

If $H_2S \geq 10$ ppm

↓

Initiate Level 3 Response

Pipeline Release – Level 3 Activation Response Flow

- Level 2 response actions are unsuccessful Continuous Release of Maximum Volume for 24 hours
- Catastrophic release of H_2S, Fire, or Explosion
- PHV released in which 100ppm H_2S in any defined public area 500ppm at any public road
- 100 ppm at a distance greater than 3,000

↓

- Direct control room operator to activate plant ESD
- Initiate implementation of the H_2S Contingency Plan
- Verbally notify any 3rd party companies or persons observed working near ROW to leave
- Notify Plant Manager
- Notify NMOCD, NM state agencies, and emergency responders

↓

Establish Incident Command and Media Staging Area at the designated location

↓

- Dispatch personnel with emergency trailers to designated areas along pipeline route and to place roadblocks to restrict entry within 2.86 miles of the release if applicable
- Monitor ambient air quality and move assembly area further away if H_2S reaching 10 ppm and notify Incident Commander of new assembly location

↓

- Additional operations personnel may be directed to close valves on gas pipelines
- Monitor H_2S levels along the pipeline

↓

If H_2S < 10 ppm

→

Emergency shall be declared "All Clear"

- Notify 3rd parties of "all clear"
- Pipeline release to operator maintenance or qualified contractors for repairs
- Once repairs are made and monitoring results are negative, personnel may return to work

NORTHWIND MIDSTREAM

Appendix D Telephone Numbers/Emergency Call List

The following contains information on residences, businesses, public receptors, and producers within the 100 PPM Radius of Exposure (ROE).

Residences		
Residence	Residence Location	Phone
Manuel Ramirez/ Tommy Dinwiddie	309 NM-128 Jal, NM 88252	575-369-5655 575-631-0385
James David Overton	585 Phillips Hill Rd Jal, NM 88252	432-553-5597
Bradley Gene Blevins	253 San Simon Rd Eunice, NM 88231	575-394-3972
Ralph Ramstetter/Intrepid Potash	193 Anthony Rd Jal, NM 88252	575-706-7973

Businesses		
Business	Business Location	Phone
Pitchfork Land & Cattle Co. (Madera Family)	524 Antelope Ridge Jal, NM 88252	806-284-2223
Merchant Livestock Co.	129 Pearson Ln Eunice, NM 88231	575-394-0084
Merchant Livestock Co.	593-595 San Simon Rd Eunice, NM 88231	575-394-0084
C&O's Burritos	Co Rd 2 Jal, NM 88252	575-263-6624
Beckham Ranch, Inc. (Brad Beckham)	236 Beckham Rd Jal, NM 88252	575-395-3230
Blue Star Services, LLC	277 NM-128 Jal, NM 88282	575-725-8887
Dinwiddie Cattle Co. (Tommy Dinwiddie)	309 NM-128 Jal, NM 88252	575-631-0385
Intrepid Potash		
Caliche Pit	NM-128 Jal, NM 88252 (32.13353, -103.27930) NAD83	1-800-451-2888
Source Water Pond	Anthony Rd Jal, NM 88252 (32.06497, -103.28876) NAD83	575-234-3875
Lucid Energy Group	1934 NM-128 Jal, NM 88252	575-748-4555
Tap Rock Resources	Unnamed road Jal, NM 88282 (32.225859, -103.579063)	720-772-5090
DCP Midstream	Brininstool Rd Jal, NM 88252	800-435-1679
Piñon Midstream	465 NM-128 Jal, NM 88252	713-300-9300

Public Receptors		
Public Receptor	Location	Phone
Jal Cooper Cemetery (Adela Rodriguez or Molly Sanchez)	Cooper Cemetery Rd Jal, NM 88252	575-395-3340 ext. 320 or 229

