H2S - 45

H2S CONTINGENCY PLAN

2016

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, December 13, 2016 4:16 PM
To: 'Charles Connolly'
Cc: Griswold, Jim, EMNRD; Brown, Maxey G, EMNRD
Subject: RE: H2S Contingency Plan Submission Energy Transfer Partners Jal #3 Gas Plant (H2S-45) Lea Co.
Attachments: Checklist 12-9-2016.xls

Mr. Connolly:

The New Mexico Oil Conservation Division (OCD) has completed its preliminary review of Energy Transfer Partners (ETP) Hydrogen Sulfide Contingency Plan (CP) dated November 1, 2016.

Please find attached OCD's comments on a spreadsheet checklist with column for ETP to respond and address in the report. It would appear ETP did not follow the example format of the approved H2S CP that OCD shared with ETP. It may have helped with organization, topic names, materials, content, maps, illustrations, etc.

Based on my review, I do expect more iterations of the report as we work to finalize ETP's CP.

Please contact me to discuss or figure out a different strategy toward receiving an acceptable CP.

Thank you.

From: Chavez, Carl J, EMNRD
Sent: Wednesday, November 16, 2016 11:22 AM
To: 'Charles Connolly' <cconnolly@cteh.com>
Cc: Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>
Subject: RE: H2S Contingency Plan Submission Energy Transfer Partners Jal #3 Gas Plant (H2S-45) Lea Co.

Mr. Connolly:

The New Mexico Oil Conservation Division (OCD) is in receipt of the updated H2S Contingency Plan (CP) for the above subject AGI Facility.

OCD has prioritized the CP for review and will respond soon.

Thank you.

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

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

From: Charles Connolly [mailto:cconnolly@cteh.com]
Sent: Wednesday, November 16, 2016 11:05 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Subject: H2S Contingency Plan Submission Energy Transfer Partners Jal #3 Gas Plant

Good afternoon Mr. Chavez,

Please find the attached H2S Contingency Plan for the Jal #3 Gas Plant (30-025-38822 JAL 3 AGI #001 [316030])owned and operated by Energy Transfer Partners for your review. Please confirm receipt of this plan and provide any applicable feedback that deem necessary so that we can modify for final approval.

I appreciate your prompt and professional review of the plan and any suggestions to make it a better overall document.

Regards,

Charles Connolly
Environmental Scientist
TERP Project Manager
Center for Toxicology and Environmental Health, LLC
Office: 281-535-2834
Cell: 501-366-5689

Chavez, Carl J, EMNRD

From: Charles Connolly <cconnolly@cteh.com>
Sent: Wednesday, November 16, 2016 11:05 AM
To: Chavez, Carl J, EMNRD
Subject: H2S Contingency Plan Submission_Energy Transfer Partners Jal #3 Gas Plant
Attachments: Energy Transfer Partners_Jal#3_H2S Contingency Plan_V1.0_11.1.16.pdf

Good afternoon Mr. Chavez,

Please find the attached H2S Contingency Plan for the Jal #3 Gas Plant (30-025-38822 JAL 3 AGI #001 [316030])owned and operated by Energy Transfer Partners for your review. Please confirm receipt of this plan and provide any applicable feedback that deem necessary so that we can modify for final approval.

I appreciate your prompt and professional review of the plan and any suggestions to make it a better overall document.

Regards,

Charles Connolly
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Office: 281-535-2834
Cell: 501-366-5689

CTEH CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

Jal #3 Gas Plant

Jal, New Mexico

H_2S Contingency Plan

Version 1.0

Prepared On Behalf Of:

ENERGY TRANSFER

Prepared By:

Center for Toxicology and Environmental Health, L.L.C.

November 1, 2016

	Name/Position	Signature	Date Signed
Prepared By:	Charles Connolly - CTEH®		11-01-2016
Approved By:			
Approved By:			

H_2S Contingency Plan Management of Change

Change 001			
•			
	Name/Position	Signature	Date Signed
Prepared By:			
Approved By:			

Change 002			
Description of Change (include sections & page numbers):			
	Name/Position	Signature	Date Signed
Prepared By:			
Approved By:			

Change 003			
Description of Change (include sections & page numbers):			
	Name/Position	Signature	Date Signed
Prepared By:			
Approved By:			

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1.0 Introduction

This is a Hydrogen Sulfide (H_2S) Contingency Plan for the Jal #3 Gas Plant located in Jal, New Mexico, approximately 3.5 miles north of Jal, New Mexico with a latitude and longitude of 32°10'30.20"N, 103°10'21.70"W. This station is owned and operated by Energy Transfer Partners (ETP) and has been designed to process 5,200 thousand cubic feet per day (MCFD) of natural gas that will contain 100,000 parts per million (ppm) H_2S.

This plan provides guidelines to assist in responding and managing an emergency in the event of an H_2S release from a pipeline or the facility. This plan is in accordance with the New Mexico Oil Conservation Division (OCD) Rule 11 (Rule 11; **Appendix A**), paragraph 7.6 of the guidelines published by the American Petroleum Institute (API) entitled "Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide," (RP-55), and any other applicable H_2S standards and regulations. A plot plan of the Jal #3 Gas Plant is provided in **Appendix B**.

The following words and terms, when used in this plan, will follow meanings as stated in context of Rule 11.

2.0 Chemical Properties

2.1 Properties of Hydrogen Sulfide

H_2S is a toxic, flammable gas, which is sometimes encountered in the production and processing of well gas, high-sulfur content crude, crude oil fractions, and associated gas. Characteristically, H_2S is heavier than air, colorless, soluble in water, and has a distinguishable rotten-egg odor. This odor cannot be used to detect H_2S because people rapidly lose their sense of smell when H_2S levels are above 100 ppm. The Department of Transportation (DOT) designates H_2S as a flammable gas and poison with identification number (I.D.) UN 1053. The National Institute for Occupational Safety and Health (NIOSH) states that 100 parts of H_2S per million parts of air (100 ppm) is Immediately Dangerous to Life and Health (IDLH) with effects on the respiratory, central nervous and cardiovascular systems. Exposure to more than 15 ppm for 20 minutes may irritate the eyes, nose and throat. No long-term health effects have been found for exposures less than 10 ppm; however, exposure to higher levels may be associated with reduced lung function and neurological effects, e.g. headache, nausea, depression.

Tables 2.1.1 and **2.1.2** below provide the chemical and physical properties and the toxicological effects and exposure limits associated with H_2S, respectively.

Table 2.1.1 Chemical and Physical Properties of H_2S

Property	H_2S Information
Chemical Name	Hydrogen Sulfide (H_2S)
CAS Number	7783-06-4
Synonyms	Sulfurated hydrogen, hydrosulfuric acid, dihydrogen sulfide
Normal Physical State	Colorless gas, vapor density at 59˚F (15˚C) of 1.1895
Ignition Temperature	500˚F (260˚C)
Boiling Point	-76˚F (-60.2˚C)
Melting Point	-117.2˚F (-82.9˚C)
Flammable Limits	4.3 – 46% by volume in air
Solubility	Soluble in water and oil; solubility decreases as the fluid temperature increases
Combustibility	Burns with a blue flame to produce sulfur dioxide
Warning Properties	Has an unpleasant odor similar to the smell of rotten eggs. Detectable at low concentrations (0.0002 – 0.3 ppm). Due to paralyzing effect the gas has on the olfactory nerve at higher concentrations, the sense of smell is not an acceptable indicator.

