

# **APPENDIX M**

## **H<sub>2</sub>S CONTINGENCY PLAN**

State of New Mexico  
Energy, Minerals and Natural Resources Department

**Susana Martinez**  
Governor

**David Martin**  
Cabinet Secretary

**Brett F. Woods, Ph.D.**  
Deputy Cabinet Secretary

**David R. Catanach**  
Division Director  
Oil Conservation Division



**FEBRUARY 3, 2015**

Julie W. Gutiérrez  
**Geolex, Inc<sup>®</sup>**  
500 Marquette Avenue, NW Suite 1350  
Albuquerque, NM 87102

**RE: DCP Midstream, L.P. (H2S-043): "Linam Ranch Gas Plant and Acid Gas Injection (AGI) Facility H2S Contingency Plan" dated January 2015 in Lea County, New Mexico**

Dear Mrs. Gutiérrez:

The Oil Conservation Division (OCD) is in receipt of DCP Midstream Services, LLC's "**Linam Ranch Gas Plant and Acid Gas Injection (AGI) Facility H2S Contingency Plan**" (plan) dated January 2015.

OCD has completed its review of the plan and finds that it appears to meet the intent of the OCD Hydrogen Sulfide Gas Regulations (19.15.11 NMAC). Therefore, OCD hereby **accepts** the plan for record.

*Please be advised that OCD approval of this plan does not relieve DCP Midstream, L.P. of responsibility should their operations fail to adequately detect, investigate, and/or undertake corrective actions to prevent or stop a hydrogen sulfide release(s) that may pose a threat to groundwater, surface water, human health, public safety or the environment. In addition, OCD approval does not relieve DCP Midstream, L.P. of responsibility for compliance with any other federal, state, or local laws and/or regulations.*

If you have any questions, please contact Carl Chavez of my staff at (505) 476-3490, mail at the address below, or email at [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us). Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jim Griswold".

Jim Griswold  
Environmental Bureau Chief

JG/cjc

cc: OCD Hobbs District Office

## VI. RADII OF EXPOSURE [NMAC 19.15.11.7. K]

For the Linam Ranch Plant and AGI Facility operations, the “Radius of Exposure” for both 500 ppm and 100 ppm of H<sub>2</sub>S gas was determined using the “escape rate” which is calculated using the maximum daily rate of the gaseous mixture that is handled by the Plant and the AGI Facility. **The rates and other variables used to calculate the ROE are discussed in greater detail in Appendix F – Worst Case Scenario and ROE calculations. Also refer to Figure 6 - ROE Map showing 500 and 100 ppm ROE for the Plant, AGI Facility and pipeline connecting them.**

	<u>500-ppm ROE</u>	<u>100-ppm ROE</u>
<b>Plant, Pipeline and AGI Facility</b>	<b>3,443 ft.</b>	<b>7,535 ft.</b>

## VII. FACILITY DESCRIPTION, MAPS AND DRAWINGS [NMAC 19.15.11.9.B (2)(c)] [API RP-55 7.4 c.]

### Description of Plant Operations

The Linam Ranch Plant is located on 165 acres of land and is completely fenced and secured. The Plant operations include gas compression, treating and processing, as well as flow lines and storage tanks. The Plant gathers and processes produced natural gas from Lea and Eddy Counties in New Mexico. Once gathered at the Plant, the produced natural gas is compressed, treated in an amine process for the removal of CO<sub>2</sub> and H<sub>2</sub>S, dehydrated to remove the water content and processed to remove and recover natural gas liquids. The processed natural gas and recovered natural gas liquids are then sold and shipped to various customers.

Because the natural gas that is gathered and processed at the Plant contains H<sub>2</sub>S ("sour gas") it must be treated or processed to remove these and other impurities. The CO<sub>2</sub> and H<sub>2</sub>S stream that is removed from the natural gas in the amine treating process is compressed to approximately 90 psi and then sent via a high density polyethylene lined 8” steel pipeline to the Acid Gas Injection Facility, approximately 2 miles from the Plant, where the Linam AGI #1 and Linam AGI #2 are located.

### Description of AGI Facility Operations

The acid gas stream is received at the AGI Facility where it is further compressed to 1500 - 2644 psi. This is accomplished using electric driven, reciprocating compressors. Water vapor contained in the gas stream is removed during compression and cooling and is pumped back to the Plant location via a polyethylene lined 4” steel pipeline for disposal through the existing wastewater disposal system.

At the AGI Facility acid gas is injected into the Lower Bone Spring formation at a depth of 8,710 feet to 9085 feet below the surface. The wellbore of each well is constructed with three casing strings, all with cement circulated to the surface. Both AGI #1 and AGI #2 are constructed consistent with requirements of applicable NMOCC orders. Pursuant to NMAC 19.15.11.12.D(2) in each well there is internal control equipment: the injection tubing is attached to the packer and is equipped with a check valve located below the packer and a hydraulically operated SSV located approximately 250 feet below the surface. Linam AGI #2 has been installed to provide redundancy in the event that Linam AGI #1 is shut in for repairs or upgrades. Linam AGI #2 is located within 500 feet of Linam AGI #1, and thus, the depth

intervals of the injection zone are approximately the same as for Linam AGI #1. Figures 7 and 8 show the wellbore schematic for both AGI #1 and AGI #2.

In compliance with NMAC 19.15.11.12.B the AGI Facility is secure and fenced. It is normally unmanned but is fully automated and is connected to the Linam Ranch Plant control room DCS via a fiber optic line. The AGI Facility operations are monitored and are controlled from the Linam Ranch Plant. Video cameras located at the Facility provide visibility throughout the AGI Facility to the Linam Ranch Plant control room.

### **Map of Plant and AGI Facility**

Figure 1 shows the Plant and AGI Facility, including Linam AGI #1, Linam AGI #2 and the pipeline that connects the plant and the AGI Facility.

## **VIII. TRAINING AND DRILLS [NMAC 19.15.11.9.B(2)(d)] [API RP-55 7.4 d.]**

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

- Characteristics of H<sub>2</sub>S and safety precautions
- An overview of the Linam Ranch Plant and AGI operations
- A review of their roles in responding to activation of the Linam Ranch Plant H<sub>2</sub>S Contingency Plan
- Location of the Radii of Exposure and how to protect the public within the Radii of Exposure
- Potential roadblock locations, potential evacuation routes, and how they can assist in implementing the Plan.

### **Duties and Responsibilities of Essential Personnel**

Training for DCP personnel shall include the Linam Ranch Plant work group – consisting of plant operators, mechanics, instrument and electrical technicians, and maintenance support personnel. Plant Operators will be responsible for initiating and implementing the H<sub>2</sub>S Contingency Plan. In addition, all Plant personnel will receive:

- Annual training on the H<sub>2</sub>S Contingency Plan. This training will include a review of all aspects of the Plan and will include, at a minimum, one table top drill involving activation of the H<sub>2</sub>S Contingency Plan.
- Plant Orientation Training - All Plant personnel, visitors, and contractors must attend a Plant overview orientation prior to obtaining permission to enter the Plant. A refresher course on this training is required annually for all persons. Included as part of this orientation is how to respond and evacuate safely in the event of a H<sub>2</sub>S alarm or release. This training also complies with the requirements of the DCP and Linam Ranch Plant's Process Safety Management Program and Procedures Manuals.
- All Plant personnel are also trained annually on the Linam Ranch Emergency Response Plan.
- H<sub>2</sub>S and SO<sub>2</sub> Training - All Plant personnel receive annual refresher training on H<sub>2</sub>S and SO<sub>2</sub>, which is conducted by DCP personnel. If an individual is unable to attend, they may be required to attend a third party training session. All contract employees are required to have had H<sub>2</sub>S training and to provide the Plant a copy of their certification card prior to obtaining permission to enter the Plant.
- Respirators - All Plant personnel are trained annually on the proper use of respirators. In addition to the annual training, all Plant personnel are fit tested annually on the respirators. All Plant personnel must have medical clearance for respirator use.

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

#### **On-Site or Classroom Emergency Response Drills**

- The Plant will conduct, at least, one tabletop drill annually. Multiple drills during the year may be scheduled at the discretion of the Plant Supervisor.
- The annual drill will execute this Plan and include, at a minimum, the Public Officials and Local Emergency Response Agencies listed below and will also include making contact with the entities that are identified as being within the 500 ppm and 100-ppm ROE (see Appendix E) to make sure contact information for them is current. The drills will also include briefing of public officials on issues such as evacuation or shelter-in-place plans.

#### **Notification and Training of Business, Individuals, and Producers Located Within the ROE**

DCP Midstream will provide annual training to the businesses, individuals and producers listed in Appendix E that includes:

- An overview of the Linam Ranch Plant and AGI operations
- Design and operating safety features on the Linam Ranch Plant
- A review of the H<sub>2</sub>S alarms and significance
- Notification procedures
- Roadblock locations
- Potential evacuation routes,
- Procedures for sheltering in place
- Radii of exposure

#### **Training of Public Officials and Emergency Response Agencies**

All of the Emergency Response Agencies listed in Appendix E will have copies of the H<sub>2</sub>S Contingency Plan, and DCP Midstream will provide annual training to the following Emergency Response Agencies:

- NM State Police-Hobbs Office
- Lea County 911 Emergency Response
- Lea County Emergency Planning Committee
- Hobbs Police Department
- Lea County Sherriff's Department
- Hobbs Fire Department
- New Mexico Oil Conservation Division-Hobbs District Office

Training will include:

- An overview of the Linam Ranch Plant and AGI Facility operations
- Design and operating safety features on the Linam Ranch Plant and AGI Facility
- A review of the H<sub>2</sub>S alarms and their significance
- Notification procedures
- Roadblock locations
- Potential evacuation routes,
- Procedures for sheltering in place
- Radii of exposure

### **Training and Attendance Documentation**

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

- Description or scope of the drill, including date and time
- Names of attendees and participants in the drill
- Summary of activities and responses
- Post-drill debriefing and reviews

## **IX. COORDINATION WITH STATE EMERGENCY PLANS [NMAC 19.15.11.9.B(2)(e)]**

### **NOTIFICATIONS AND REPORTS**

The Plant 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, Plant personnel also have internal and external notification and reporting obligations associated with the activation of this Plan. Reporting obligations are as follows:

#### **New Mexico Oil Conservation Division (OCD) [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 II Office of the activation of the H<sub>2</sub>S 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.

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

The New Mexico State Police are responsible for overall scene management and coordination of all resources. A designated Emergency Response Officer (ERO) will establish the National Interagency Incident Management System (NIIMS) Incident Command System (ICS) as the IC (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.

### **PLAN ACTIVATION [NMAC 19.15.11.9.C] [API RP-55 7.4 d]**

The plan will be activated as described in the Immediate Action Plan Section of this document (**see Appendices A through D for Immediate Action Plans and associated Response Flow Diagrams**). **At a minimum, Per NMAC 19.15.11.8.C, the Plan also shall be activated whenever a release may create an H<sub>2</sub>S concentration of more than 100 ppm in a public area, 500 ppm at a public road or 100 ppm 3,000 feet from the site of release.**

#### **Activation Levels**

The Plan has three (3) activation levels that are described in detail in the Immediate Action Plan Section of this Plan (see Appendices A through D) and in outline form in the Response Flow Diagrams in each of the appendices.

##### **Level 1:**

Intermittent alarm sounded and flashing yellow beacons activated for H<sub>2</sub>S greater than 10 ppm at personal or fixed monitor.

**Level 2:**

Continuous alarm sounded and flashing yellow beacons activated for H<sub>2</sub>S greater than 20 ppm; or release 10 ppm or greater of H<sub>2</sub>S detected for longer than 15 minutes; corrective actions at Level 1 have been unsuccessful. Operators activate AGI PSD and/or Linam Ranch Plant ESD, depending on location of the release. Notification of the public including individual residences, businesses, and state agencies is initiated.

**Level 3:**

Catastrophic release; fire; explosion; a continuous release of maximum volume for 24 hours; or Rule 11 mandatory activation for 100 ppm in any defined public area; 500 ppm at any public road; or 100 ppm at a distance greater than 3000 feet from the site or the release. Operators activate ESD system at the Plant. Notification of the public, individuals and businesses and state agencies is initiated.