NORTHWIND MIDSTREAM

Producers			
Producer	Office Location	Phone	Location *(twn & range)*
Ameredev Operating, LLC	2901 Via Fortuna, Suite 600 Austin, TX 78746	737-300-4700	26S 36E 25S 36E 26S 34E 25S 34E
Caza Operating, LLC	200 N Lorine St, Suite 1550 Midland, TX 79701	432-682-7424	25S 35E 26S 35E 23S 34E 22S 35E 21S 34E
Fulfer Oil & Cattle, LLC	P.O. Box 1224 Jal, NM 88252	505-935-9970	26S 36E 25S 36E 24S 36E 21S 34E 26S 34E 25S 34E 23S 36E
Northern Pacific Oil & Gas Inc.	530-B Harkle Rd Santa Fe, NM 87505	505-738-3809	26S 36E 26S 34E
Chevron USA INC	6301 Deauville Blvd Midland, TX 79706	432-687-7328	25S 35E 24S 36E 24S 34E 23S 34E 21S 35E 22S 33E
COG Operating LLC	600 W Illinois Ave Midland, TX 79701	432-683-7443	25S 35E 24S 35E 24S 34E 24S 33E 23S 34E 22S 35E 22S 34E 21S 34E 21S 35E 22S 33E 21S 33E
EOG Resources INC	P.O. Box 2267 Midland, TX 79702	432-686-3689	25S 35E 24S 35E 24S 34E 24S 33E 23S 34E 23S 35E 21S 34E 21S 35E 22S 33E 21S 33E

Producers			
Producer	Office Location	Phone	Location (twn & range)
Franklin Mountain Energy LLC	44 Cook St, Suite 1000 Denver, CO 80206	720-414-7868	25S 35E 26S 35E 24S 35E
Matador Production Co	One Lincoln Centre 5400 LBJ Freeway Suite 1500 Dallas, TX 75240	972-371-5200	25S 35E 26S 35E 24S 34E 24S 33E 23S 34E 23S 35E 22S 35E 21S 34E 21S 33E
Solaris Water Midstream LLC	907 Tradewinds Blvd Suite B Midland, TX 79706	432-203-9024	25S 35E 24S 34E 24S 33E 21S 33E
Devon Energy Production Co LP	333 West Sheridan Ave Oklahoma City, OK 73102	405-552-4660	26S 35E 24S 33E 23S 34E 23S 35E 22S 34E 21S 34E 22S 33E
Earthstone Operating LLC	1400 Woodloch Forest Suite 300 Attn: NM Regulatory The Woodlands, TX 77380	281-298-4246	26S 35E 22S 35E 21S 34E
Flare Oil Inc	P.O. Box 156 Port Isabel, TX 78578	361-758-6002	26S 35E
Marathon Oil Permian LLC	990 Town & Country Blvd Floor 11 Houston, TX 77024	713-296-2500	26S 35E 24S 35E 24S 34E 22S 34E 21S 34E 21S 35E 22S 33E 21S 33E
Oxy USA INC	P.O. Box 4294 Houston, TX 77210	713-366-5716	26S 35E 24S 35E 24S 34E 24S 33E 23S 34E 21S 35E 22S 33E

NORTHWIND MIDSTREAM

Producers			
Producer	Office Location	Phone	Location *(twn & range)*
Raybaw Operating LLC	2626 Cole Ave Suite 300 Dallas, TX 75204	214-800-2301	26S 35E 22S 33E
Tap Rock Operating LLC	523 Park Point Drive Suite 200 Golden, CO 80401	720-772-5093	26S 35E 25S 36E 24S 35E 24S 34E 24S 33E 25S 34E
BC & D Operating Inc	P.O. Box 302 Hobbs, NM 88241	575-390-5930	25S 36E 25S 34E
Driftwood Oil LLC	P.O. Box 1224 Jal, NM 88252	575-395-9970	25S 36E 25S 34E
Extex Operating Company	1616 S. Voss Road Suite 400 Houston, TX 77057	713-953-0824	25S 36E 22S 35E 25S 34E
FAE II Operating LLC	11757 Katy Freeway Suite 725 Houston, TX 77079	832-706-0041	25S 36E 24S 36E 23S 35E 21S 35E 25S 34E 23S 36E 22S 36E
Mesquite SWD Inc.	P.O. Box 1479 Carlsbad, NM 88221	575-706-7288	25S 36E 25S 34E
Owl SWD Operating LLC	5005 LBJ Freeway Suite 675 Dallas, TX 75244	214-292-2011	25S 36E 24S 34E 21S 34E 25S 34E 22S 36E
Penroc Oil Corp	P.O. Box 2769 Hobbs, NM 88241	575-492-1236	25S 36E 24S 36E 21S 35E 25S 34E 22S 36E
Apache Corporation	303 Veterans Airpark Ln #1000 Midland, TX 79705	432-818-1000	24S 36E 21S 34E 21S 35E 23S 36E 22S 36E 20S 35E
Blackwell Operating LLC	P.O. Box 202 Andrews, TX 79714	432-238-4675	24S 36E
Cameron Oil & Gas Inc	5445 Legacy Drive, Suite 440 Plano, TX 75024	972-674-1024	24S 36E 21S 35E 23S 36E 22S 36E