Table 2.1.2 Toxicological Effects and Exposure Limits of H_2S

Concentration	H_2S Information
0.0002 – 0.3 ppm	Odor Threshold
1 ppm	ACGIH TLV TWA
5 ppm	ACGIH TLV STEL
1-20 ppm	Offensive odor, possible nausea, tearing of the eyes or headaches with prolonged exposure
10 ppm	NIOSH STEL (10 min)
20 ppm	OSHA PEL-C – Irritation of eyes, nose, throat and lung
50 ppm	Loss of sense of smell after about 15 or more minutes of exposure.
100 ppm	NIOSH IDLH – Severe eye, nose, throat and lung irritation. Respiratory, central nervous and cardiovascular system effects.
300 – 500 ppm	May cause unconsciousness and death in 1 to 4 hours
700 – 1000 ppm	May be rapidly fatal
43,000 ppm	Lower explosive limit (LEL)

2.2 Properties of Sulfur Dioxide

Sulfur dioxide (SO_2) is a severe irritant of the eyes, mucous membranes, and skin. Its irritant properties are due to the rapidity with which it forms sulphurous acid on contact with moist membranes. Characteristically, SO2 is heavier than air, colorless, soluble in water, and has a distinguishable pungent odor. The Department of Transportation (DOT) designates SO_2 as a poison gas with an identification number of UN 1079. NIOSH states that 100 parts of SO_2 per million parts of air (100 ppm) is the IDLH with effects on the respiratory, central nervous and cardiovascular systems. Exposure to more than 6-12 ppm may irritate the eyes, nose and throat. No long-term health effects have been found for exposures less than 5 ppm; however, exposure to higher levels may be associated with reduced lung function and neurological effects, e.g. headache, nausea, depression.

Tables 2.2.1 and **2.2.2** below provide the chemical and physical properties and the toxicological effects and exposure limits associated with SO_2, respectively.

Table 2.2.1 Chemical and Physical Properties of SO_2

Property	SO_2 Information
Chemical Name	Sulfur Dioxide (SO_2)
CAS Number	7446-09-5
Synonyms	Sulfurous acid anhydride, Sulfurous oxide, Sulfur oxide
Normal Physical State	Colorless gas, vapor density at 32˚F (0˚C) of 2.264
Ignition Temperature	500˚F (260˚C)
Boiling Point	14˚F (-10˚C)
Melting Point	-103.9˚F (-75.5˚C)
Flammable Limits	Non-Flammable Gas
Solubility	Soluble in water, ethanol, diethyl ether, and chloroform
Combustibility	Non-Flammable Gas
Warning Properties	Colorless gas with a characteristic pungent odor and is a severe irritant of the eyes, mucous membranes, and the skin.

Table 2.2.2 Toxicological Effects and Exposure Limits of SO_2

Concentration	SO_2 Information
0.3 – 5 ppm	Odor Threshold
0.25 ppm	ACGIH TLV STEL
0.1 - 20 ppm	Offensive odor, possible nausea, tearing of the eyes or headaches with prolonged exposure
2 ppm	NIOSH REL TWA
5 ppm	OSHA TWA PEL – Irritation of eyes, nose, throat and lung NIOSH REL STEL
100 ppm	NIOSH IDLH – Severe eye, nose, throat and lung irritation. Respiratory, central nervous and cardiovascular system effects
400 – 500 ppm	May cause unconsciousness and death for even short period of exposure

3.0 General Provisions

ETP participates in an extensive annual Public Awareness Program and Damage Prevention Program. On an annual basis, ETP provides education programs to the Public Officials, Emergency Responders, Contractors, and the General Public in order to promote awareness of ETP pipeline facility locations. ETP underwrites these educational programs and uses various third party groups who specialize in these types of pipeline education programs. ETP attends these education programs to provide additional information to attendees and to monitor the effectiveness of the program.

3.1 Warning and Marker Provisions

There will be conditions met when applying warning and markers inside the facility and outside the fence line. Clearly visible warning signs will be posted on access roads and alternative access points into the plant. Marker signs will contain sufficient information to establish the ownership, and will indicate, by the use of the words “Caution” and “Poison Gas,” that a potential danger exists and will be in compliance with the regulation of the Federal Department of Transportation.

3.2 Security Provision

The Jal #3 Gas Plant will be protected from public access by fencing and a main gate at all times.

3.3 Materials and Equipment Provisions

There will be general conditions met when applying to materials and equipment inside the facility. Construction of the station is in accordance with all current industry standards to ensure all materials and equipment installed has been handled in such a way as not to induce sulfide stress cracking. In the

event of a failure of any element of an existing system as the result of H_2S stress cracking, a detailed written report of the failure will be forwarded to the OCD.

There are also conditions when dealing with emergency shutdown equipment. ETP has installed automatic and manually activated emergency shutdown system (ESD) at the AGI facility at the Jal #3 Gas Plant. The plant operator and/or Incident Commander (IC) may use these systems to shutdown and isolate the equipment in the facility. This is a fail-safe system that will shut valves and equipment if any portion of the system fails. The AGI system will be normally controlled from the Jal #3 Plant Control Room and shutdown of equipment and ESD valves at the well-site may be accomplished from this system as well as at the well-site.

When activated, the ESD shuts an automatic valve on the inlet acid gas feed stream, shuts an automatic valve on the compressed acid gas to the AGI well, and sends a signal to the wellhead panel to shut down automatic valves on the wellhead. The specific major equipment items at an AGI site that are shutdown in an ESD include the acid gas compressors and associated coolers and pumps. The fuel gas, which is used for flare fuel and purge gas is left on-line; however, an automatic valve is provided in this line at the well-site that can be actuated separately in the control system to close this valve.

In the wellhead control panel there is a separate shutdown for the subsurface safety valve (SSSV). The SSSV can be closed if required. The SSSV will close automatically upon detection of high pressure in the wellhead piping. The SSSV will shut if there is a fault in the wellhead control panel.

In addition to these systems, the well-site facility contains portable fire extinguishers that may be used in an emergency. The well-site facility also has air packs used for escape or rescue located throughout the facility at key locations. The facility also has a breathing air system at the compressor units consisting of air bottles, tubing, and a manifold to connect 5-minute air packs. These are primarily used when performing maintenance work on the compressor units; however, they can also be used during an emergency, if required.

ETP has also installed H2S detectors throughout the facility in key locations to detect possible leaks. Upon detection of H2S at 10 ppm at any detector, a visible beacon is activated at that detector and an alarm is sounded. In the event of a detection of H2S at 50 ppm levels at any detector, an evacuation alarm is sounded throughout the facility.

In addition to sounding evacuation alarm sirens, at concentrations of 50 ppm in the acid gas compressor area, the acid gas compressor is shut down and isolation valves upstream and downstream of the unit are closed, including the wellhead automatic wing valve. During shutdowns of the well-site compression or the AGI well, the acid gas will be processed through the sulfur recovery unit (SRU) or, if necessary, flared at the Jal #3 Plant.

This described system satisfies all requirements under Rule 11 regarding downhole conditions in the AGI. The SSSV and the packer and inert fluid filling the annular space, combined with pressure monitoring will ensure safety and Rule 11 compliance.

4.0 Contingency Plan Provision

The purpose of this contingency plan is to provide an organized plan of action of alerting and protecting the public following the accidental release of a potentially hazardous volume of H_2S. This plan shall be activated immediately upon the detection of an accidental release of a potentially hazardous volume of H_2S per the definitions listed in 19.15.11.7 of Rule 11. If the H_2S Contingency Plan is activated, the OCD shall be notified as soon as possible, but no more than one hour after the plan activation. The H_2S Contingency Plan will be available for the OCD at the location indicated on the certificate of compliance, and it will be retained at this location, which will lend itself to the best activation of the plan.