**Events that Could Lead to a Release of H<sub>2</sub>S**

- Inlet and plant piping failure
- Amine still failure (This would be a leak in the amine process equipment or amine still utilized to separate methane from H<sub>2</sub>S and CO<sub>2</sub>.)
- Flange/gasket leaks on inlet and plant piping
- Flange/gasket leak on the acid gas compressors
- Flange/gasket or valve packing leak at the AGI Well or associated piping
- Valve packing failure
- Seal failure on acid gas compressors
- Failure of flare to ignite during Plant emergency blow down
- Damage to AGI Wellhead
- Damage to Pipeline between Plant and AGI Facility

**X. SUBMISSION OF H<sub>2</sub>S CONTINGENCY PLANS [NMAC 19.15.11.9.D]****Submission**

DCP Midstream, LP submitted this revised H<sub>2</sub>S Contingency Plan to the OCD for review and approval in January 2015.

**Retention**

DCP Midstream shall maintain a copy of the contingency plan at the Linam Ranch Gas Plant, at DCP Headquarters in Hobbs, NM and at DCP Headquarters office in Denver, CO. The plan as approved by the OCD will be readily accessible for review by the OCD at the facility upon request.

**Revisions to the Plan**

The H<sub>2</sub>S 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 Facility, specifically those areas within the radii-of-exposure.

**Annual Inventory of Contingency Plans**

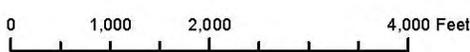
DCP Midstream, LP will file an annual inventory of wells, facilities and operations for which H<sub>2</sub>S Contingency Plans are on file with the OCD with the appropriate Local Emergency Planning Committee (LEPC) and the State Emergency Response Commission as per NMAC 19.15.11.9H. The inventory shall include the name, address, telephone number, and point of contact for all operations for which H<sub>2</sub>S Contingency Plans are on file with the OCD.

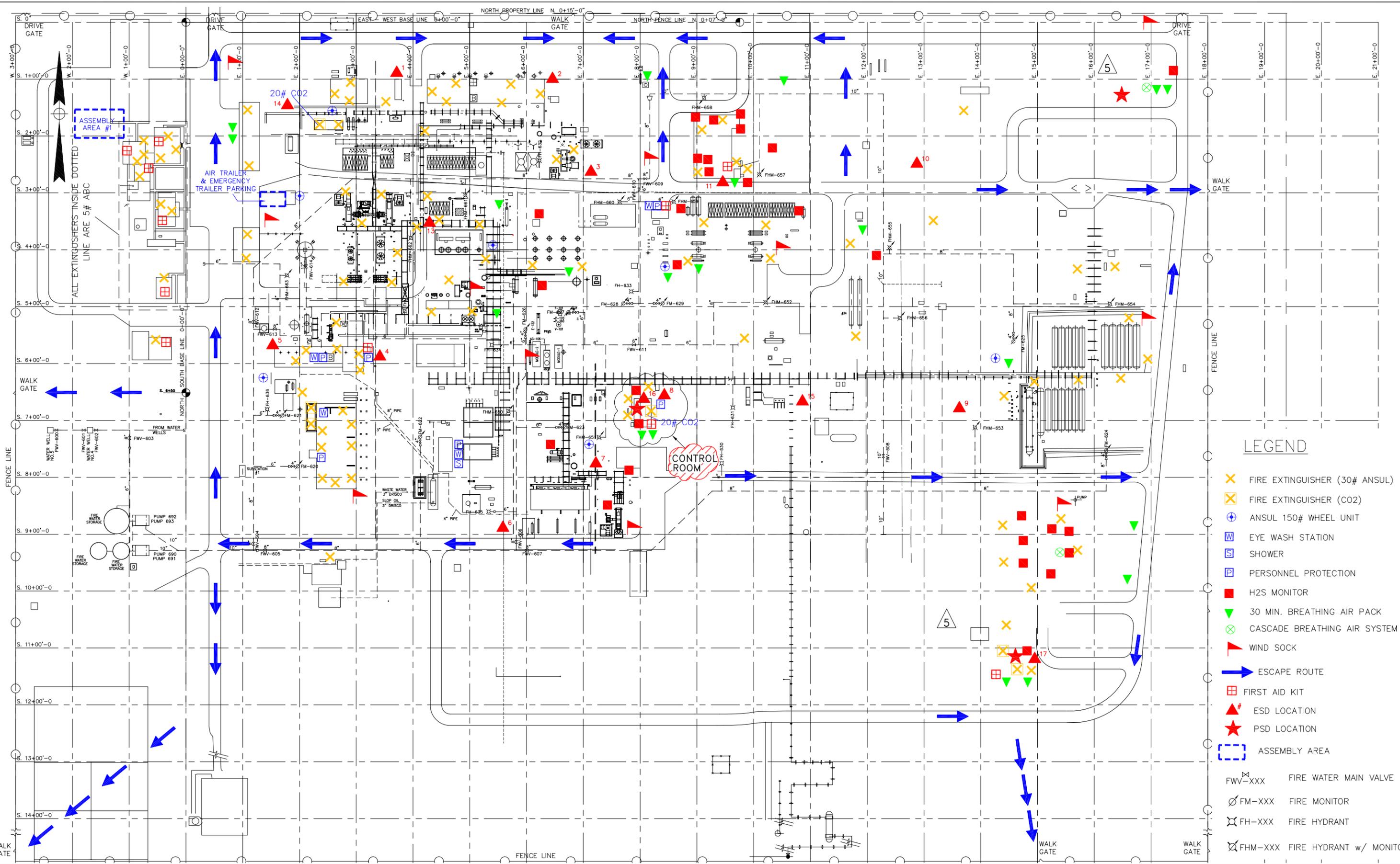
# FIGURES

FIGURE 1  
 Linam Ranch Gas Plant &  
 Acid Gas Injection Property



- ★ Public Receptors
- ★ DCP Plants
- DCP Property Boundaries
- AGI Pipeline ROW
- TOWNSHIP
- SECTION





**LEGEND**

- X FIRE EXTINGUISHER (30# ANSUL)
- X FIRE EXTINGUISHER (CO2)
- ⊕ ANSUL 150# WHEEL UNIT
- W EYE WASH STATION
- S SHOWER
- P PERSONNEL PROTECTION
- H2S MONITOR
- ▼ 30 MIN. BREATHING AIR PACK
- ⊗ CASCADE BREATHING AIR SYSTEM
- ▲ WIND SOCK
- ➔ ESCAPE ROUTE
- ⊠ FIRST AID KIT
- ▲ ESD LOCATION
- ★ PSD LOCATION
- ASSEMBLY AREA
- FWM-XXX FIRE WATER MAIN VALVE
- FM-XXX FIRE MONITOR
- FH-XXX FIRE HYDRANT
- FHM-XXX FIRE HYDRANT w/ MONITOR

REV.	DATE	REVISION	BY	CHK'D	ENGR.	REV.	DATE	REVISION	BY	CHK'D	ENGR.
1	1/12/99	ADDED FIREMAINS	JC			6	10/7/09	REVISED EMERGENCY EQUIPMENT	wrt		
2	9/21/04	UPDATED SAFETY EQUIPMENT LOCATIONS	P.L.								
3	3/08/06	ADDED WIND SOCKS	P.L.								
4	8/23/06	REVISED PER EQUIPMENT REMOVAL	wrt								
5	3/13/09	ADDED AGI EQUIPMENT	MAC								

NOTES:

**FIGURE 2**



**SAFETY EQUIPMENT LOCATION PLAN  
LINAM RANCH PLANT**

JA NO. FILE NAME  
07307MP002

AFE NO. SCALE  
1"=80'

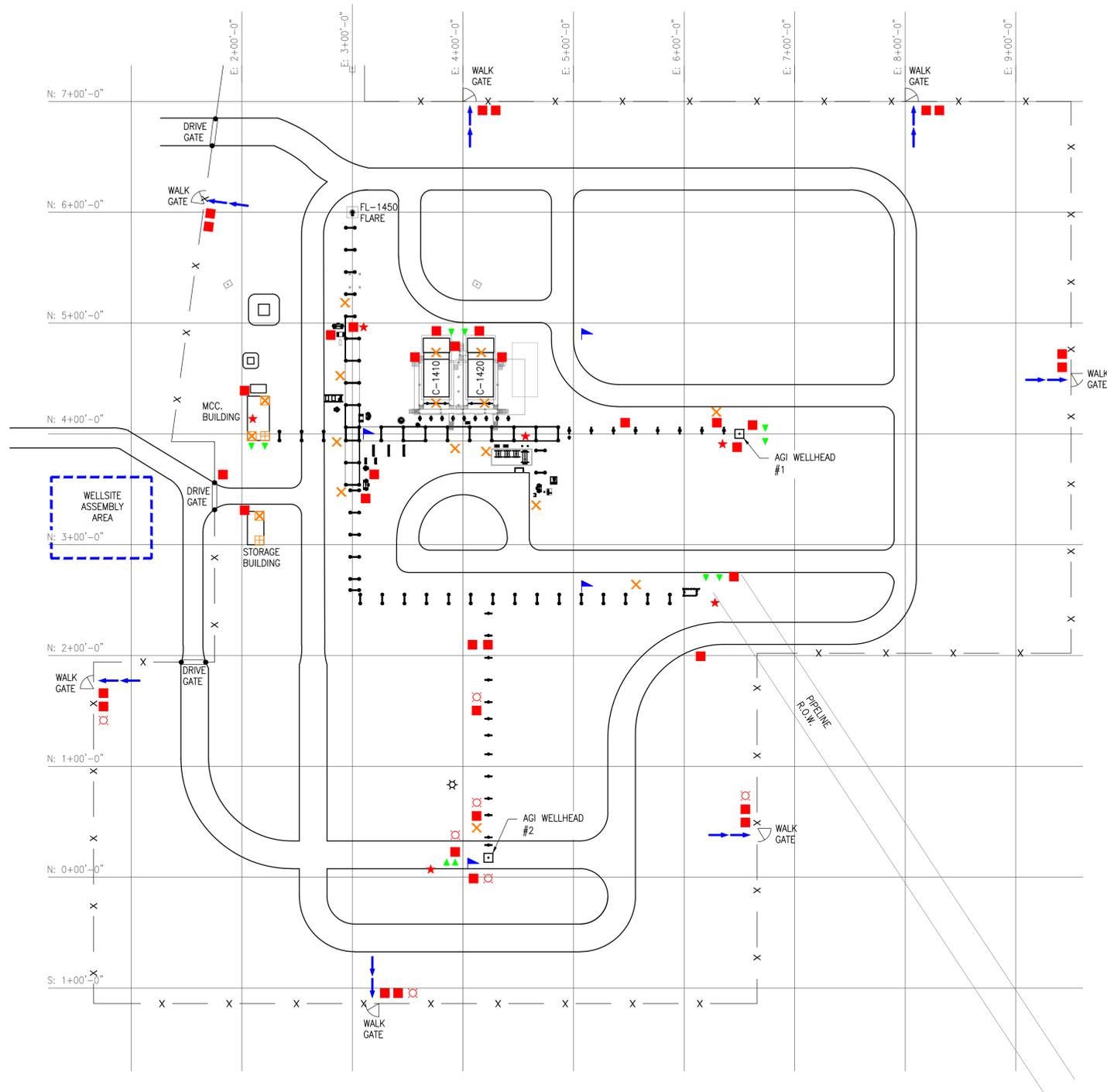
BASE NO. 07-3-07

DWG. NO. M-5

DRAWN: COLEMAN DATE: 5/14/96

PLOT TIME: October 27 2009 - 11:25 am

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A



NOTE:  
1. REFER TO VENDOR DRAWING FOR EQUIPMENT DETAILS.