NORTHWIND MIDSTREAM

Producers			
Producer	Office Location	Phone	Location *(twn & range)*
CCC Oil & Gas LLC	7 Crawford Ln Jal, NM 88252	575-441-2153	24S 36E 23S 36E
Cress Green Energy Resources LLC	997 County Rd 203 Seminole, TX 79360	575-441-4660	24S 36E
Empire New Mexico LLC	2200 S. Utica Place Suite 150 Tulsa, OK 74114	539-444-8002	24S 36E 22S 36E
Energy Acumen LLC	10103 Gutierrez Rd NE Albuquerque, NM 87111	310-977-7636	24S 36E 21S 35E 23S 36E
J R Oil LTD Co	P.O. Box 52647 Tulsa, OK 74152	575-390-1380	24S 36E 23S 36E 22S 36E
Legacy Reserves Operating LP	15 Smith Rd, Suite 3000 Midland, TX 79705	432-689-5200	24S 36E 23S 36E
Petroleum Exploration Company LTD	P.O. Box 548 Breckenridge, TX 76424	254-559-5453	23S 36E 22S 36E
Sabre OP INC	P.O. Box 4848 Wichita Falls, TX 76308	940-696-8077	24S 36E
Saxet Oil Corporation	P.O. Box 187 Midland, TX 79702	432-684-8001	24S 36E 23S 36E
Centennial Resources Production LLC	1001 17th St, Suite 1800 Denver, CO 80202	720-499-1400	24S 34E 23S 34E 22S 35E 22S 34E 21S 34E
Chevron Midcontinent LP	6301 Deauville Blvd Midland, TX 79706	432-687-7866	24S 34E
Cimarex Energy Co	600 N. Marienfeld Street Suite 600 Midland, TX 79701	432-620-1936	24S 34E 24S 33E 22S 34E 22S 33E 21S 33E
Cimarex Energy Co of Colorado	600 N. Marienfeld Street Suite 600 Midland, TX 79701	432-571-7800	24S 34E 21S 34E 21S 35E 21S 33E
COG Production LLC	600 W Illinois Ave Midland, TX 79701	432-683-7443	24S 34E 24S 33E
Kaiser-Francis Oil Co	P.O. Box 21468 Tulsa, OK 74121	918-491-4468	24S 34E 24S 33E 23S 34E 22S 34E
NGL Water Solutions Permian LLC	865 North Albion Street Suite 400 Denver, CO 80220	303-815-1010	24S 34E

NORTHWIND MIDSTREAM

Producers			
Producer	Office Location	Phone	Location *(twn & range)*
Lucid Energy Delaware LLC	201 S. Fourth Street P.O. Box 158 Artesia, NM 88210	575-748-4555	24S 33E
BTA Oil Producers LLC	104 S. Pecos St Midland, TX 79701	432-682-3753	23S 34E 22S 34E 21S 34E
CML Exploration LLC	P.O. Box 980 Snyder, TX 79550	325-573-0750	23S 34E
Endeavor Energy Resources LP	110 North Marienfeld Street Midland, TX 79701	432-262-4026	23S 34E
Mewbourne Oil Co	P.O. Box 5270 Hobbs, NM 88241	575-393-5905	23S 34E 22S 34E 21S 34E 21S 35E
Siana Operating LLC	P.O. Box 2246 Conroe, TX 77305	346-415-6578	23S 34E
Wildcat Energy LLC	P.O. Box 13323 Odessa, TX 79768	432-563-5076	23S 34E
Wynn-Crosby Operating LP	1700 Pacific Avenue Suite 1200 Dallas, TX 75201	972-354-1423	23S 34E
Beach Exploration Inc	800 North Marienfeld Street Midland, TX 79701	432-683-6226	23S 35E
Marlin Operating LLC	1371 Brumlow Avenue Suite A Southlake, TX 76092	817-675-8328	23S 35E
Avant Operating LLC	1515 Wynkoop Street Suite 700 Denver, CO 80202	720-746-5045	22S 35E
Breitburn Operating LP	1111 Bagby St, Suite 1600 ATTN: REGULATORY Houston, TX 77002	713-437-8000	22S 35E
Jay Management Company LLC	2401 Fountain View Drive Suite 420 Houston, TX 77057	713-621-6785	22S 35E
K&M Resources LLC	P.O. Box 1540 Artesia, NM 88211	575-703-0379	22S 35E
The Colborn Company Inc	P.O. Box 1804 Eunice, NM 88231	505-390-0817	22S 35E
Enstor Grama Ridge Storage & Transportation	10375 Richmond Ave Suite 1900 Houston, TX 77042	281-374-3050	22S 34E 21S 34E
Grama Ridge Disposal LLC	P.O. Box 1105 Eunice, NM 88231	575-394-2553	22S 34E