4.1 New Mexico Oil Conservation Division Determination Scenario

The H_2S concentration in the gaseous mixture will be determined in the plant in accordance with standards set by ASTM Standard D-2385-66, GPA Plant Operations Test Manual C-1, GPA Publication 2265-68, and in accordance with 19.15.11.8 Regulatory Threshold of Rule 11. If any of the following conditions are met in regards to the Radius of Exposure (ROE), the activation of the H_2S Contingency Plan will take place:

1. The 100 ppm ROE includes any part of a public area
2. The 500 ppm ROE includes any part of a public road
3. The 100 ppm ROE exceeds 3,000 feet

For all applicable operations, the radius of exposure will be determined as the radius constructed with the point of escape as its starting point and its length calculated using the following Pasquill-Gifford equations found in **Table 4.1.1** below, or by other methods that have been approved by the OCD.

Table 4.1.1 Pasquill-Gifford Equations

Radius of Exposure (ROE)	Equation
100 ppm	$X^* = [(1.589)(\text{mole fraction } H_2S^{**})(Q^{***})]^{0.6258}$
500 ppm	$X = [(0.4546)(\text{mole fraction } H_2S)(Q)]^{0.6258}$

*Radius of exposure (ft)
**Mole fraction of hydrogen sulfide in the gaseous mixture available for escape
***Maximum volume determined to be available for escape (ft^3)

4.2 Jal #3 Gas Plant - Radius of Exposure

The volume used as the worse case scenario escape route for the plant is based on total escape of the maximum daily process rate of 5,200 MCFD from the process piping that will contain 100,000 ppm of H_2S. This scenario is based on the expected shutdown of the SRU and AGI well forcing all acid gas to the flare, which also isn't functioning thus releasing to the atmosphere. This is the worst-case scenario and the information is provided below in **Table 4.2.1.** A map showing the site, worst case ROE, and road blocks is provided in **Appendix C**.

Table 4.2.1 Jal #3 Gas Plant - Worst Case Scenario

Description	Equation	Radius of Exposure (ROE)
100 ppm Equation	$X^* = [(1.589)(0.1^{**})(5{,}200{,}000^{***})]^{0.6258}$	X = 5,046 ft
500 ppm Equation	$X = [(0.4546)(0.1)(5{,}200{,}000)]^{0.6258}$	X = 2,306 ft

*Radius of exposure (ft)
**Mole fraction of hydrogen sulfide in the gaseous mixture available for escape
***Maximum volume determined to be available for escape (ft^3)

Based on the data in **Table 4.2.1** above, the 500 ppm ROE includes a public road (Sid Richardson Road), and the 100 ppm ROE exceeds 3,000 feet. The Jal #3 Gas Plant is equipped with safety devices to detect escape of H2S, and a plat plan of the safety devices and their locations is included in the on-site binder.

4.3 Instructions and Procedures for Alerting the Public

Appendix D is a detailed, internal Emergency Response Plan of Action in the event of an accidental hazardous release of H_2S. Public roads are the only public facilities existing within potential contingency plan requirements. No other known public facilities are within the distance to be considered a potential hazardous area in the event of an accidental release of H_2S. These roads are within the 500-ppm ROE calculation as shown in **Table 4.2.1** of this document.

4.4 Contact Information

The H_2S Contingency Plan as described will be coordinated with the OCD, New Mexico State Police, and the New Mexico Hazardous Materials Emergency Response Plan. A copy of this plan will be submitted to the OCD, New Mexico State Police, and the Local Emergency Planning Committee (LEPC) for Lea County.

The following information, located in **Table 4.4.1,** provides a list of agency contact information that will be contacted via telephone and informed of the situation and activation of this plan. They will be instructed following the information located in Appendix D.

ETP shall make a priority of notifying the OCD upon a release of H_2S requiring activation of this plan as soon as possible, but no more than one hour after the plan activation, recognizing that a prompt response should supercede notification. ETP shall submit a full report of the incident to the OCD on Form C-141 no later than fifteen days following the release.

Table 4.4.1 Agency Contact Information

Agency	City, State	Contact Information
LEPC	Lea County, NM	575-396-8521
Sheriff Department	Jal, NM	575-395-2121
New Mexico State Police	Jal, NM	575-392-5588
Ambulance Service	Jal, NM	911
Jal Clinic*	Jal, NM	575-395-3400
Fire Department	Jal, NM	575-395-2501
State Emergency Response Commission (SERC)	Hobbs, NM	575-393-6161
New Mexico Office of Emergency Management	Sante Fe, NM	505-476-9600
National Response Center (NRC)	National	800-424-8802
Oil Conservation Division (OCD)	Lea County, NM	575-393-6161 575-370-7106** 575-370-3180***

* Doctor to be determined by hospital staff when notified
**Emergency Beeper - After Working Hours Only
***District Supervisor Mobile - After Working Hours Only

While there are no public areas in the ROE calculations, there is one business located at Crawford Lane, just west of the ROE. Their contact information is located below in **Table 4.4.2.**

Table 4.4.2 Public Area Contact Information

Resident/Business	City, State	Contact Information
SunEdison Solar Farm	Jal, NM	650-453-5600
Chaparral Transportation *	Jal, NM	575-390-9684

*Business located on Highway 18 outside of the ROE calculations

Contact information for supervisory personnel working in the Jal #3 Gas Plant is located below in **Table 5.2.3.** A detailed, internal list of contact information for ETP personnel is provided in **Appendix E.**

Table 4.4.3 Jal #3 Gas Plant Contact Information

Company	Individual/Position	Contact Information
Energy Transfer Partners	Yo Olivas/Plant Manager	575-395-2068 575-390-6034*
Energy Transfer Partners	Mark Fisher/Maintenance Manager	575-395-2068 575-631-5843*

*Cell phone number provided

5.0 Training Requirements

Training courses are provided to all plant personnel annually, pertaining to operational and plant topics. This training will be conducted prior to the introduction to the product. The safety training topics offered to all employees at the Jal #3 Gas Plant are provided in detail in **Appendix F.**

Initial training is to take place upon employment with the company and refresher training is to be conducted annually, or sooner, if there is a change in the plan or the need for additional training is determined. Only trained and certified personnel from ETP and any responding agencies will participate in the activation of this plan. All training for ETP personnel will be documented and training records will be maintained and on file at the Monahans EHS office.

Appendix A

New Mexico Oil Conservation Division

Rule 11

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

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

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

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

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

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

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

19.15.11.7 DEFINITIONS:

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

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

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

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

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

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

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

(4) For new oil wells, the escape rate is calculated by multiplying the producing gas/oil ratio by the maximum daily production rate of offset wells in the pool or reservoir, or the pool or reservoir average of the producing gas/oil ratio multiplied by the maximum daily production rate.

(5) For facilities or operations not mentioned, the escape rate is calculated using the actual flow of the gaseous mixture through the system or the best estimate of the actual flow of the gaseous mixture through the system.

E. "GPA" means the gas processors association.

F. "LEPC" means the local emergency planning committee established pursuant to the Emergency Planning and Community Right-To-Know Act, 42 U.S.C. section 11001.

G. "NACE" means the national association of corrosion engineers.

H. "Potentially hazardous volume" means the volume of hydrogen sulfide gas of such concentration that:

(1) the 100-ppm radius of exposure includes a public area;

(2) the 500-ppm radius of exposure includes a public road; or

(3) the 100-ppm radius of exposure exceeds 3000 feet.

I. "Public area" means a building or structure that is not associated with the well, facility or operation for which the radius of exposure is being calculated and that is used as a dwelling, office, place of business, church, school, hospital or government building, or a portion of a park, city, town, village or designated school bus stop or other similar area where members of the public may reasonably be expected to be present.