- LEGEND:
- FIRE EXTINGUISHER (30 # ANSUL)
  - FIRE EXTINGUISHER (002)
  - H2S
  - ALARM STROBE
  - MIN BREATHING AIR PACK
  - CASCADE BREATHING AIR SYSTEM
  - ESCAPE ROUTE
  - PSD LOCATION
  - FIRST AID KIT
  - WIND SOCKS

**SAFETY EQUIPMENT LOCATION PLAN**  
SCALE: 1/64"=1'-0"

**FIGURE 3**  
**AGI #1 and AGI #2**

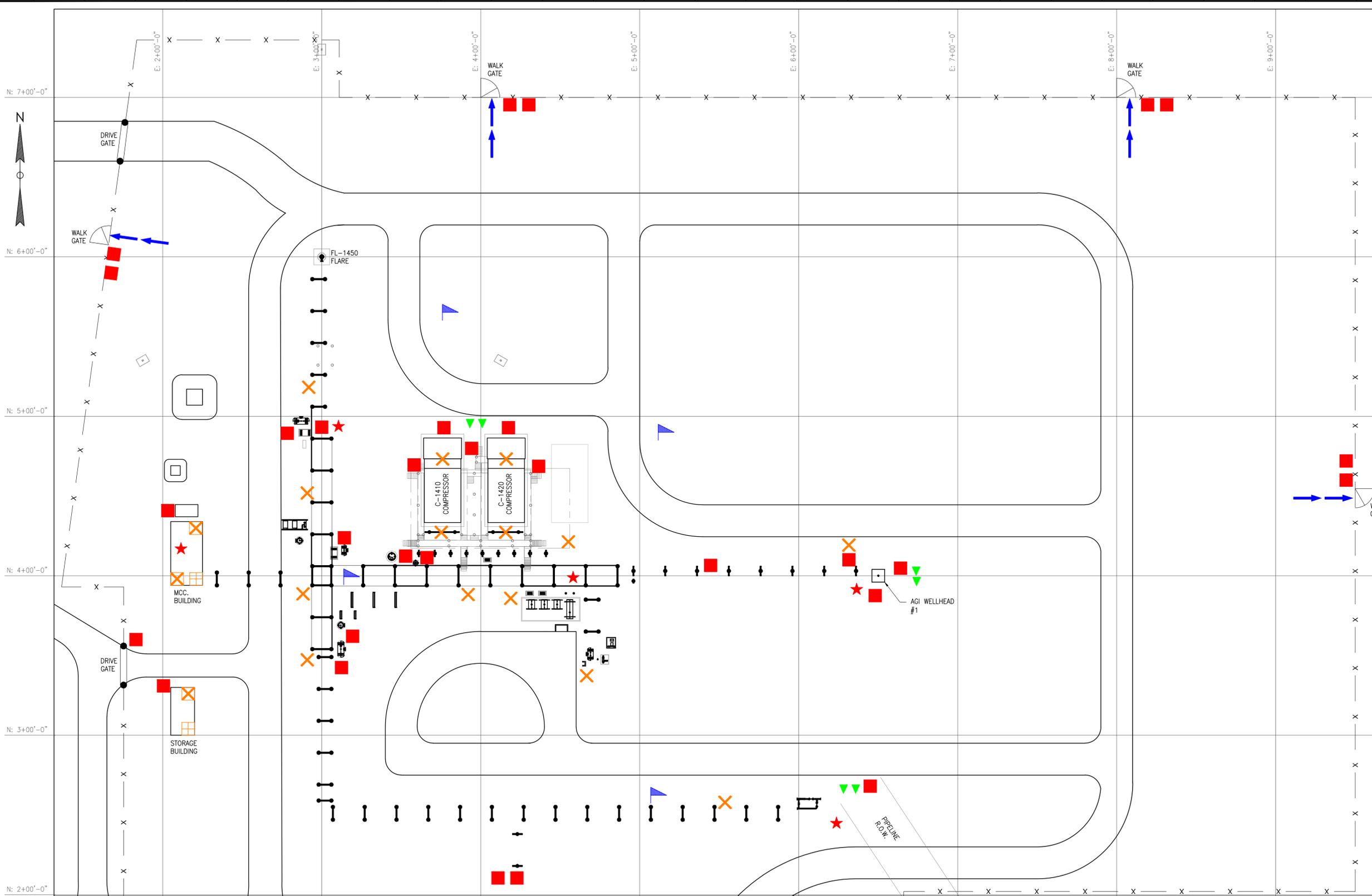
THIS DRAWING HAS NOT BEEN PUBLISHED BUT RATHER HAS BEEN PREPARED BY ZAP ENGINEERING & CONSTRUCTION SERVICES, INC. FOR USE BY THE CLIENT NAMED IN THE TITLE BLOCK SOLELY IN RESPECT OF THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THE FACILITY NAMED IN THE TITLE BLOCK AND SHALL NOT BE USED FOR ANY OTHER PURPOSE OR FURNISHED TO ANY OTHER PARTY WITHOUT THE EXPRESS CONSENT OF ZAP ENGINEERING & CONSTRUCTION SERVICES, INC.

REFERENCE DRAWINGS					
NO.	TITLE				
2	ISSUED FOR CONSTRUCTION	WBH	JJH	JJH	01/27/15
1	ISSUED FOR CONSTRUCTION	AS	JTS	JJH	10/3/14
0	ISSUED FOR CONSTRUCTION	WSG	JJH	JJH	08/12/14
NO.	REVISION	BY	CHK	APVD	DATE



ENG. RECORD	DATE
DRAWN BY: GT	02/07/13
CHECKED BY: JRE	02/14/13
APPROVED BY: JJH	02/14/13
PLOT SCALE: ANSI D	
SCALE: AS NOTED	

SAFETY EQUIPMENT LOCATION PLAN (OVERALL)	
JOB NO.	12067
DRAWING NO.	12067-C02-1002
REV.	2



NOTE:  
1. REFER TO VENDOR DRAWING FOR EQUIPMENT DETAILS.

- LEGEND:
- FIRE EXTINGUISHER (30 # ANSUL)
  - FIRE EXTINGUISHER (002)
  - H2S
  - ALARM STROBE
  - MIN BREATHING AIR PACK
  - CASCADE BREATHING AIR SYSTEM
  - ESCAPE ROUTE
  - PSD LOCATION
  - FIRST AID KIT
  - WIND SOCKS

FIGURE 3a  
Linam Ranch AGI Facility  
AGI #1 Detail

**SAFETY EQUIPMENT LOCATION PLAN**  
SCALE: 1/32"=1'-0"

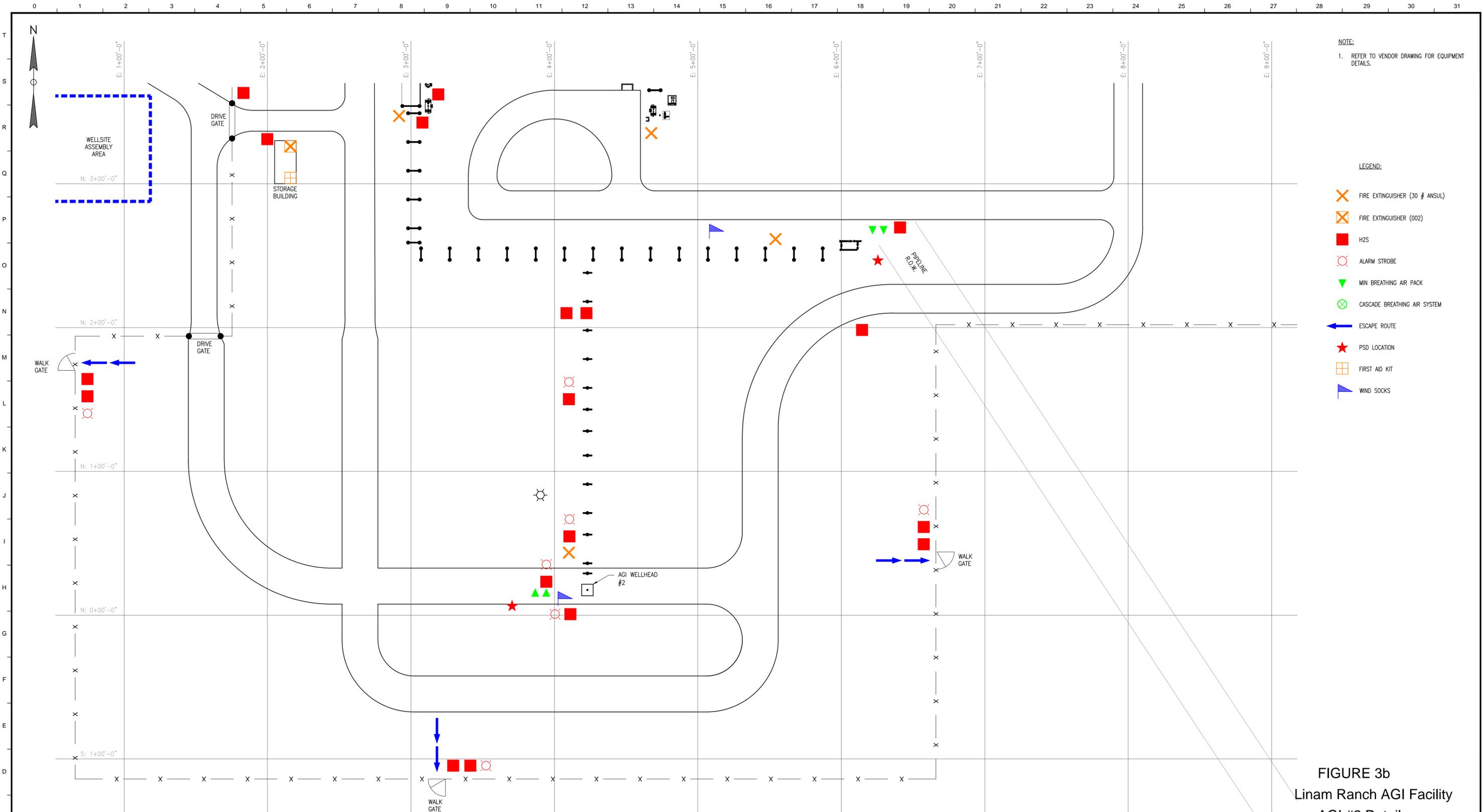
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NO.	TITLE				
1	ISSUED FOR CONSTRUCTION	WBH	JJH	JJH	01/27/15
0	ISSUED FOR CONSTRUCTION	WSG	JJH	JJH	08/12/14
NO.	REVISION	BY	CHK	APVD	DATE



ENG. RECORD	DATE
DRAWN BY: GT	02/07/13
CHECKED BY: JRE	02/14/13
APPROVED BY: JJH	02/14/13
PLOT SCALE: ANSI D	
SCALE: AS NOTED	

SAFETY EQUIPMENT LOCATION PLAN (ENLARGED PLAN - NORTH)	
JOB NO.	12067
DRAWING NO.	12067-C02-1003
REV.	1



**NOTE:**  
1. REFER TO VENDOR DRAWING FOR EQUIPMENT DETAILS.

- LEGEND:**
- FIRE EXTINGUISHER (30 # ANSUL)
  - FIRE EXTINGUISHER (002)
  - H2S
  - ALARM STROBE
  - MIN BREATHING AIR PACK
  - CASCADE BREATHING AIR SYSTEM
  - ESCAPE ROUTE
  - PSD LOCATION
  - FIRST AID KIT
  - WIND SOCKS

**FIGURE 3b**  
Linam Ranch AGI Facility  
AGI #2 Detail

**SAFETY EQUIPMENT LOCATION PLAN**  
SCALE: 1/32"=1'-0"

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REFERENCE DRAWINGS					
NO.	TITLE				
2	ISSUED FOR CONSTRUCTION	WBH	JJH	JJH	01/27/15
1	ISSUED FOR CONSTRUCTION	AS	JTS	JJH	10/3/14
0	ISSUED FOR CONSTRUCTION	WSG	JJH	JJH	08/12/14
NO.	REVISION	BY	CHK	APVD	DATE