NORTHWIND MIDSTREAM

Producers			
Producer	Office Location	Phone	Location *(twn & range)*
Foundation Energy Management LLC	5057 Keller Springs Rd Suite 650 Addison, TX 75001	972-707-2500	21S 34E
Marshall & Winston Inc	P.O. Box 50880 Midland, TX 79710	432-684-6373	21S 34E 21S 33E
Oxy USA WTP Ltd Partnership	P.O. Box 4294 Houston, TX 77210	713-366-5716	21S 34E
Permian Water Solutions LLC	P.O. Box 2106 Midland, TX 79702	432-219-0741	21S 34E
Citation Oil & Gas Corp	P.O. Box 690688 Houston, TX 77069	281-891-1000	21S 35E
Craft Operating NM LLC	5726 Winsome Lane Houston, TX 77057	713-702-3300	21S 35E
Forty Acres Energy LLC	11757 Katy Freeway Suite 725 Houston, TX 77079	832-706-0041	21S 35E
M&M Energy LLC	1008A Prospect St El Paso, TX 79902	713-304-1695	21S 35E 22S 36E
Momentum Operating Co Inc	P.O. Box 2439 Albany, TX 76430	325-762-3331	21S 35E
Raz Oil & Gas LLC	P.O. Box 1180 Eunice, NM 88231	575-394-1046	21S 35E
Tandem Energy Corporation	5065 Westheimer Rd Suite 920 Houston, TX 77056	713-364-7822	21S 35E
BXP Operating, LLC	11757 Katy Freeway Suite 475 Houston, TX 77079	281-848-3696	23S 36E 22S 36E
Morgan Operating Inc.	P.O. Box 118 Hobbs, NM 88241	575-631-4597	23S 36E
North Fork Operating LP	1000 W. Wilshire Blvd Suite 311 Nichols Hills, OK 73116	405-843-8200	23S 36E
Petroleum Exploration Co, Ltd	P.O. Box 548 Breckenridge, TX 76424	254-559-5453	23S 36E 22S 36E
Primal Energy Corporation	211 Highland Cross, Suite 227 Houston, TX 77073	281-821-5600	23S 36E
Rhombus Operating Co LTD	P.O. Box 627 Littleton, CO 80160	720-839-2555	23S 36E
Roca Production Inc.	123 Smith St Santa Fe, NM 87505	817-698-0414	23S 36E 22S 36E
Sabinal Energy Operating LLC	1780 Hughes Landing Blvd Suite 1200 The Woodlands, TX 77380	346-224-9300	23S 36E

NORTHWIND MIDSTREAM

Producers			
Producer	Office Location	Phone	Location *(twn & range)*
Sahara Operating Co	P.O. Box 4130 Midland, TX 79704	432-697-0967	23S 36E
Yarbrough Oil LP	P.O. Box 2526 Hobbs, NM 88241	575-397-3606	23S 36E
Christmas LLC	P.O. Box 718 Eunice, NM 88231	575-631-1667	22S 36E
Ernmar Investments Inc.	P.O. Box 6492 Edmond, OK 73083	405-478-0754	22S 36E
Jack Huff	P.O. Box 50190 Midland, TX 79705	432-683-9231	22S 36E
Remuda Operating	301 N Colorado St Suite 150 Midland, TX 79711	432-684-8003	22S 36E
Southwest Royalties Inc	P.O. Box 53570 Midland, TX 79710	432-685-9038	22S 36E
Water Energy Services LLC	2105 Avenue O Eunice, NM 88231	575-394-2581	22S 36E
XTO Energy Inc	6401 Holiday Hill Rd Bldg #5 Midland, TX 79707	432-620-6724	22S 36E
DKL Field Services, LLC	310 Seven Springs Way Suite 500 Brentwood, TN 37027	615-771-6701	22S 33E
Advance Energy Partners Hat Mesa LLC	11490 Westheimer Rd Suite 950 Houston, TX 77077	832-672-4604	22S 33E 21S 33E
Wagner Oil Co.	500 Commerce St Suite 600 Fort Worth, TX 76102	817-335-2222	22S 33E
WPX Energy Permian LLC	333 West Sheridan Ave ATTN: Regulatory Dept. Oklahoma, City OK 73102	405-235-3611	Texas
Pilot Water Gath Delaware LLC	127 PR 5241 Gary, TX 75643	903-754-1034	Texas