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

K. "Radius of exposure" means the radius constructed with the point of escape as its starting point and its length calculated using the following Pasquill-Gifford derived equation, or by such other method as the division may approve:

(1) for determining the 100-ppm radius of exposure: $X = [(1.589)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$, where "X" is the radius of exposure in feet, the "hydrogen sulfide concentration" is the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the gaseous mixture and "Q" is the escape rate expressed in cubic feet per day (corrected for standard conditions of 14.73 psi absolute and 60 degrees fahrenheit);

(2) for determining the 500-ppm radius of exposure: $X = [(0.4546)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$, where "X" is the radius of exposure in feet, the "hydrogen sulfide concentration" is the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the gaseous mixture and "Q" is the escape rate expressed in cubic feet per day (corrected for standard conditions of 14.73 psi absolute and 60 degrees fahrenheit);

(3) for a well being drilled, completed, recompleted, worked over or serviced in an area where insufficient data exists to calculate a radius of exposure but where hydrogen sulfide could reasonably be expected to be present in concentrations in excess of 100 ppm in the gaseous mixture, a 100-ppm radius of exposure equal to 3000 feet is assumed.

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

19.15.11.8 REGULATORY THRESHOLD:

A. Determination of hydrogen sulfide concentration.

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

(2) The person shall conduct the tests used to make the determination referred to in Paragraph (1) of Subsection A of 19.15.11.8 NMAC in accordance with applicable ASTM or GPA standards or by another division-approved method.

(3) If the person conducted a test prior to January 31, 2003 that otherwise meets the requirements of Paragraphs (1) and (2) of Subsection A of 19.15.11.8 NMAC, new testing is not required.

(4) If a change or alteration may materially increase the hydrogen sulfide concentration in a well, facility or operation, the person shall make a new determination in accordance with 19.15.11 NMAC.

B. Concentrations determined to be below 100 ppm. If the hydrogen sulfide concentration in a given well, facility or operation is less than 100 ppm, the person is not required to take further actions pursuant to 19.15.11 NMAC.

C. Concentrations determined to be above 100 ppm.

(1) If the person determines the hydrogen sulfide concentration in a given well, facility or operation is 100 ppm or greater, then the person shall calculate the radius of exposure and comply with applicable requirements of 19.15.11 NMAC.

(2) If calculation of the radius of exposure reveals that a potentially hazardous volume is present, the person shall provide results of the hydrogen sulfide concentration determination and the calculation of the radius of

exposure to the division. For a well, facility or operation, the person shall accomplish the determination, calculation and submission 19.15.11.8 NMAC requires before operations begin.

D. Recalculation. The person shall calculate the radius of exposure if the hydrogen sulfide concentration in a well, facility or operation increases to 100 ppm or greater. The person shall also recalculate the radius of exposure if the actual volume fraction of hydrogen sulfide increases by a factor of 25 percent in a well, facility or operation that previously had a hydrogen sulfide concentration of 100 ppm or greater. If calculation or recalculation of the radius of exposure reveals that a potentially hazardous volume is present, the person shall provide the results to the division within 60 days.

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

19.15.11.9 HYDROGEN SULFIDE CONTINGENCY PLAN:

A. When required. If a well, facility or operation involves a potentially hazardous volume of hydrogen sulfide, the person shall develop a hydrogen sulfide contingency plan that the person will use to alert and protect the public in accordance with the Subsections B through I of 19.15.11.9 NMAC.

B. Plan contents.

(1) API guidelines. The person shall develop the hydrogen sulfide contingency plan with due consideration of paragraph 7.6 of the guidelines in the API publication Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide, RP-55, most recent edition, or with due consideration to another division-approved standard.

(2) Required contents. The hydrogen sulfide contingency plan shall contain information on the following subjects, as appropriate to the well, facility or operation to which it applies.

(a) Emergency procedures. The hydrogen sulfide contingency plan shall contain information on emergency procedures the person will follow in the event of a release and shall include, at a minimum, information concerning the responsibilities and duties of personnel during the emergency, an immediate action plan as described in the API document referenced in Paragraph (1) of Subsection B of 19.15.11.9 NMAC, and telephone numbers of emergency responders, public agencies, local government and other appropriate public authorities. The plan shall also include the locations of potentially affected public areas and public roads and shall describe proposed evacuation routes, locations of road blocks and procedures for notifying the public, either through direct telephone notification using telephone number lists or by means of mass notification and reaction plans. The plan shall include information on the availability and location of necessary safety equipment and supplies.

(b) Characteristics of hydrogen sulfide and sulfur dioxide. The hydrogen sulfide contingency plan shall include a discussion of the characteristics of hydrogen sulfide and sulfur dioxide.

(c) Maps and drawings. The hydrogen sulfide contingency plan shall include maps and drawings that depict the area of exposure and public areas and public roads within the area of exposure.

(d) Training and drills. The hydrogen sulfide contingency plan shall provide for training and drills, including training in the responsibilities and duties of essential personnel and periodic on-site or classroom drills or exercises that simulate a release, and shall describe how the person will document the training, drills and attendance. The hydrogen sulfide contingency plan shall also provide for training of residents as appropriate on the proper protective measures to be taken in the event of a release, and shall provide for briefing of public officials on issues such as evacuation or shelter-in-place plans.

(e) Coordination with state emergency plans. The hydrogen sulfide contingency plan shall describe how the person will coordinate emergency response actions under the plan with the division and the New Mexico state police consistent with the New Mexico hazardous materials emergency response plan.

(f) Activation levels. The hydrogen sulfide contingency plan shall include the activation level and a description of events that could lead to a release of hydrogen sulfide sufficient to create a concentration in excess of the activation level.

C. Plan activation. The person shall activate the hydrogen sulfide contingency plan when a release creates a hydrogen sulfide concentration greater than the activation level set forth in the hydrogen sulfide contingency plan. At a minimum, the person shall activate the plan whenever a release may create a hydrogen sulfide concentration of more than 100 ppm in a public area, 500 ppm at a public road or 100 ppm 3000 feet from the site of release.

D. Submission.

(1) Where submitted. The person shall submit the hydrogen sulfide contingency plan to the division.

(2) When submitted. The person shall submit a hydrogen sulfide contingency plan for a new well, facility or operation before operations commence. The hydrogen sulfide contingency plan for a drilling, completion, workover or well servicing operation shall be on file with the division before operations commence and may be

submitted separately or along with the APD or may be on file from a previous submission. A person shall submit a hydrogen sulfide contingency plan within 180 days after the person becomes aware or should have become aware that a public area or public road is established that creates a potentially hazardous volume where none previously existed.

(3) Electronic submission. A filer who operates more than 100 wells or who operates an oil pump station, compressor station, refinery or gas plant shall submit each hydrogen sulfide contingency plan in electronic format. The file may submit the hydrogen sulfide contingency plan through electronic mail, through an Internet filing or by delivering electronic media to the division, so long as the electronic submission is compatible with the division's systems.

E. Failure to submit plan. A person's failure to submit a hydrogen sulfide contingency plan when required may result in denial of an application for permit to drill, cancellation of an allowable for the subject well or other enforcement action appropriate to the well, facility or operation.

F. Review, amendment. The person shall review the hydrogen sulfide contingency plan any time a subject addressed in the plan materially changes and make appropriate amendments. If the division determines that a hydrogen sulfide contingency plan is inadequate to protect public safety, the division may require the person to add provisions to the plan or amend the plan as necessary to protect public safety.