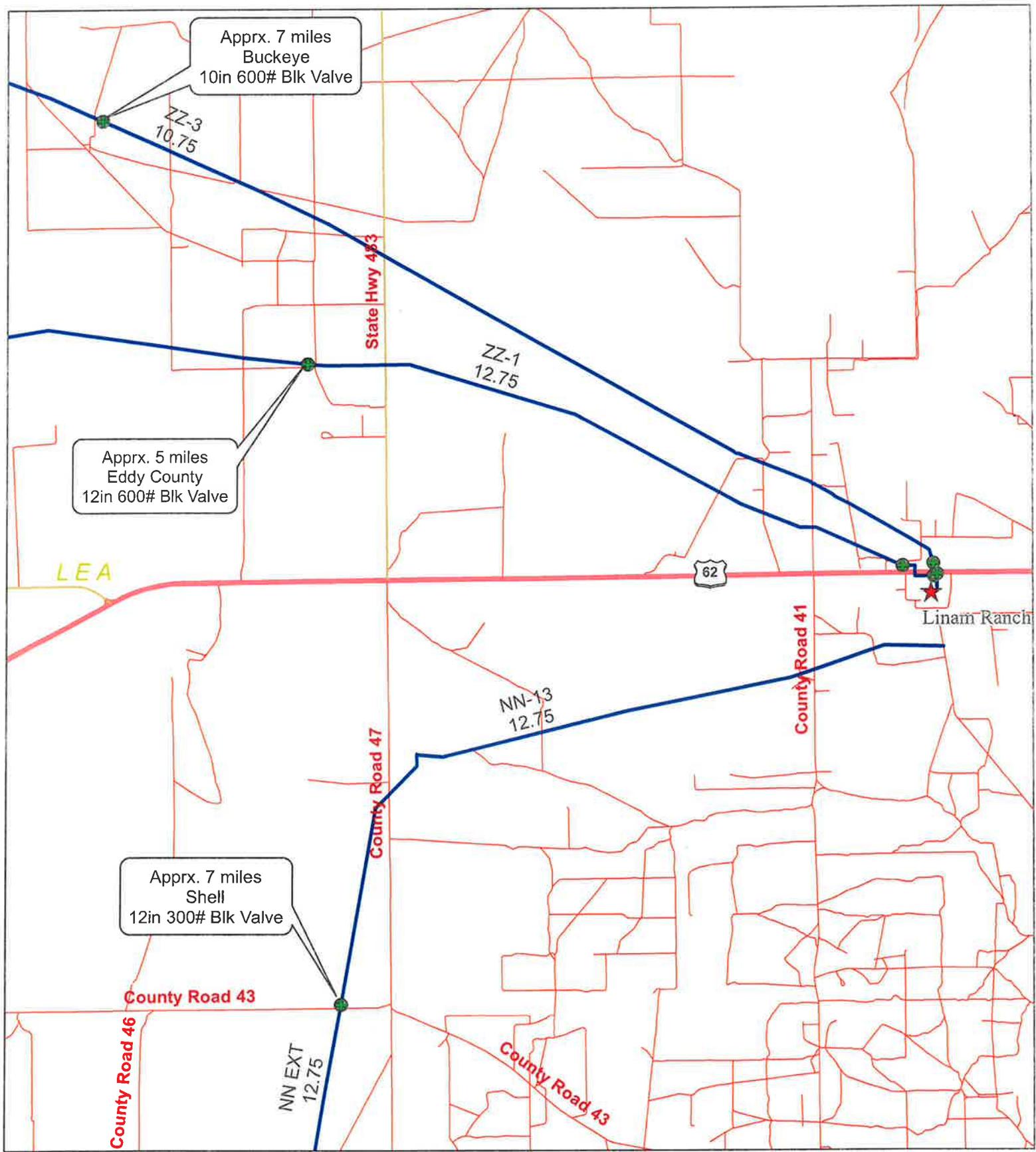


ENG. RECORD	DATE
DRAWN BY: GT	02/07/13
CHECKED BY: JRE	02/14/13
APPROVED BY: JJH	02/14/13
PLOT SCALE: ANSI D	
SCALE: AS NOTED	

SAFETY EQUIPMENT LOCATION PLAN (ENLARGED PLAN - SOUTH)	
JOB NO.	12067
DRAWING NO.	12067-C02-1004
REV.	2



FIGURE 4  
PHOTO OF FLASHING SIGN



Aprx. 5 miles  
Eddy County  
12in 600# Blk Valve

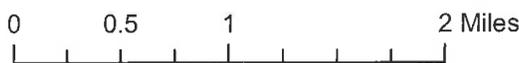
Aprx. 7 miles  
Buckeye  
10in 600# Blk Valve

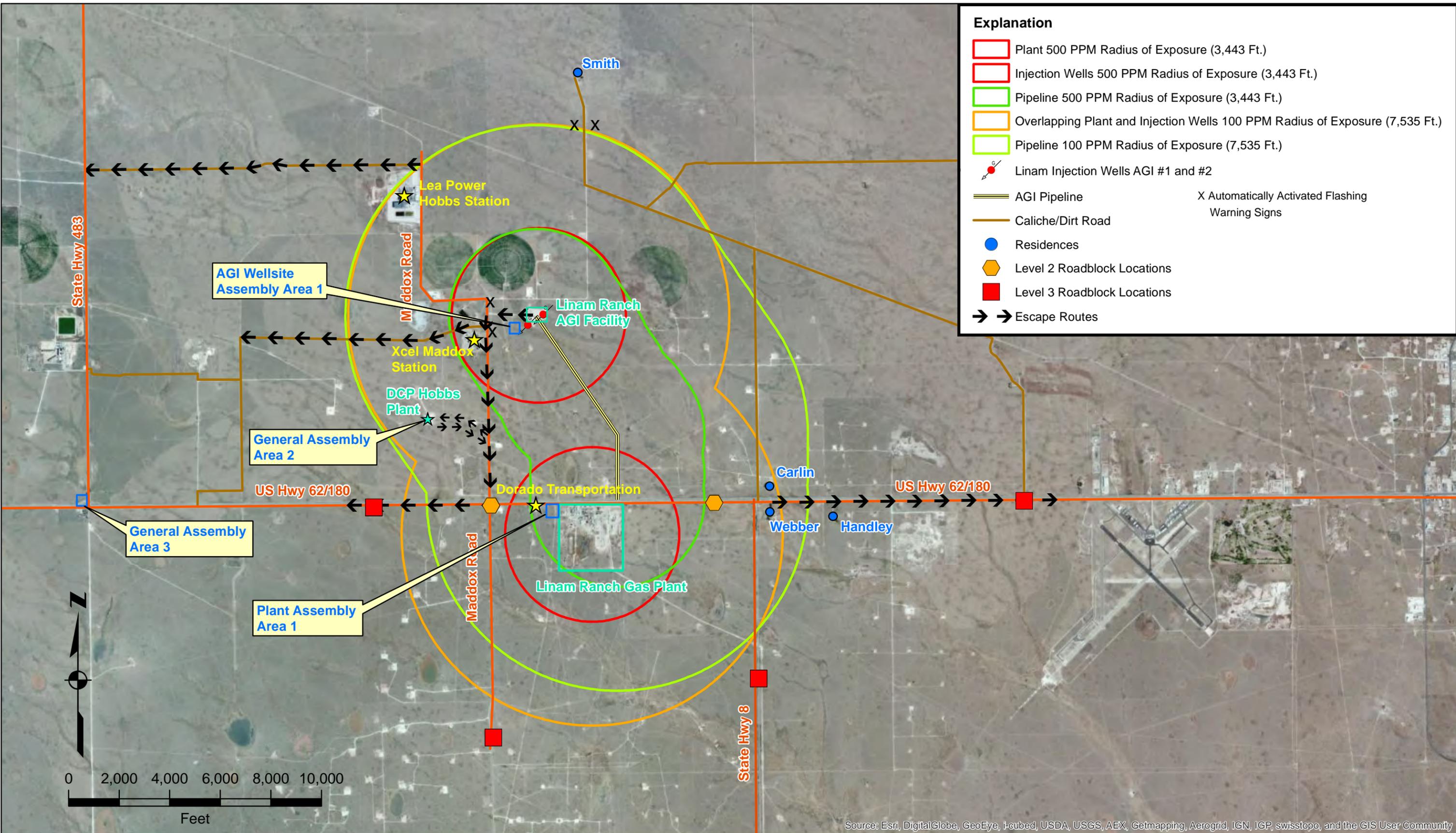
Aprx. 7 miles  
Shell  
12in 300# Blk Valve

Linam Ranch

FIGURE 5  
Block Valve Locations

- Block Valves
- ★ DCP Midstream Gas Plant
- DCP Midstream Pipelines





**Figure 6: Linam Ranch Plant and AGI Facility**  
**500 and 100 ppm ROE with Roadblock, Warning Sign Locations, Assembly Areas and Escape Routes**



**Figure 7**

DCP Midstream  
API # 30-025-38576

**DCP LINAM AGI #1  
WELLBORE SCHEMATIC**

**Location:** 1980' FSL, 1980' FWL  
**STR** 30-T18S-R37E  
**County, St.:** LEA, NEW MEXICO

**SURFACE CASING:**  
13 3/8", 48.00#/ft, H40, STC at 530'

**INTERMEDIATE CASING:**  
9 5/8", 40.00#/ft, J55, LTC at 4212'

**PRODUCTION CASING:**  
7", 26.00#/ft, L80, STC at 9200'  
PBTB = 9137'

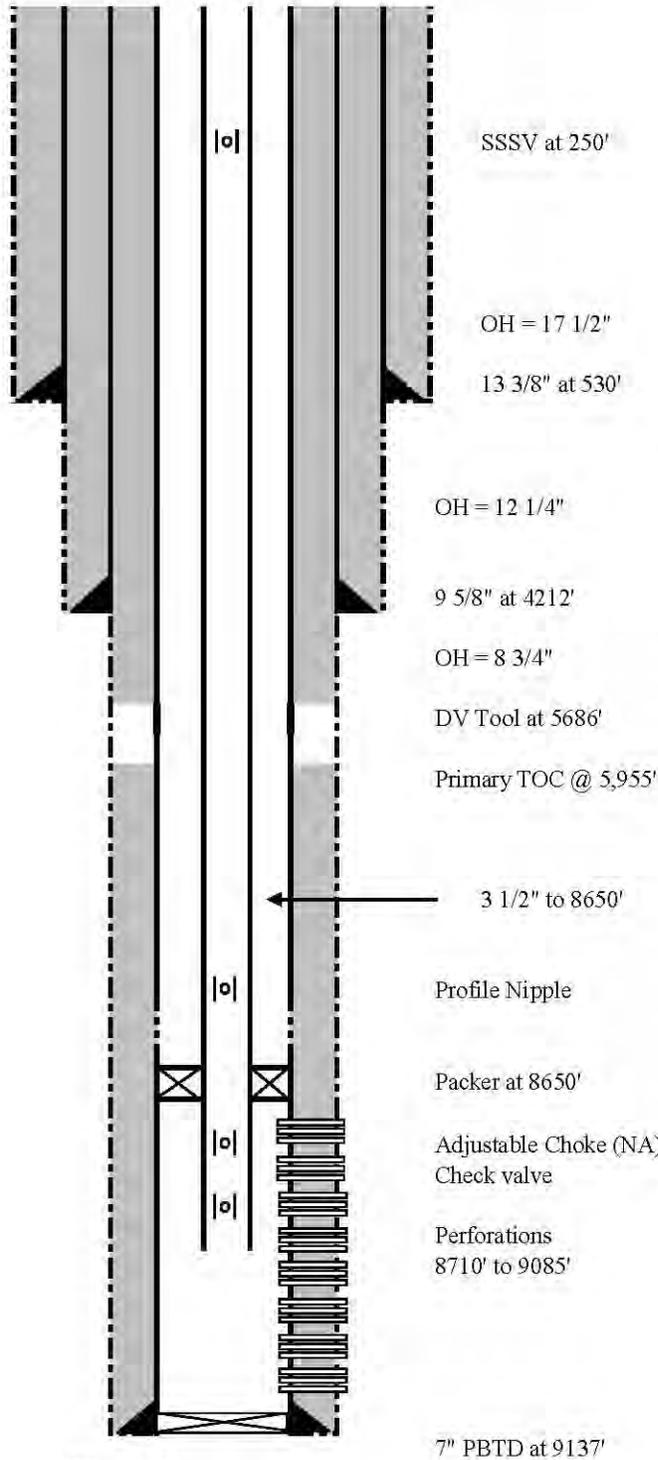
**TUBING:**  
Subsurface Safety Valve at 250 ft  
3 1/2", 9.2#/ft, L80, Hunting SLF at 8650'