Northwind Company Internal Notification		
Name	Title	Phone
Alonzo Villalobos	Plant Manager	432-287-4033
Reagan Register	Director of Operations	432-250-5888
Josh Barker	HSE Supervisor	432-631-5164
David Barton	Director of Environmental, Health, Safety and Regulatory	817-266-8865
Operations Response Team Includes: • Plant Manager • Plant/Pipeline Operators • Technicians	Please Note: Operators work in shifts (24/7). The 8am-5pm shift, Monday-Friday, includes a manager, maintenance technicians, and 2 operators. All Operations Response Team Personnel are Emergency Responders and are HAZWOPER Certified and fit tested for respirators and SCBA	432-250-5888 432-287-4033
2 Individuals	Plant/Pipeline Operators	432-250-5888
0-2 Individuals	Maintenance Technicians	432-250-5888

Emergency Responders	
Agency	Phone
Emergency Dispatch	911
Hobbs Fire & EMS Department	575-397-9308
Hobbs Police Department	575-397-9265
Jal Fire & EMS Department	575-395-2221
Eunice Fire & EMS Department	575-394-3258
New Mexico State Police (Hobbs)	575-392-5588
Lea County Sheriff's Office	575-396-3611
Hobbs-Lea Regional Medical Center	575-492-5000
Lubbock University Medical Center (UMC) (Level 1 Trauma Center)	800-345-9911
American Association of Poison Control Centers	800-222-1222
HELICOPTER SERVICES: Lubbock University Medical Center Transfer to Level 1 Trauma Center	800-345-9911

County and Local Law Enforcement; Public Authorities; Local Government Agencies		
Agency		Phone
Oil Conservation Division	Santa Fe Office	505-476-3441
	District 1 Office, Lea County (Hobbs)	575-241-7063
Local Emergency Planning Committee (LEPC) – Lea County		575-605-6561
New Mexico State Police (Hobbs)		575-392-5580
Lea County Sheriff's Office		575-396-3611
National Response Center (NRC) Response Center		800-424-8802
New Mexico Department of Homeland Security & Emergency Management (NMDHSEM)		505-476-9635
City of Jal City Manager		575-395-3340

NORTHWIND MIDSTREAM

Appendix E Radius of Exposure Calculation

Northwind Titan		ROE CALCULATIONS PURSUANT TO RULE 11			
If data is provided in mole% use calculator below for getting ppm					
Enter Mole % in cell C5	Mole %	ppm			
Convert mole% to ppm	1.5	15000			
If data is provided in mole fraction use calculator below for getting ppm					
Enter Mole Fraction in cell C10	Mole Fraction	ppm			
Convert mole fraction to ppm	0.015	15000			
Use ppm derived from either of above calculations to input data below					
Input Data Here	H_2S Concentration (ppm)	15000			
	24 Hour Throughput (MMCFD)	200			

The radius of exposure is calculated using the following equations:

100 ppm ROE calculation (as per 19 NMAC 15.11.7.K.1)

$$X_{100ppm} = [(1.589)(Conc_{H2S})(Q)]^{(0.6258)}$$

500 ppm ROE calculation (as per 19 NMAC 15.11.7.K.2)

$$X_{500ppm} = [(0.4546)(Conc_{H2S})(Q)]^{(0.6258)}$$

Where:

X = radius of exposure (ft)

$Conc_{H2S}$ = the decimal equivalent of the mole or volume fraction of H_2S in the gas

Q = daily plant throughput corrected to standard conditions (SCFD)