G. Retention and inspection. The hydrogen sulfide contingency plan shall be reasonably accessible in the event of a release, maintained on file at all times and available for division inspection.

H. Annual inventory of contingency plans. On an annual basis, each person required to prepare one or more hydrogen sulfide contingency plans pursuant to 19.15.11 NMAC shall file with the appropriate local emergency planning committee and the state emergency response commission an inventory of the wells, facilities and operations for which plans are on file with the division and the name, address and telephone number of a point of contact.

I. Plans required by other jurisdictions. The person may submit a hydrogen sulfide contingency plan the BLM or other jurisdiction require that meets the requirements of 19.15.11.9 NMAC to the division in satisfaction of 19.15.11.9 NMAC.

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

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

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

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

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

B. Detection and monitoring equipment. Drilling, completion, workover and well servicing operations involving a hydrogen sulfide concentration of 100 ppm or greater shall include hydrogen sulfide detection and monitoring equipment as follows.

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

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

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

C. Wind indicators. Drilling, completion, workover and well servicing operations involving a hydrogen sulfide concentration of 100 ppm or greater shall include wind indicators. The person shall have equipment to indicate wind direction present and visible at all times. The person shall install at least two devices to indicate wind direction at separate elevations that visible from all principal working areas at all times. When a sustained hydrogen sulfide concentration is detected in excess of 20 ppm at a detection point, the person shall display red flags.

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

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

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

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

F. Mud program. Drilling, completion, workover and well servicing operations involving a hydrogen sulfide concentration of 100 ppm or greater shall use a hydrogen sulfide mud program capable of handling hydrogen sulfide conditions and well control, including de-gassing.

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

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

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

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

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

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

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

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

additional measures are required.

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

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

E. Tanks or vessels. The person shall chain each stair or ladder leading to the top of a tank or vessel containing 300 ppm or more of hydrogen sulfide in the gaseous mixture or mark it to restrict entry.
[19.15.11.12 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.13 PERSONNEL PROTECTION AND TRAINING: The person shall provide persons responsible for implementing a hydrogen sulfide contingency plan training in hydrogen sulfide hazards, detection, personal protection and contingency procedures.
[19.15.11.13 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.14 STANDARDS FOR EQUIPMENT THAT MAY BE EXPOSED TO HYDROGEN SULFIDE: Whenever a well, facility or operation involves a potentially hazardous hydrogen sulfide volume, the person shall select equipment with consideration for both the hydrogen sulfide working environment and anticipated stresses and shall use NACE Standard MR0175 (latest edition) or some other division-approved standard for selection of metallic equipment or, if applicable, use adequate protection by chemical inhibition or other methods that control or limit hydrogen sulfide's corrosive effects.
[19.15.11.14 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.15 EXEMPTIONS: A person may petition the director or the director's designee for an exemption to a requirement of 19.15.11 NMAC. A petition shall provide specific information as to the circumstances that warrant approval of the exemption requested and how the person will protect public safety. The director or the director's designee, after considering all relevant factors, may approve an exemption if the circumstances warrant and so long as the person protects public safety.
[19.15.11.15 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

19.15.11.16 NOTIFICATION OF THE DIVISION: The person shall notify the division upon a release of hydrogen sulfide requiring activation of the hydrogen sulfide contingency plan as soon as possible, but no more than four hours after plan activation, recognizing that a prompt response should supersede notification. The person shall submit a full report of the incident to the division on form C-141 no later than 15 days following the release.
[19.15.11.16 NMAC - Rp, 19.15.3.118 NMAC, 12/1/08]

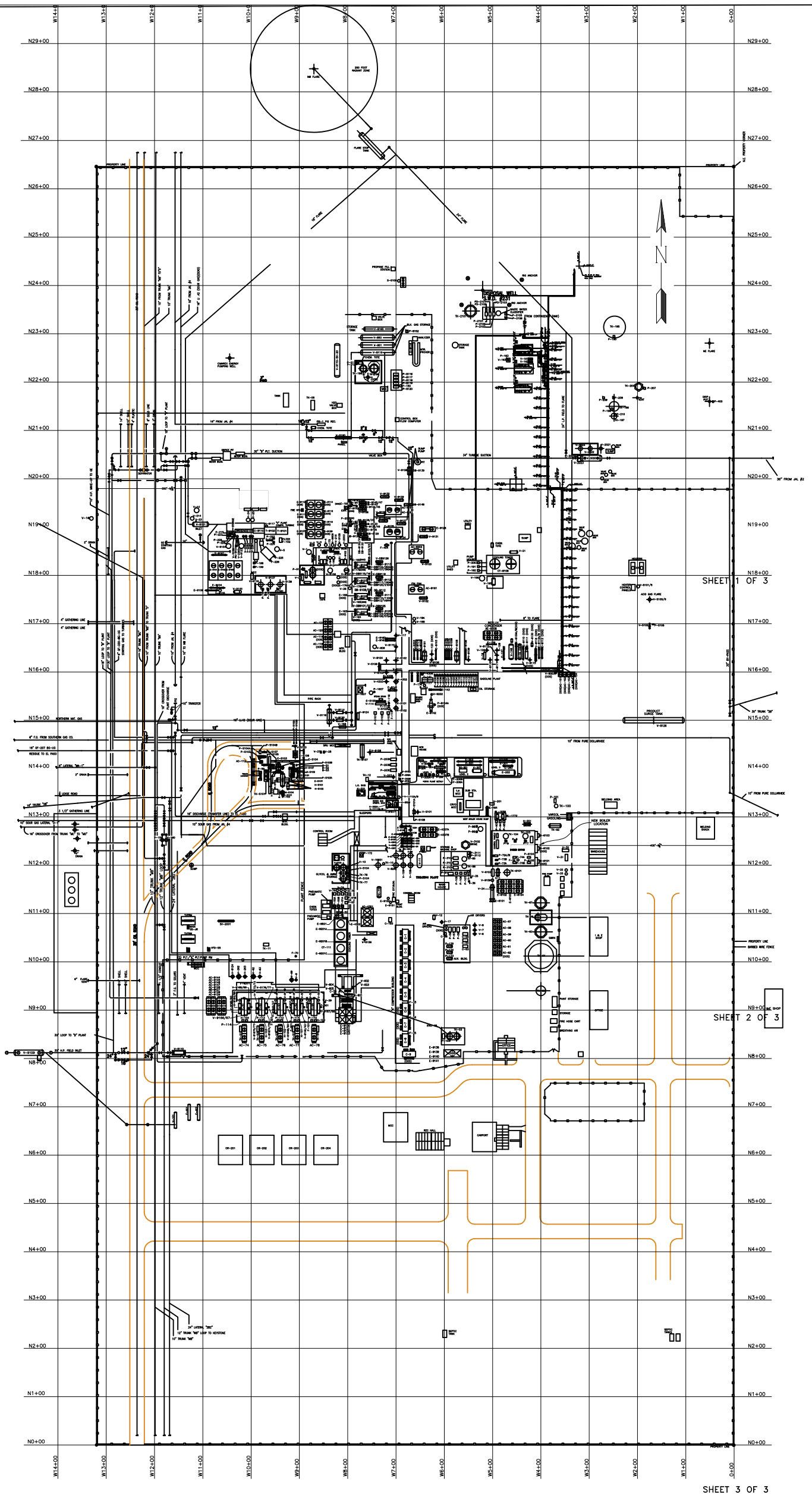
HISTORY of 19.15.11 NMAC:

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

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

Appendix B

Jal #3 Gas Plant Plot Plan



NOTES:

REV.	BY	DATE	DESCRIPTION	APPR'D.	BY
–	–	–	–	–	–
–	–	–	–	–	–
–	–	–	–	–	–
–	–	–	–	–	–
1	CFTS	11/05/15	**REVISED PER CFTS WALK DOWN REDLINES**	–	–
0	JWS	–	**AS BUILT PER SIEMENS OGM PACKAGE**	–	JEM

P & I D

PLOT PLAN

JAL #3 GAS PLANT

ENERGY TRANSFER
1300 MAIN STREET
Houston, Texas 77002
Telephone: (713) 989-7000

DRAWN BY: JWS	DATE: 02/18/08
CHECKED BY: –	DATE: –
APPROVED BY: LK	DATE: 09/2009
SCALE: NTS	AFE No.: –
FILE NAME:	J3-PP-1000
DWG. NO.:	J3-PP-1000

REV. 1

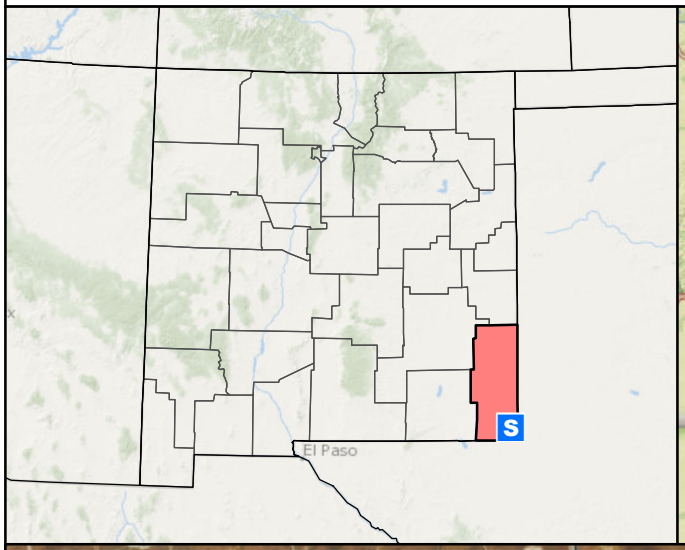
Appendix C

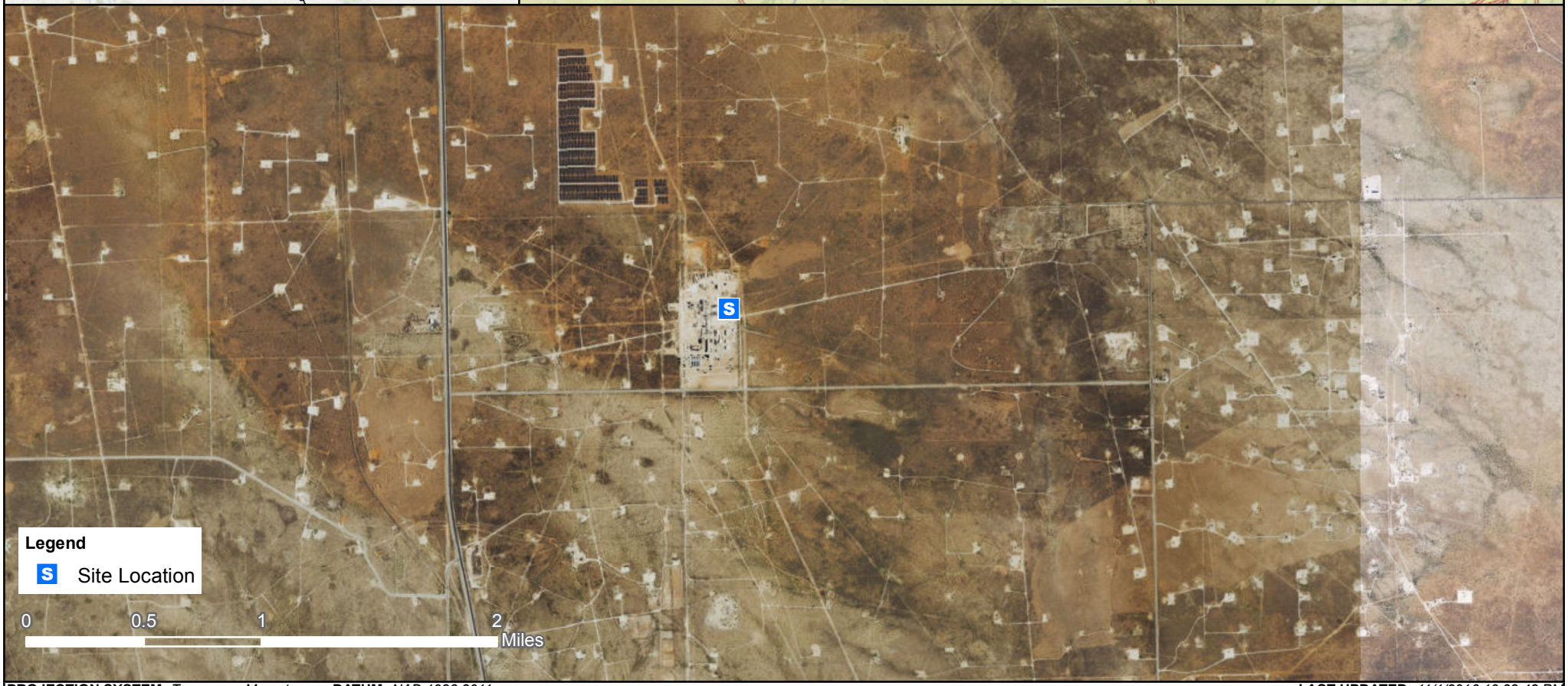
Radius of Exposure and Site Map

Site Location

Energy Transfer Partners

ENERGY TRANSFER



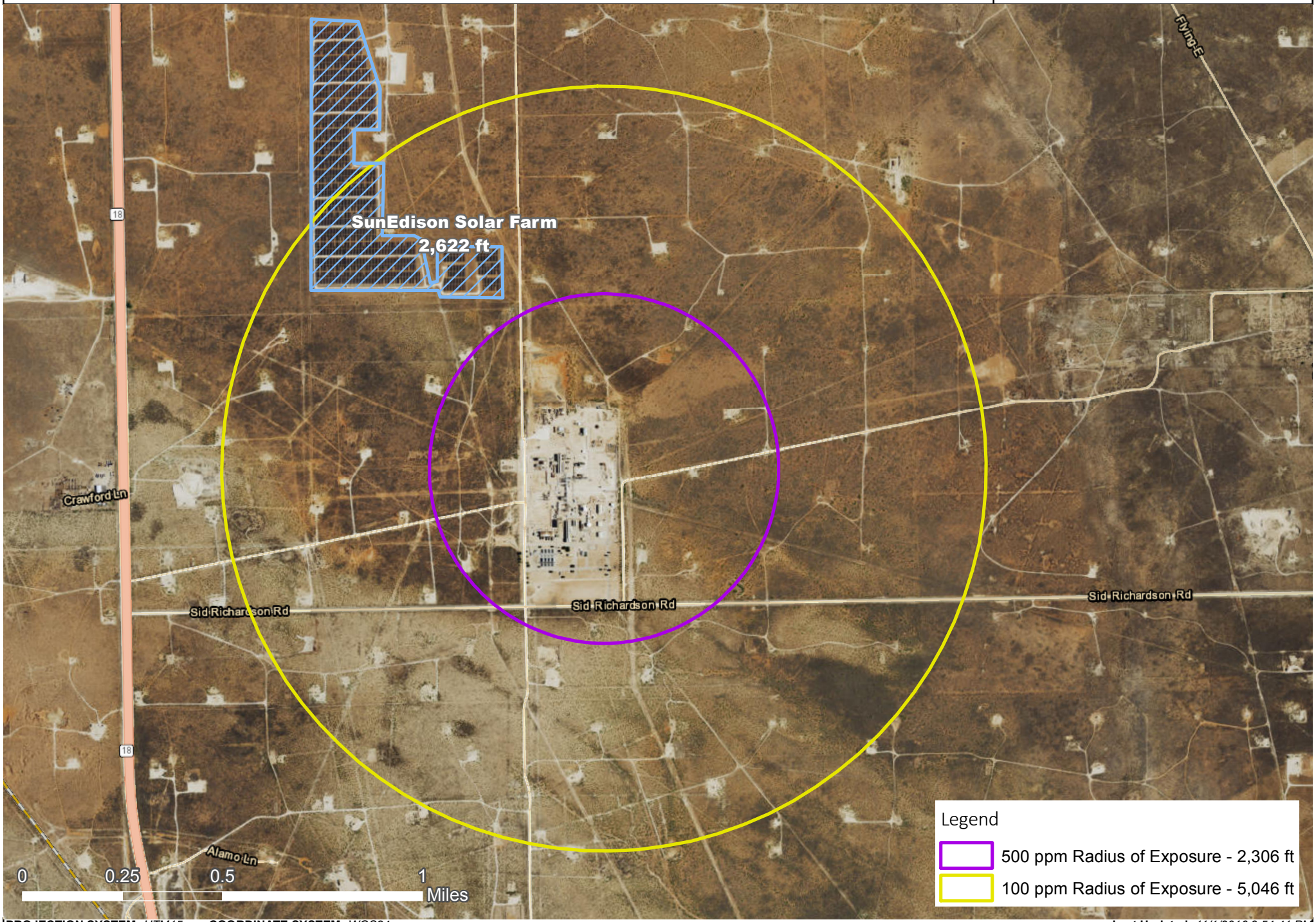


PROJECTION SYSTEM: *Transverse Mercator* **DATUM:** *NAD 1983 2011* **LAST UPDATED:** *11/1/2016 10:33:42 PM*

Radius of Exposure - Appendix C

Energy Transfer Partners

ENERGY TRANSFER

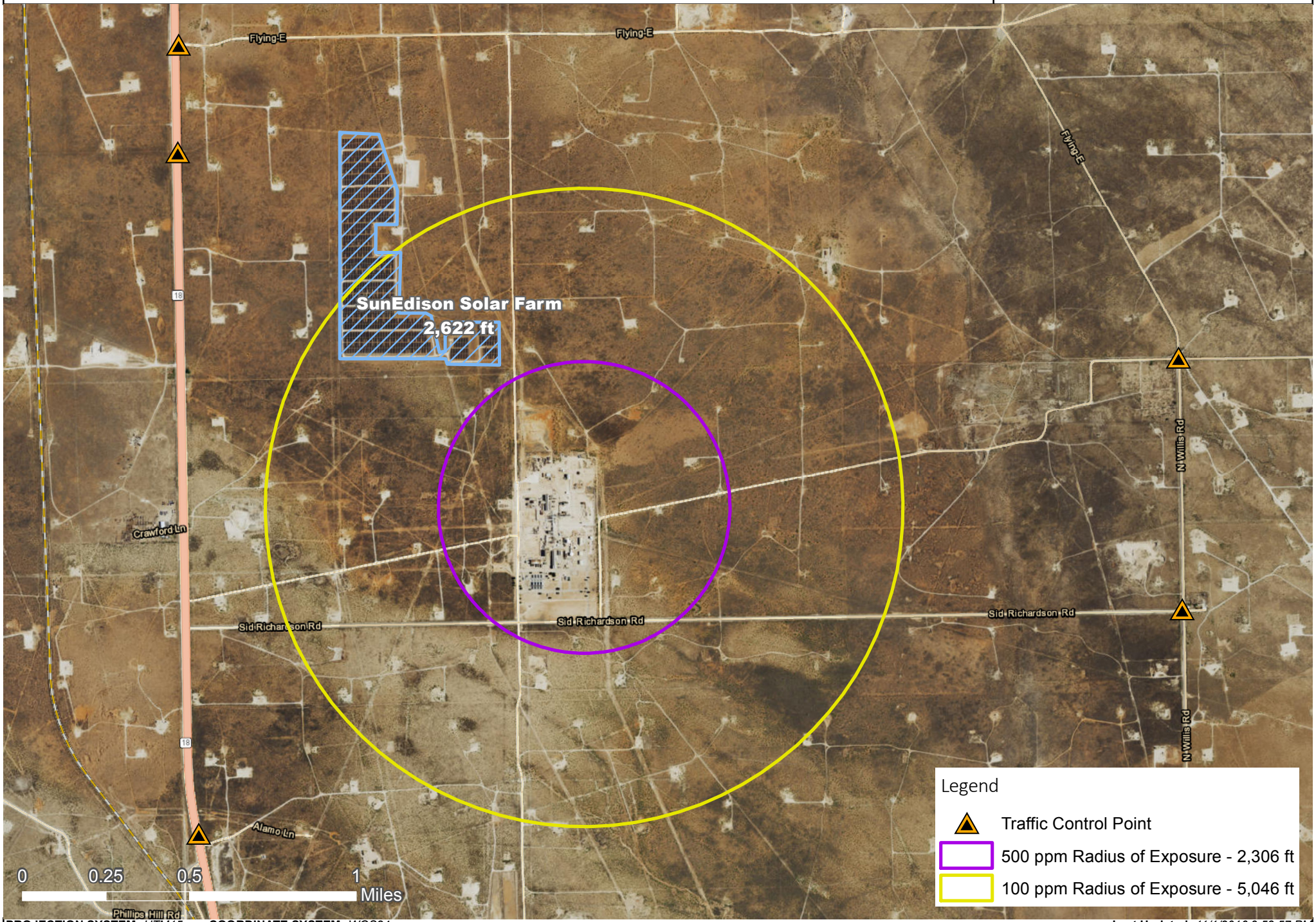


PROJECTION SYSTEM: *UTM15* **COORDINATE SYSTEM:** *WGS84* **Last Updated:** *11/1/2016 9:54:41 PM*

Radius of Exposure - Appendix C

Energy Transfer Partners

ENERGY TRANSFER



PROJECTION SYSTEM: *UTM15* **COORDINATE SYSTEM:** *WGS84* **Last Updated:** *11/1/2016 9:53:57 PM*

Appendix D

Emergency Response Plan of Action

D.1 Emergency Incident Management

Emergency incident management will follow the Incident Command System (ICS) as described by the Federal Emergency Management Act (FEMA). The intent of using ICS for all emergency incidents provides automatic continuity with outside agencies and assists in establishing a "unified command" of the incident. Energy Transfer Partners (ETP) provides instruction and training on the ICS, which is beyond the scope of this plan.

D.2 Emergency Response Policy

It is the policy of ETP to take the necessary actions required to safeguard ETP personnel and the public from emergency incidents. Such emergency incidents may include fires, hazardous materials releases, and incidents resulting from natural hazards such as tornadoes.

In the event of an emergency incident, ETP personnel will take prompt action within their immediate work area to ensure that all appropriate ETP personnel, corporate personnel, and the public are alerted or notified that an emergency incident exists.

Whenever possible, ETP personnel will take immediate action to limit the effects of the emergency. All ETP personnel have the responsibility, if necessary, to immediately alert other ETP personnel that an emergency condition exists and to take appropriate action to protect life, property, and the environment. Emergency response actions taken by individuals should be within the limitations of their training, experience, and physical abilities. At no time will Jal #3 Gas Plant personnel assume an unreasonable risk during an emergency response.