**PACKER:**  
Permanent Production Packer  
Adjustable Choke  
Check valve

**PACKER FLUID (CORROSION INHIBITED):**  
Diesel w/ Cortron R-2525 (Corrosion inhibitor and oxygen scavenger)

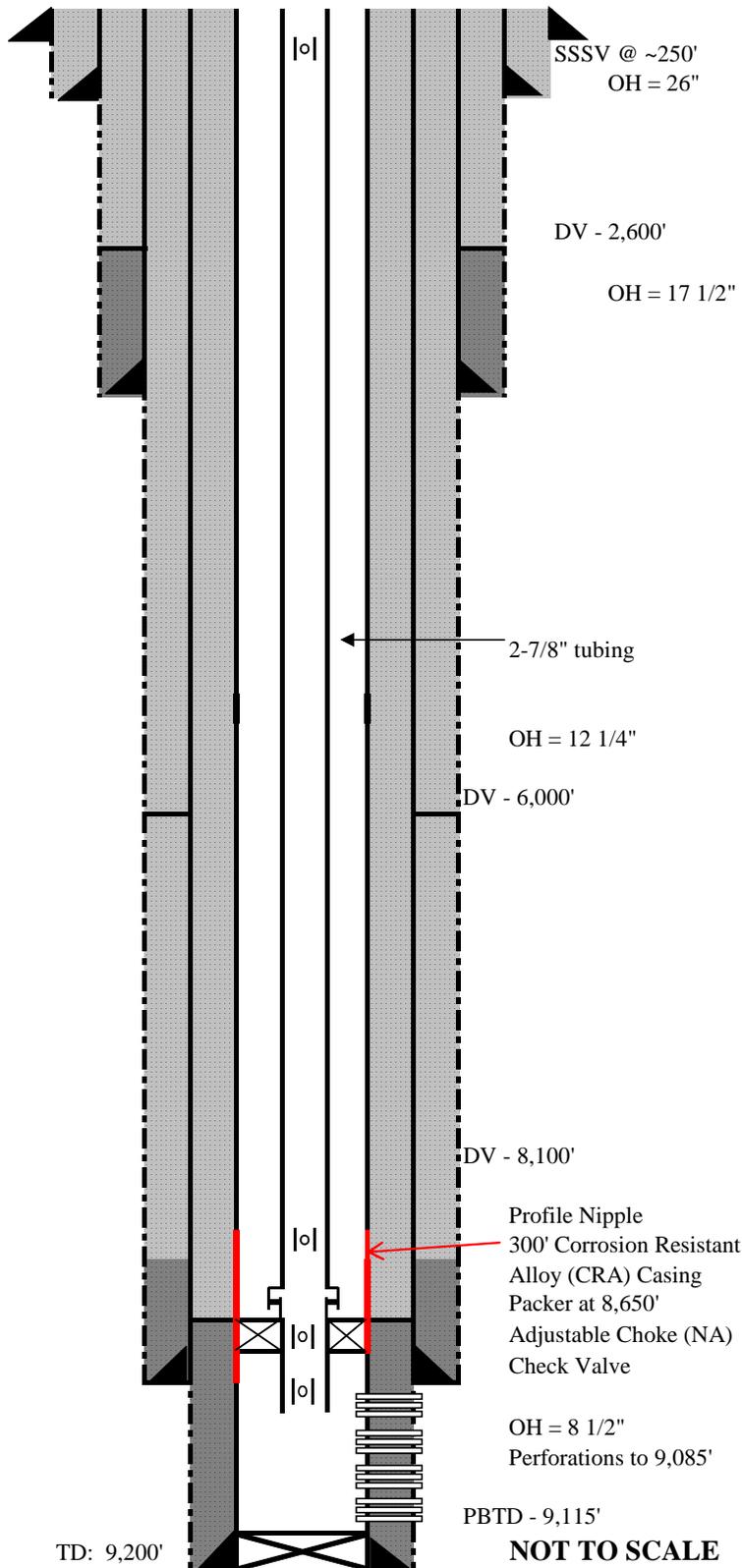
**PERFORATIONS:**

Primary Target	Secondary Target
Lower Bone Springs	Brushy Canyon
8710' - 8730'	5000' to 5300'
8755' - 8765'	(Not perforated)
8780' - 8795'	
8780' - 8890'	
8925' - 8930'	
8945' - 8975'	
8985' - 9000'	
9045' - 9085'	



TD: 9213'

**Location:** 2120' FSL, 2120' FWL  
**STR** Section 30, T18S-R37E  
**County, St.:** Lea County, New Mexico



**CONDUCTOR CASING**

30" Conductor at 40'

**SURFACE CASING**

20", 94#/ft, J55, BTC at 500'

**INTERMEDIATE CASING:**

13 3/8", 54.5 #/ft, J55, STC at 3,200'

**SECOND INTERMEDIATE CASING:**

9 5/8", 40.0 #/ft, HCL--80, LTC at 7,500'

9 5/8", 47.0 #/ft, HCL--80, LTC at 8,600'

**PRODUCTION CASING:**

7", 26 #/ft, HCL-80, LTC to 8,500'

7", 26 #/ft, SM-2535, USF to 8,800'

7", 26 #/ft, HCL-80, USF to 9,200' TD

**TUBING:**

2-7/8", 6.5#/ft, L-80 TTS8 (Fiberglass Lined) Tt

**ANNULAR FLUID:**

Diesel Fuel from top of packer to surface

**PACKER:**

Permanent Production Packer @ 8,650'

Adj. Choke (if needed, placed in nipple below p

Check valve (if needed, placed in nipple below p

**PERFORATIONS:**

**Primary Targets:**

8,710'-9,085'

**NOT TO SCALE**

# **APPENDIX A**

## **IMMEDIATE ACTION PLANS AND RESPONSE FLOW DIAGRAMS**

### **LINAM RANCH PLANT**

## Linam Ranch Plant Immediate Action Plan/Emergency Procedures

### LEVEL 1 ACTIVATION

#### Activating Conditions:

- H<sub>2</sub>S of 10 ppm or greater detected at any fixed monitor.

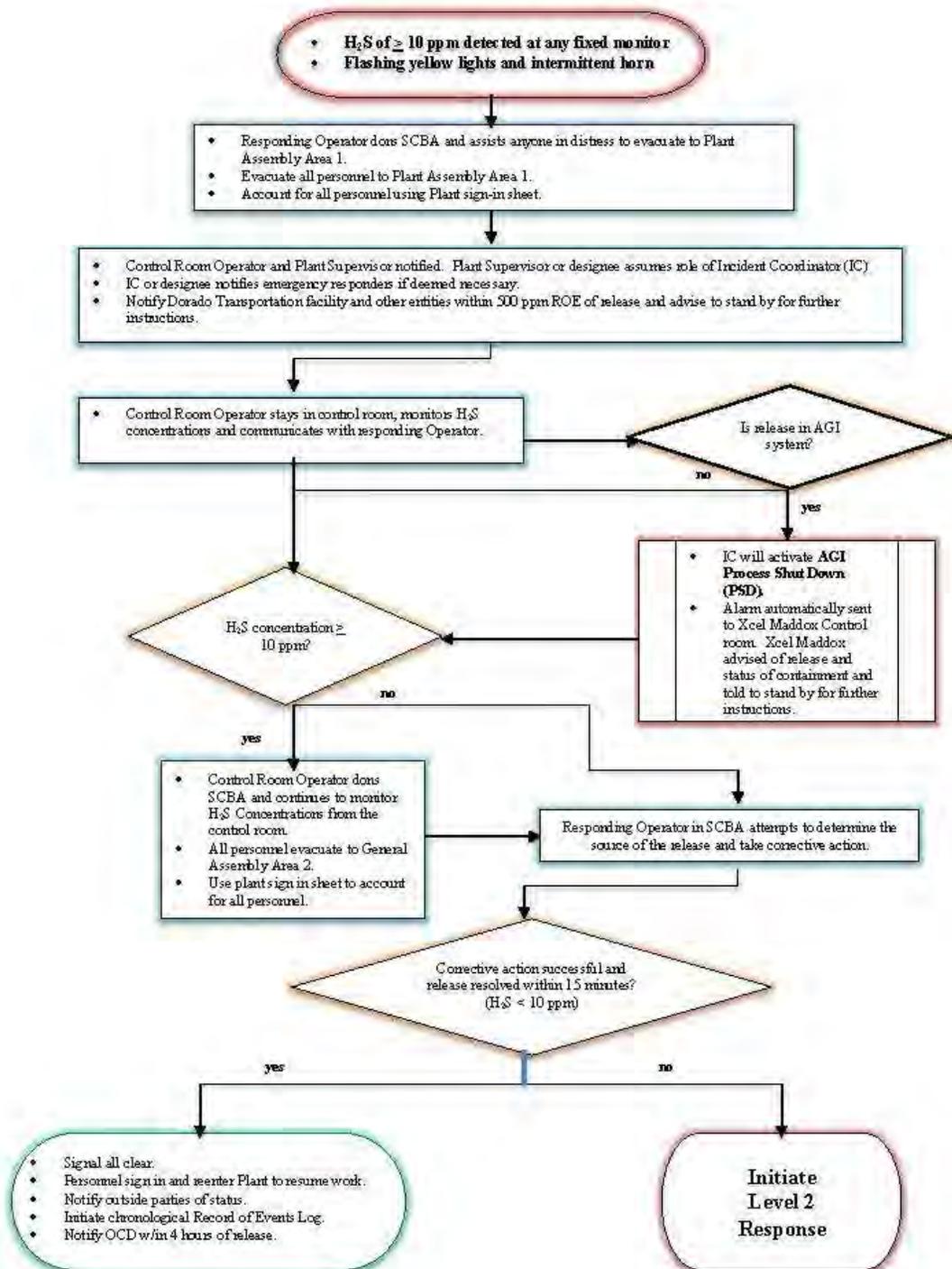
#### Alarms and Automated Activations:

- Flashing yellow lights and an intermittent horn are activated at any fixed monitor that senses H<sub>2</sub>S at 10ppm or greater. The horn and flashing yellow 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.
- All employees also wear personal monitors that sound an audible alarm at 10ppm H<sub>2</sub>S or greater.

#### Actions:

1. At the initial sound of an audible alarm or the sight of a flashing yellow beacon, assigned responding Operator(s) in the vicinity of the alarm will put on 30 minute Self-Contained Breathing Apparatus (SCBA), help any person in distress evacuate to Plant Assembly Area 1.
2. All other personnel in the Plant complex shall immediately evacuate the Plant using the designated evacuation routes to Plant Assembly Area 1 (see Figures 2 and 6).
3. At Plant Assembly Area 1, all personnel will be accounted for using the Plant sign in sheet.
4. Donning the SCBA, the responding Operator(s) will attempt to determine the source of the release and if possible take corrective actions.
5. Control Room Operator and Plant Supervisor shall be notified of the release. Plant Supervisor or designee will assume the role of IC. Control Room Operator will remain in the control room and monitor H<sub>2</sub>S concentrations throughout the Plant.
6. If deemed necessary, Plant personnel as designated by the IC will contact local emergency response service providers (phone numbers provided in Appendix E) and advise them of the release and status of containment.
7. The Dorado Transportation Facility and any other entities located within the 500 ppm ROE (see Figure 6) will be notified by the IC or designee that a release is occurring and to stand by for further instructions (see Appendix E for phone numbers).
8. Control Room Operator will monitor H<sub>2</sub>S levels and communicate with responding Operator(s).
9. Air quality will be monitored to insure it remains less than 10 ppm H<sub>2</sub>S; if H<sub>2</sub>S rises to 10 ppm or above, all personnel will move to General Assembly Area 2 via designated routes (see Figure 6).
10. If the concentration of H<sub>2</sub>S in the control room reaches 10 ppm, the Control Room Operator will also put on a 30 minute SCBA.
11. If the release has occurred within the AGI system, the IC will activate the AGI process shut down (PSD), which shuts down and isolates the AGI compressors and equipment and routes the acid gas to the plant acid gas flare. Activating the AGI PSD automatically sends an alarm to the Xcel Maddox Control Room, which is continuously manned.
12. If corrective actions are successful, the release is resolved and the monitored H<sub>2</sub>S levels in the Plant return to less than 10 ppm, the IC or designee will signal all clear, and personnel will be allowed to sign in and reenter the Plant to resume work.
13. The IC will initiate and maintain a Chronologic Record of Events Log (see Appendix H).
14. The Plant Supervisor or designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**
15. If the release is not resolved and H<sub>2</sub>S levels continue to rise or remain above 10 ppm for 15 minutes, IC will initiate a Level 2 Response.