Plant parameters

Q =	200	MMSCFD =	200000000	SCFD			
$Conc_{H2S}$ =	15000	ppm =	1.5	Mole %=	0.015	Mole Fraction	

ROE calculation:

X_{100ppm} = [(1.589)*(0.015)*(200000000)]^(0.6258)

X_{100ppm} = 15109 ft = **2.86 miles**

X_{500ppm} = [(0.4546)*(0.015)*(200000000)]^(0.6258)

X_{500ppm} = 6904 ft = **1.31 miles**

Appendix F H_2S Contingency Plan Distribution List

- Nearby Residents (if applicable)
- New Mexico Oil Conservation Division, Santa Fe Office
- New Mexico Department of Public Safety (State Office)
- Lea County LEPC/Emergency Manager*
- City of Jal City Manager
- Titan Treatment Plant Manager's Office
- Titan Treatment Plant Control Room
- Northwind Corporate Office
- Titan Treatment Plant and Flight, Siege, and Pelican Emergency Trailers
- New Mexico State Police, Hobbs Office
- State of New Mexico Emergency Response Commission (SERC)

NOTE: The Lea County LEPC Emergency Manager will make and send copies of this plan to appropriate entities within his jurisdiction, including the Hobbs Fire Department.

Appendix G Chronologic Record of Events Log

ACTIVITY LOG (ICS 214)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:	
3. Name:	4. ICS Position:	5. Home Agency (and Unit):

6. Resources Assigned:

Name	ICS Position	Home Agency (and Unit)

7. Activity Log:

Date/Time	Notable Activities

8. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 214, Page 1 Date/Time: _____

ACTIVITY LOG (ICS 214)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

7. Activity Log (continuation)**:**

Date/Time	Notable Activities

8. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 214, Page 2 Date/Time: _____

ICS 214
Activity Log

Purpose. The Activity Log (ICS 214) records details of notable activities at any ICS level, including single resources, equipment, Task Forces, etc. These logs provide basic incident activity documentation, and a reference for any after-action report.

Preparation. An ICS 214 can be initiated and maintained by personnel in various ICS positions as it is needed or appropriate. Personnel should document how relevant incident activities are occurring and progressing, or any notable events or communications.

Distribution. Completed ICS 214s are submitted to supervisors, who forward them to the Documentation Unit. All completed original forms must be given to the Documentation Unit, which maintains a file of all ICS 214s. It is recommended that individuals retain a copy for their own records.

Notes:

- The ICS 214 can be printed as a two-sided form.
- Use additional copies as continuation sheets as needed, and indicate pagination as used.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Name**	Enter the title of the organizational unit or resource designator (e.g., Facilities Unit, Safety Officer, Strike Team).
4	**ICS Position**	Enter the name and ICS position of the individual in charge of the Unit.
5	**Home Agency** (and Unit)	Enter the home agency of the individual completing the ICS 214. Enter a unit designator if utilized by the jurisdiction or discipline.
6	**Resources Assigned**	Enter the following information for resources assigned:
	• Name	Use this section to enter the resource's name. For all individuals, use at least the first initial and last name. Cell phone number for the individual can be added as an option.
	• ICS Position	Use this section to enter the resource's ICS position (e.g., Finance Section Chief).
	• Home Agency (and Unit)	Use this section to enter the resource's home agency and/or unit (e.g., Des Moines Public Works Department, Water Management Unit).
7	**Activity Log** • Date/Time • Notable Activities	• Enter the time (24-hour clock) and briefly describe individual notable activities. Note the date as well if the operational period covers more than one day. • Activities described may include notable occurrences or events such as task assignments, task completions, injuries, difficulties encountered, etc. • This block can also be used to track personal work habits by adding columns such as "Action Required," "Delegated To," "Status," etc.
8	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

Appendix H NMOCD Form C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☐ The source of the release has been stopped.

☐ The impacted area has been secured to protect human health and the environment.

☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☐ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	_____ (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☐ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☐ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☐ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☐ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☐ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☐ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature:_____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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

Operator: Northwind Midstream Partners LLC 811 Louisiana St Houston, TX 77002	OGRID: 331501
	Action Number: 349862
	Action Type: [UF-H2S] H2S Contingency Plan (H2S Plan)

CONDITIONS

Created By	Condition	Condition Date
joel.stone	None	6/4/2024