D.3 Equipment

Plant personnel are equipped with personal hydrogen sulfide (H_2S) monitors and portable gas detection devices. The plant has a fully equipped mobile breathing air system with work units. Also, there are self contained breathing apparatus' (SCBA) located strategically throughout the facility. The acid gas injection (AGI) facility itself has additional H_2S monitoring and alarm monitoring systems, which are integrated with the plant H_2S alarm systems.

An emergency response kit and road block kits are located at the egress stations for easy access if the facility is evacuated. Personnel have cell phones for communication, as well as two-way radios for inter-company communication.

Each ETP field truck is equipped with a fire extinguisher in order to enable assistance as needed. Company vehicles are also equipped with two-way radios, road block kits, and cell phones.

The following emergency equipment is located on-site at the Jal #3 Gas Plant: Fire extinguishers, wind socks, fixed H_2S monitors, SCBA, first aid kits, fire blankets, eye wash stations, emergency showers, and personal protective equipment (PPE) boxes.

D.4 Evacuation Procedure

Evacuation may become necessary to protect personnel and the public from hazards associated with an incident. Orderly evacuation is essential to protect the public as well as ETP personnel and property. ETP personnel have reviewed the affected area for this plan and have determined the safe evacuation routes and assembly areas. There are no public areas located within the 500 ppm or the 100 ppm Radius of Exposure (ROE), only the public road (Sid Richardson Road).

The evacuation route will depend on wind direction at all times, so this must be noted prior to evacuation procedures being activated. The primary evacuation assembly area will be at the road block upwind and crosswind on Highway 18. The visitor sign-in sheet will be used to account for all visitors.

In emergencies involving a large acid gas release, road blocks will be issued outside of the Radius of Exposure at the following locations:

- 1 mile North of intersection of Highway 18 and Sid Richardson Road
- 1 mile south of intersection of Highway 18 and Sid Richardson Road
- Intersection of Sid Richardson Road and N Willis Road
- Intersection of N Willis Road and Dollarhide Road
- Intersection of Highway 18 and Highway 14

The unpaved access roads around the Jal #3 Gas Plant will be secured in the event of a release that is likely to cause an exceedance of 10 ppm H2S in the road area. In this event, appropriate road-block locations will be established on these roads.

The Incident Command Post (ICP) will be established at one of the road block locations. The site will be dependent on wind direction. The Incident Commander (IC), after arriving at the ICP, has the authority to assess the situation and determine the severity level of the incident. The IC may determine that the H2S Contingency Plan, as written, cannot be activated effectively and they may make decisions based on their authority.

D.5 Response Procedures for Unintentional Release of H_2S

If an H2S leak is detected as a result of an accidental release, the following plan of action should be put into effect to adequately ensure the safety of ETP personnel, contractors, and the public. These response sequences should be altered to fit the prevailing situation and the site-specific requirements.

1. Upon detecting a leak, assess wind direction and immediately move away from the source and attempt to get out of the affected area by moving upwind and/or crosswind.
2. Alert other personnel in the area. Assist personnel in distress if this can be done without endangering yourself. Proceed to the designated assembly areas as quickly as possible.
3. If injury or death has occurred, immediately call emergency services (911).
4. If possible, take immediate measures by shutting manual valve on AGI line to control present or potential discharge and to eliminate possible ignition sources. Auto control valve may have already activated to shut down flow of acid gas compressor.
5. Notify the supervisory foreman, when possible. The supervisor or their designee will formally assume the role of IC. Until relieved by the supervisor, the senior employee having initially discovered the leak should fill the role of IC.
6. If the IC deems it necessary, ensure that steps are taken to stop traffic through the area, most importantly, highway traffic. Roadblocks must be set up at the 10-ppm boundary outside of the ROE at the previously mentioned locations. The H_2S boundary shall be delineated by using a calibrated H2S monitor. Call all necessary emergency response agencies located in **Table 4.4.1** of this plan for assistance and information, as required.
7. The IC will assess the situation and direct further action to be taken. If assistance is required from law enforcement, safety, or medical agencies, consult the emergency contact information located in **Table 4.4.1** of this plan. All ETP personnel located in **Table 4.4.2** and **Appendix D** should also be notified as soon as time allows.
8. Ensure evacuation of all employees and vistors, and coordinate with emergency services.
9. Personnel equipped with SCBA and portable H_2S monitoring equipment will determine the cause and extent of the leak. Personnel should enter the area from the upwind of the release site. If a reading of 10 ppm or higher of H_2S is obtained, then back-up personnel equipped with SCBA will also be required.
10. If possible, de-energize all sources of ignition, using lockout/tagout procedures.
11. If needed, perform shutdown on appropriate equipment and systems.
12. Trained personnel will continuously monitor H_2S concentrations, wind direction, and area of exposure and will advise public safety and emergency personnel on current conditions.

13. As soon as possible, but no more than one hour after plan activation, notify the New Mexico Oil Conservation Division and Lea County LEPC using the contact information provided in Table 4.4.1 of this plan. At a minimum, the following information will be needed: Company name, facility name, responder name and number, location of discharge, description of affected area, concentration estimate, whether assistance is required from the agency.

Appendix E

Energy Transfer Partners Contact Information

The Incident Commander shall be responsible for notifying the individuals located in Table E as needed.

Table E Emergency Internal Reporting Policy

Individual	Job Title	Work Phone Number	Cell Phone Number
Yo Olivias	Jal #3 Plant Manager	575-395-2068	575-390-6034
Mark Fisher	Jal #3 Maintenance Manager	575-395-2068	575-631-5843
Gregory Mcilwain	Houston VP Gas Operations	713-989-7120	281-979-0487
Mark Milliken	Houston Director EH&S	713-989-7475	713-907-3095
James Shuler	Houston Emergency Response and Security Manager	713-989-6438	281-245-9348
Jim Payne	West Texas Area Safety Senior Safety Specialist	817-302-9721	432-940-5123
Hector Sanchez	West Texas Area Safety Senior Safety Specialist	817-302-9719	432-238-6465
Jack Birden	West Texas Area Safety EH&S Compliance Specialist	817-302-9732	432-208-0947
John McCracken	West Texas Area Office Senior Director	817-302-9802	505-217-5034
Stephen Wells	West Texas Area Office Director of Operations	817-302-9802	469-616-4796
Johnnie Bradford	West Texas Area Office Air Quality Supervisor	817-302-9802	432-250-5542

Appendix F

Training Requirements

The following list of training topics is presented annually and provided by the Energy Transfer Partners EHS Department through safety meetings and stand-up classes:

1. **New Employee Orientation - (New employees only)**
2. **Hydrogen Sulfide Training**
    a. Monitors (Stationary and Personal)
    b. Operation of Safety Equipment and Life-Support System, Including Breathing Equipment, e.g. Scott Air Packs, Cascade Systems and Escape Packs
    c. Hazards and Characteristics of H_2S
    d. Safety Precautions
3. **Fire Training**
    a. Portable Extinguisher
    b. FE-36 Clean Guard Extinguishers
    c. Hands-On Fire Extinguisher Training
4. **Hazard Communication**
    a. Chemical Handling
    b. Safety Data Sheets (SDS)
    c. Personal Protective Equipment (PPE)
    d. Written Program and Location
    e. Labeling
5. **Lockout/Tagout**
6. **Confined Space**
7. **Hearing Conservation Program**
8. **First Aid/CPR/AED Training**
9. **Bloodborne Pathogens**
10. **Hot Work Permits**
11. **General Work Permits**