## LINAM RANCH PLANT—LEVEL 1 RESPONSE



## Linam Ranch Plant

### LEVEL 2 ACTIVATION

#### Activating Conditions:

- **Corrective actions at Level 1 are unsuccessful;**
- **10 ppm of H<sub>2</sub>S or greater is detected at any fixed monitor for greater than 15 minutes;**
- **20 ppm of H<sub>2</sub>S or greater is detected at any fixed monitor.**

#### Alarm and Automated Activations:

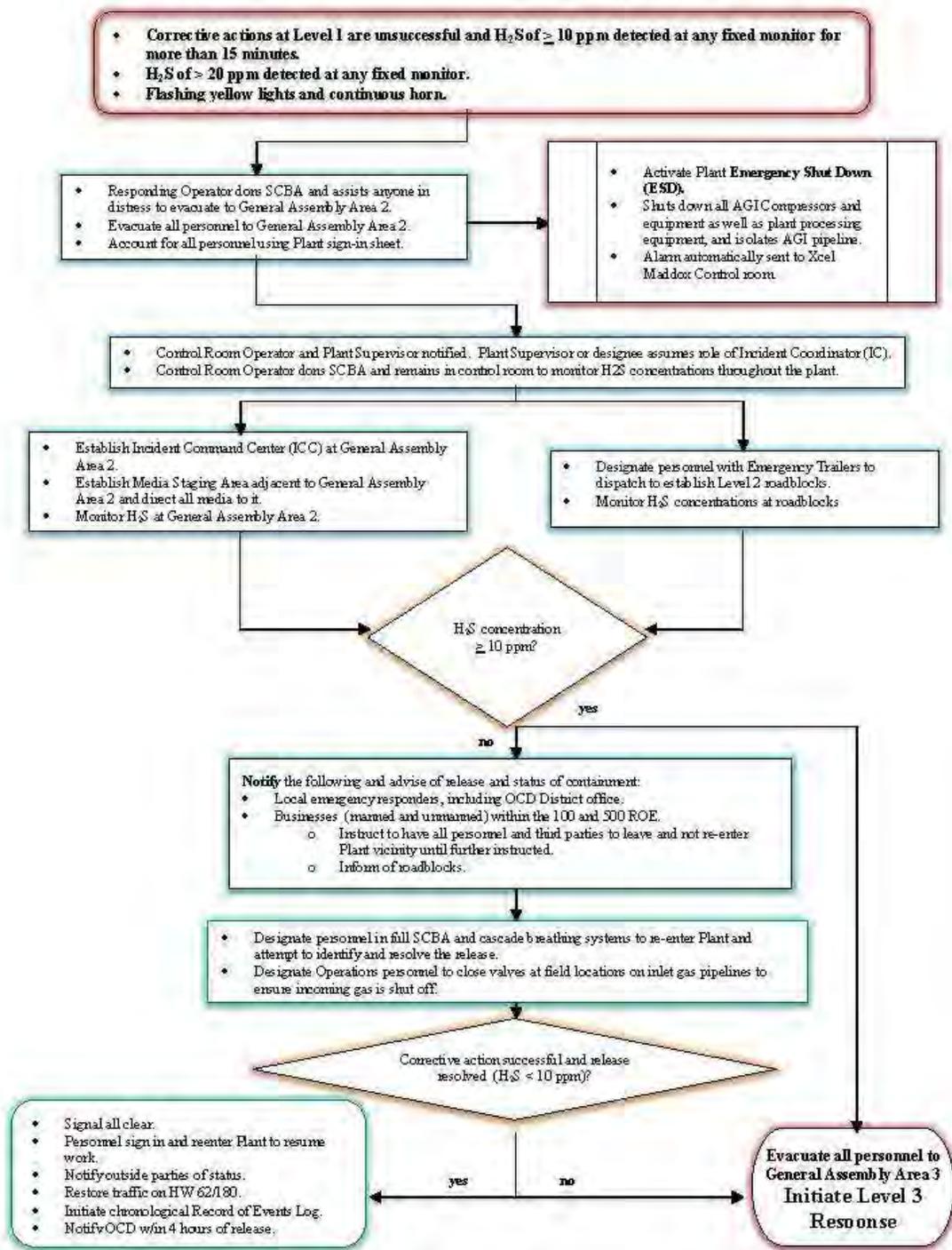
- **If 20 ppm of H<sub>2</sub>S or greater is detected at a fixed monitor, a continuous horn and flashing yellow lights will occur. The horn and flashing yellow lights are redundant systems which function independently of one another so that should one system fail, the other would remain active. These 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(s), donning the SCBA, will help any persons in distress to evacuate to General Assembly Area 2 (see Figure 6).
2. All personnel will be evacuated to General Assembly Area 2 via designated routes. Air quality will continue to be monitored for H<sub>2</sub>S at General Assembly Area 2.
3. At General Assembly Area 2, all personnel will be accounted for using the Plant sign-in list.
4. Responding Operator will activate the Plant ESD shutting off all incoming and outgoing gas and natural gas liquid (NGL) product streams, shutting down all AGI compressors and equipment, as well as all plant processing equipment, and isolating AGI pipeline between Plant and AGI Facility. Activating the Plant ESD automatically sends an alarm to the Xcel Maddox control room.
5. The Plant Supervisor and the Control Room Operator will be notified. The Plant Supervisor or designee will assume the role of IC. The Control Room Operator will put on SCBA, remain in the control room and monitor H<sub>2</sub>S concentrations throughout the Plant.
6. Incident Command Center (ICC) will be established at General Assembly Area 2.
7. A media staging area adjacent to General Assembly Area 2 will be established and all media will be directed to it.
8. IC will designate personnel with H<sub>2</sub>S monitors and emergency trailers to be dispatched to establish Level 2 roadblocks and monitor for H<sub>2</sub>S concentrations (see Figure 6).
9. Emergency Responders, local law enforcement and state agencies, including the OCD District Office (phone numbers provided in Appendix E) will be notified of the release and the status of containment by the IC or designee.
10. Designated personnel will notify individuals, area businesses and producers within the 500 and 100 ppm ROE, both manned and unmanned (phone numbers provided in Appendix E), of the nature of the release and status of containment. All entities will be instructed to standby for further instruction and may be asked to evacuate or shelter in place, depending on wind conditions, etc. 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 release. Those individuals will be instructed to immediately leave and not re-enter the Plant vicinity until further instruction. All shall be informed of the roadblocks on HW 62/180.
11. 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. Additional operations personnel may be directed by IC to close valves at field locations on inlet gas pipelines to ensure incoming gas is shut off.
12. If release is resolved and monitored levels of H<sub>2</sub>S in the Plant are less than 10 ppm, IC or designee may authorize personnel to return to the Plant.
13. All businesses, individuals and producers previously notified will be informed that the release has been resolved and advised of the current monitored H<sub>2</sub>S levels. Highway traffic will be restored.
14. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)

15. The Plant Supervisor or designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**
16. If monitored H<sub>2</sub>S levels at General Emergency Assembly Area 2 exceed 10 ppm, all personnel will evacuate to General Emergency Assembly Area 3 via designated route, and IC will initiate a Level 3 Response.
17. If H<sub>2</sub>S concentrations reach 10 ppm at designated Level 2 roadblocks, initiate Level 3 response.
18. If the release is not resolved or H<sub>2</sub>S levels continue to increase, the IC will initiate a Level 3 Response.

## LINAM RANCH PLANT—LEVEL 2 RESPONSE



## Linam Ranch Plant

### LEVEL 3 ACTIVATION

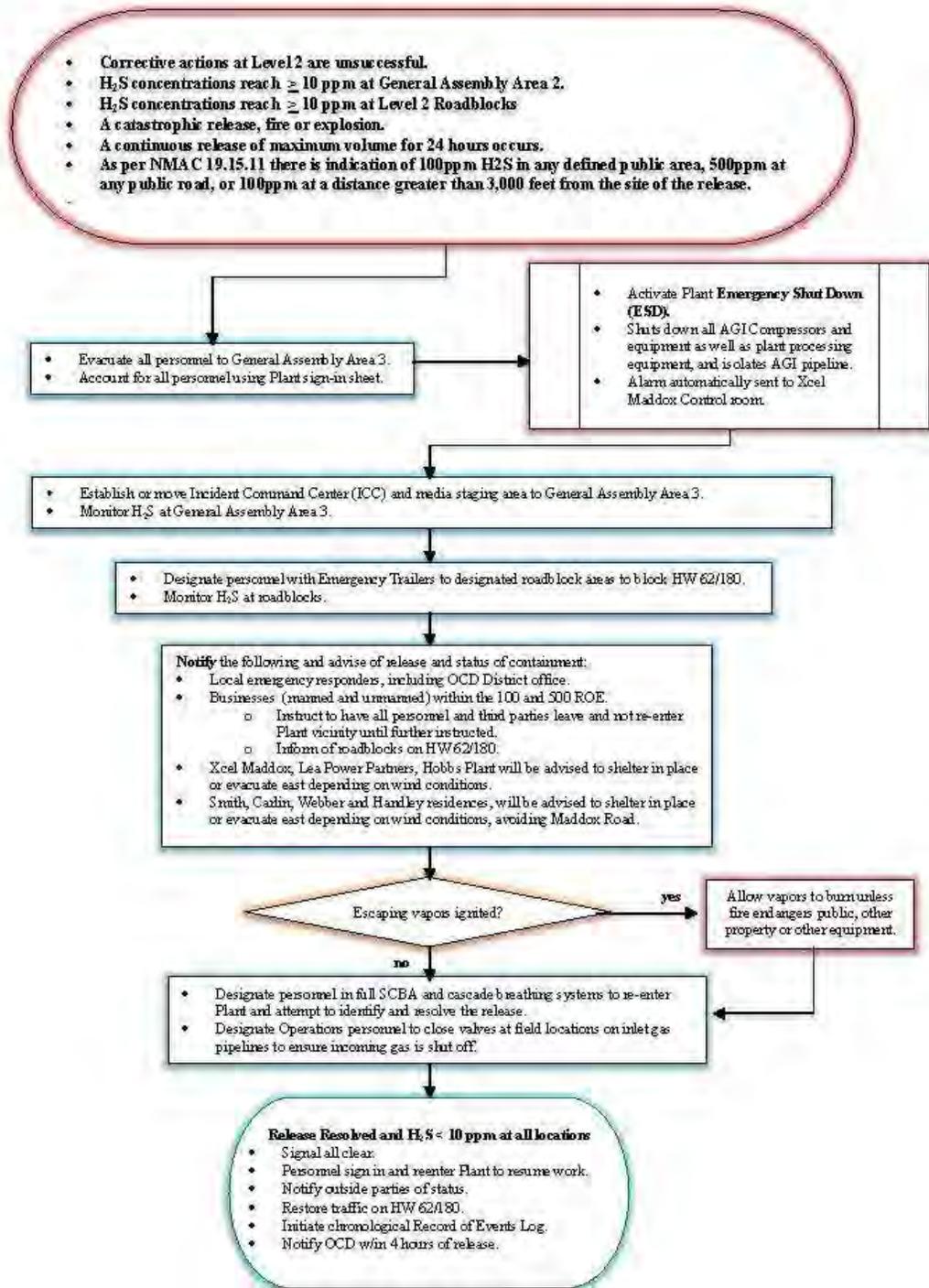
#### Activating Conditions:

- Corrective actions at Level 2 are unsuccessful;
- H<sub>2</sub>S concentrations reach 10 ppm or greater at Assembly Area 2;
- H<sub>2</sub>S concentrations reach 10 ppm or greater at designated Level 2 Road Blocks;
- 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 100ppm H<sub>2</sub>S in any defined public area, 500ppm at any public road, or 100ppm at a distance greater than 3,000 feet from the site of the release.

#### Actions:

1. All personnel should be evacuated to and accounted for at General Assembly Area 3 using the Plant sign in sheet, and air quality will be monitored for H<sub>2</sub>S concentrations (see Figure 6).
2. IC shall have activated the Plant ESD system on evacuation from Plant facilities. Activating the Plant ESD automatically sends an alarm to the Xcel Maddox control room.
3. Emergency Responders, local law enforcement and State agencies, including the OCD District Office will be notified of the release and status of containment (phone numbers provided in Appendix E).
4. The ICC and media staging area shall be established and/or moved to General Assembly Area 3.
5. IC will designate personnel with H<sub>2</sub>S monitors and emergency trailers to move to the designated roadblock areas shown on ROE map and HW 62/180 will be blocked (see Figure 6).
6. Designated personnel will notify area businesses, individuals and producers within the 500 and 100 ppm ROE, both manned and unmanned (phone numbers provided in Appendix E), of the nature of the release and status of containment. All entities will be advised to shelter in place or evacuate, depending on wind conditions, etc. and will be instructed to immediately alert all company personnel, third party contractors and/or service companies working in the area and imminently scheduled to work in the area, of the release. Those individuals will be instructed to immediately leave and not re-enter the Plant vicinity until further notice. All shall be informed of the roadblocks on HW 62/180. Notifications will include but not be limited to:
  - a) Xcel Maddox, DCP Hobbs Plant and Lea Power Partners facilities will be advised to shelter in place or evacuate west at the discretion of the IC depending on wind conditions, avoiding Maddox Road.
  - b) Smith, Carlin, Webber and Handley residences will be advised to shelter in place or evacuate east at the discretion of the IC, depending on wind conditions etc., avoiding Maddox Road.
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. Additional operations personnel may be directed by IC to close valves at field locations on inlet gas pipelines to ensure incoming gas is shut off.
9. Once release is resolved and monitored levels of H<sub>2</sub>S in the Plant are less than 10 ppm, IC or designee may authorize personnel to return to the Plant.
10. All businesses, individuals and producers previously notified will be informed that the release has been resolved and advised of the current monitored H<sub>2</sub>S levels at the Plant. Highway traffic will be restored.
11. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)
12. The Plant Supervisor or designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**

## LINAM RANCH PLANT—LEVEL 3 RESPONSE



## **APPENDIX B**

### **IMMEDIATE ACTION PLANS AND RESPONSE FLOW DIAGRAMS**

#### **AGI FACILITY**

# AGI Facility

## Immediate Action Plan/Emergency Procedures

### LEVEL 1 ACTIVATION

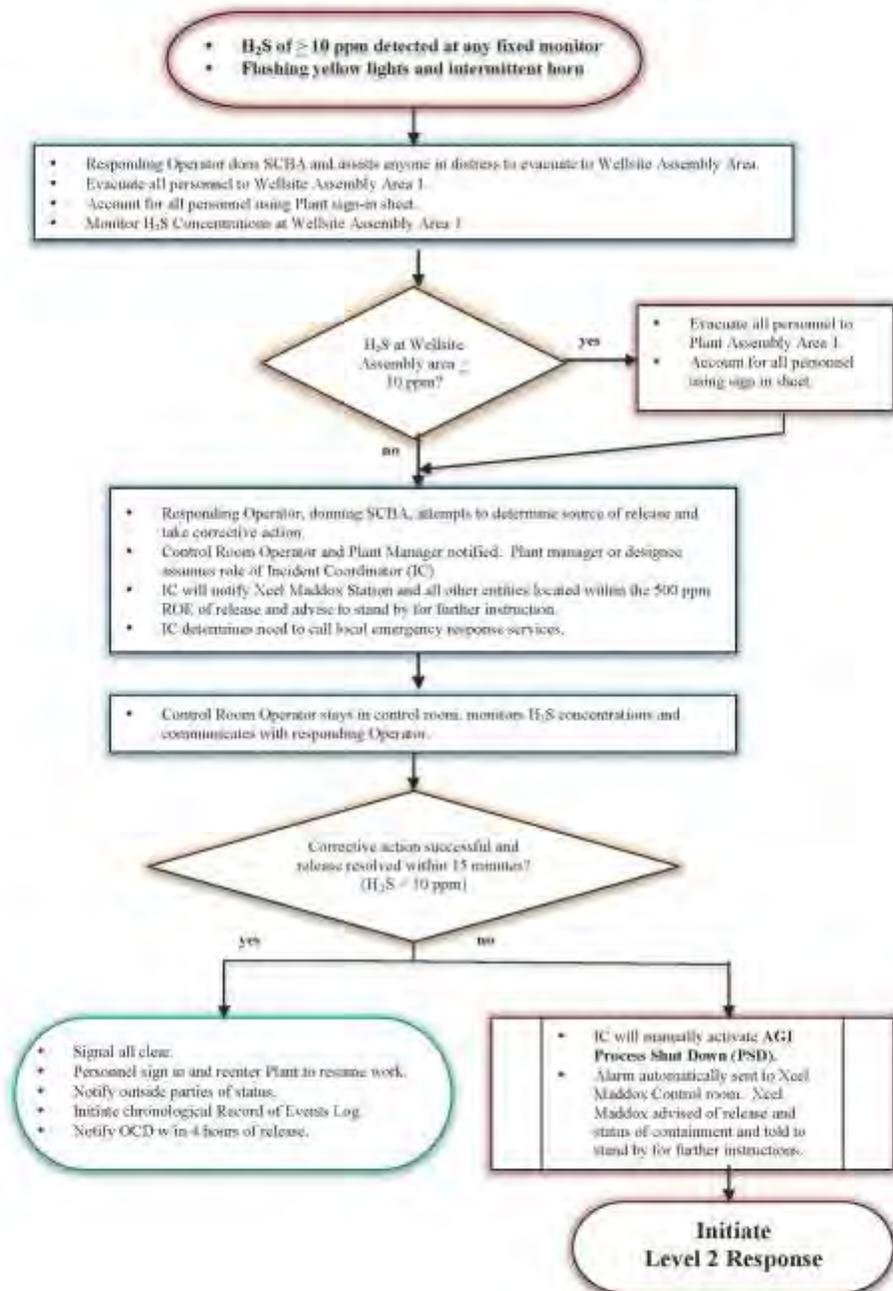
#### Activating Conditions/Alarms:

- Any fixed monitor that senses H<sub>2</sub>S at 10 ppm or greater.
- Flashing yellow lights and an intermittent horn are activated at
- The horn and flashing yellow 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.
- All employees also wear personal monitors that sound an audible alarm at 10 ppm H<sub>2</sub>S or greater.

#### Actions:

1. At the initial sound of an audible alarm or the sight of flashing yellow beacons, Responding operator shall put on a 30 minute Self Contained Breathing Apparatus (SCBA) and help any person in distress to evacuate to Wellsite Assembly Area (see Figure 6).
2. All personnel at the AGI Facility shall immediately evacuate the using the designated evacuation routes to the Wellsite Assembly Area (see Figure 6).
3. At the Wellsite Assembly Area, all personnel will be accounted for using the sign in sheet.
4. Air quality at the Wellsite Assembly area will be monitored to insure it remains less than 10 ppm H<sub>2</sub>S; if it rises to 10 ppm H<sub>2</sub>S, all personnel will move to General Assembly Area 2 (see Figure 6).
5. The Linam Plant Control Room Operator and Plant Supervisor shall be notified of the release. Plant Supervisor or designee will assume the role of IC. Control Room Operator will monitor H<sub>2</sub>S levels and communicate with IC.
6. Donning SCBA, responding Operator(s) will re-enter the AGI Facility, to determine the source of the release and take corrective action if possible.
7. If deemed necessary, local emergency response service providers (phone numbers provided in Appendix E) will be contacted by IC or designee and advised of the release and status of containment.
8. The Xcel Maddox Station and any other entities located within the 500 ppm ROE (see Figure 6) will be notified by the IC or designee that a release is occurring and to standby for further instructions (see Appendix E for phone numbers).
9. If the release is contained and the monitored H<sub>2</sub>S levels at the AGI Facility are less than 10 ppm, the Plant Supervisor or his designee will signal all clear and personnel will be allowed to sign in and re-enter the AGI Facility to resume work. Priority will be given to restoring the AGI compressors and equipment to normal operations.
10. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)
11. The Plant Supervisor or his designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**
12. If the Responding operator(s) are unsuccessful in containing the release and H<sub>2</sub>S levels continue to rise, or remain above 10 ppm for 15 minutes, the IC will initiate Level 2 response and manually activate the AGI process shut down (PSD). PSD shuts down the AGI compressors and equipment, closes the pipeline and injection well isolation valves and depressurizes the AGI Facility equipment and piping to the AGI Facility flare. At Linam Ranch Plant, the acid gas stream from the amine system is routed to the plant acid gas flare.
13. When the AGI PSD is activated, an alarm is automatically sent to the Xcel Maddox control room. The Xcel Maddox control room is manned continuously and will receive an audible and visual signal on their DSC system of the DCP alarms.

### AGI WELLSITE RELEASE—LEVEL 1 RESPONSE



## AGI Facility

### LEVEL 2 ACTIVATION

#### Activating Conditions:

- **Corrective actions at Level 1 are unsuccessful;**
- **A Wellsite perimeter monitor has reached 10 ppm H<sub>2</sub>S;**
- **20 ppm of H<sub>2</sub>S or greater is detected at an interior fixed monitor;**

#### Automated Activations:

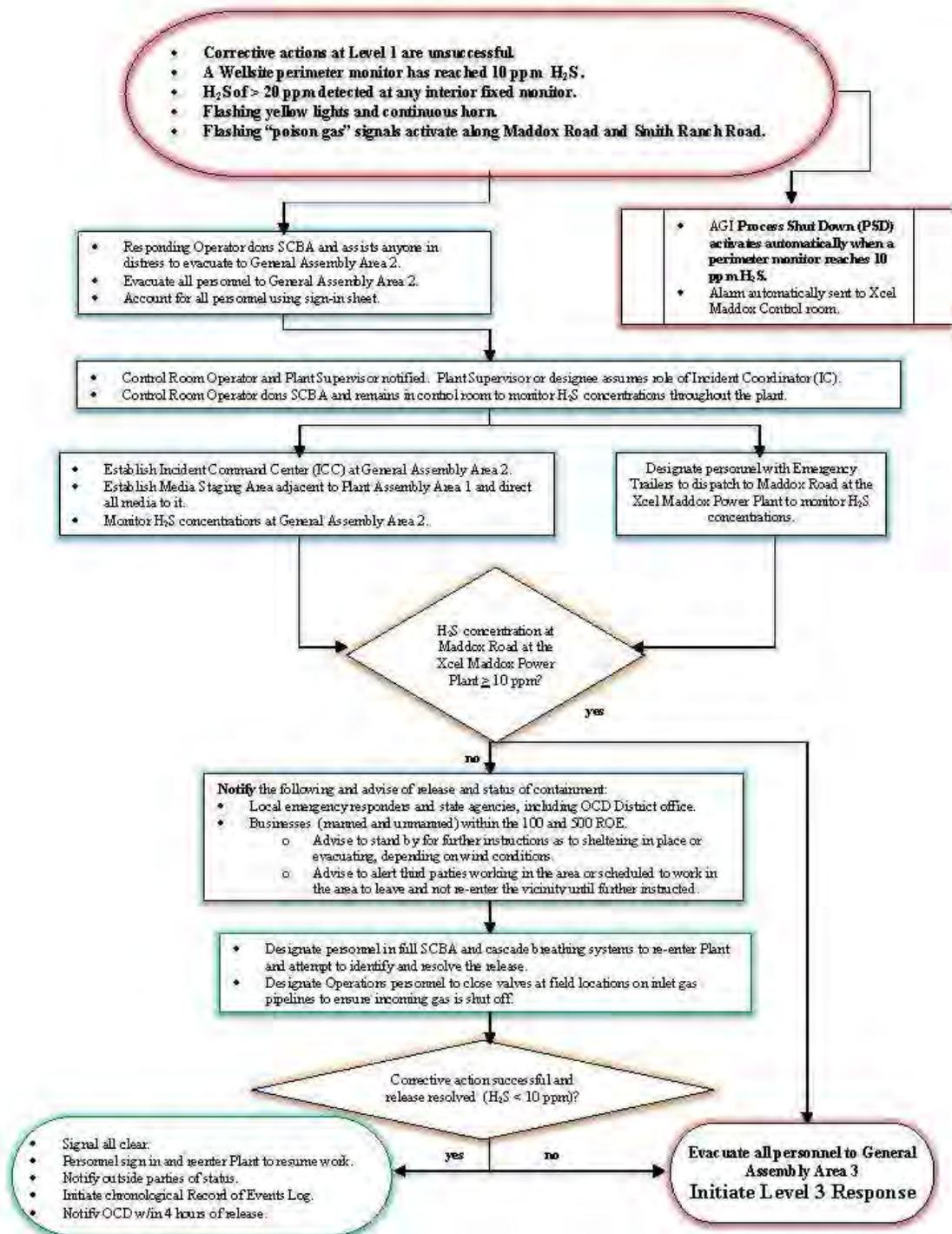
- **Continuous horn and flashing yellow beacons. The horn and flashing yellow lights are redundant systems which function independently of one another so that should one system fail, the other would remain active. These systems incorporate backup battery capabilities as recommended in API RP 55 which insure their operation in the event of a power failure.**
- **AGI PSD will be automatically activated when a perimeter monitor reaches 10 ppm H<sub>2</sub>S.**
  - **Shutting down the compressor equipment, closes pipeline and injection well isolation valves and depressurizes the AGI Facility equipment and piping to the AGI Facility acid gas flare.**
  - **At Linam Ranch Plant, the acid gas stream from the amine treater will be routed to the Linam Ranch Plant acid gas flare.**
- **When the AGI PSD is activated an alarm, including an audible and visual signal on their DSC system of the DCP alarms, is automatically sent to the Xcel Maddox control room to alert them of the 10 ppm H<sub>2</sub>S concentration at the DCP AGI Facility perimeter.**
- **Flashing poison gas signals are activated along Maddox Road and Smith Ranch Road to alert approaching vehicles and personnel of potential danger.**

#### Actions:

1. The responding Operator(s), donning SBCA will help any person in distress to evacuate to the General Assembly Area 2 along the designated routes. (See figures 2 and 5)
2. All personnel will be evacuated to General Assembly Area 2 along the designated routes and accounted for using the sign in sheets. (See figures 2 and 5)
3. The Linam Plant Control Room Operator and Plant Supervisor shall be notified of the release. Plant Supervisor or designee will assume the role of IC. Control Room Operator will monitor H<sub>2</sub>S levels and communicate with IC.
4. Incident Command Center (ICC) will be established at the General Assembly Area 2 and air quality will be monitored for H<sub>2</sub>S concentrations.
5. A media staging area adjacent to General Assembly Area 2 will be established, and all media will be directed to it.
6. IC will designate personnel with emergency trailers will to be dispatched to monitor H<sub>2</sub>S concentrations on Maddox Road at the Xcel Maddox Power Plant.
7. Emergency responders, local law enforcement and State agencies, including the OCD District Office (phone numbers provided in Appendix E) will be notified of the release and the status of the containment by IC or designee.
8. Designated personnel will notify individuals, area businesses and producers within the 500 and 100 ppm ROE, both manned and unmanned (phone numbers provided in Appendix E), of the nature if the release and status of containment. All entities will be instructed to standby for further instruction and may be asked to evacuate or shelter in place, depending on wind conditions, etc. 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 release. Those individuals will be instructed to immediately leave and not re-enter the vicinity until further instruction.
9. 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. Additional operations personnel may be directed by IC to close valves at on AGI pipeline

10. If release is resolved and monitored levels of H<sub>2</sub>S in the AGI Facility are less than 10 ppm, the Plant Supervisor or his designee will signal all clear and personnel will be allowed to sign in and re-enter the AGI Facility to resume work.
11. All businesses, individuals and producers previously notified will be informed that the release has been resolved and advised of the current monitored H<sub>2</sub>S levels.
12. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)
13. The Plant Supervisor or his designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**
14. If monitored H<sub>2</sub>S levels rise to 10 ppm at General Assembly Area 2 or at the pipeline road crossing, IC will initiate a Level 3 response and evacuate to General Assembly Area 3.
15. If H<sub>2</sub>S concentrations reach 10 ppm at the Maddox Road and Xcel Maddox Station.
16. If release is not resolved, a Level 3 response is initiated.

## AGI FACILITY—LEVEL 2 RESPONSE



## AGI Facility

### LEVEL 3 ACTIVATION

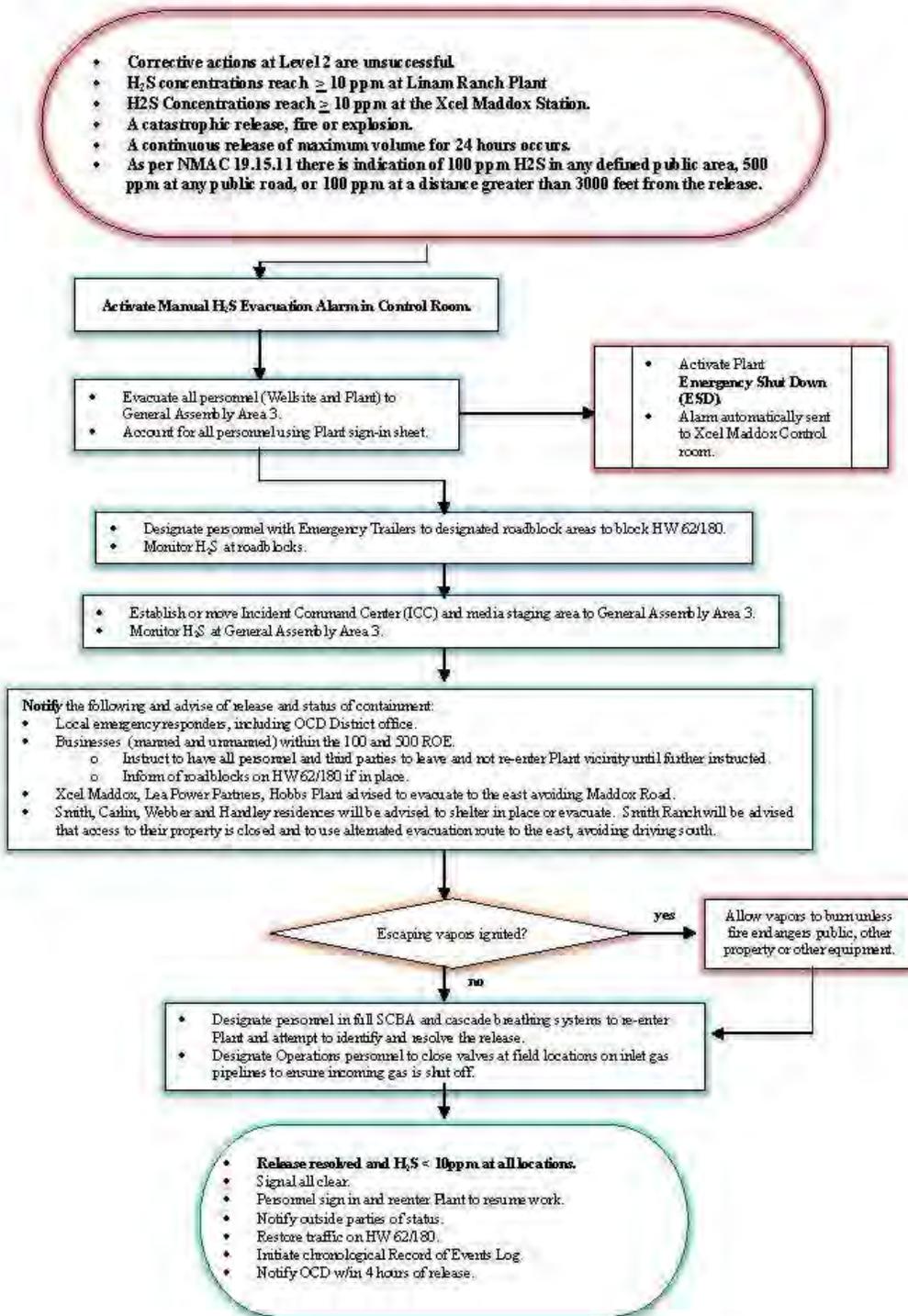
#### Activating Conditions:

- Corrective actions at Level 2 are unsuccessful;
- H<sub>2</sub>S concentrations reach 10 ppm or greater at the Linam Ranch Plant;
- H<sub>2</sub>S concentrations reach 10 ppm or greater at the Xcel Maddox Station;
- H<sub>2</sub>S detectors at pipeline road crossing indicate 10 ppm H<sub>2</sub>S from an AGI Wellsite release;
- A catastrophic release, fire or explosion occurs.
- A continuous release of maximum volume for 24 hours occurs;
- As per NMAC 19.15.11 there is indication of 100 ppm H<sub>2</sub>S 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 of the release.

#### Actions:

1. Activate manual H<sub>2</sub>S evacuation alarm in Control Room.
2. All personnel at AGI Facility and Plant evacuate via the designated routes to General Assembly Area 3.
3. All personnel will be accounted for at General Assembly Area 3 using the sign in sheet, and air quality will be monitored for H<sub>2</sub>S concentrations.
4. IC designates personnel with H<sub>2</sub>S monitors and emergency trailers to move to the designated roadblock areas shown on ROE map (see Figure 6) and HW 62/180 will be blocked.
5. ICC and media staging area shall be established or moved to General Assembly Area 3. All media will be directed to the media staging area at General Assembly Area 3.
6. IC shall have activated the Plant ESD system on evacuation from Plant facilities. Activating the Plant ESD automatically sends an alarm to the Xcel Maddox control room.
7. Emergency responders, local law enforcement and State agencies, including the OCD District Office (phone numbers provided in Appendix E), will be notified of the release and status of containment.
8. Designated personnel will notify area businesses, individuals and producers within the 500 and 100 ppm ROE, both manned and unmanned (phone numbers provided in Appendix E), of the nature of the release and status of containment. All entities will be advised to shelter in place or evacuate, depending on wind conditions, etc. and will be instructed to immediately alert all company personnel, third party contractors and/or service companies working in the area and imminently scheduled to work in the area of the release. Those individuals will be instructed to immediately leave and not re-enter the vicinity until further notice. All will be informed of the roadblocks on HW 62/180. Notifications will include but are not limited to the following:
  - a) Xcel Maddox and Lea Power Partners and DCP Hobbs Plant will be notified of the release and advised to shelter in place or evacuate to the west, avoiding Maddox Road.
  - b) Smith, Carlin, Webber and Handley residences will be advised to evacuate or shelter in place. Smith Ranch will be advised that the access road to their property is closed and if to use an alternate evacuation road to the east, avoiding driving south.
9. 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.
10. 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. Additional operations personnel may be directed by IC to close valves at field locations on inlet gas pipelines to ensure incoming gas is shut off.
11. Once release is resolved and monitored levels of H<sub>2</sub>S in the Plant are less than 10 ppm, the Plant Supervisor will signal all clear and allow personnel to sign in and re-enter the Plant site and AGI Facility.
12. All businesses previously notified will be informed that the release has been resolved and advised of the current monitored H<sub>2</sub>S levels at the AGI Facility and Linam Ranch Plant.
13. Highway traffic will be restored.
14. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)
15. The Plant Supervisor or his designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**

### AGI WELLSITE RELEASE—LEVEL 3 RESPONSE



## **APPENDIX C**

### **IMMEDIATE ACTION PLANS AND RESPONSE FLOW DIAGRAMS**

### **HIGHWAY 62/180 ROAD CROSSING**

## Highway 62/180 Road Crossing Immediate Action Plan/Emergency Response Procedures

### LEVEL 1 ACTIVATION

#### Activating Condition:

- 10 ppm H<sub>2</sub>S or greater at a road crossing fixed monitor.

#### Alarm and Automated Activations:

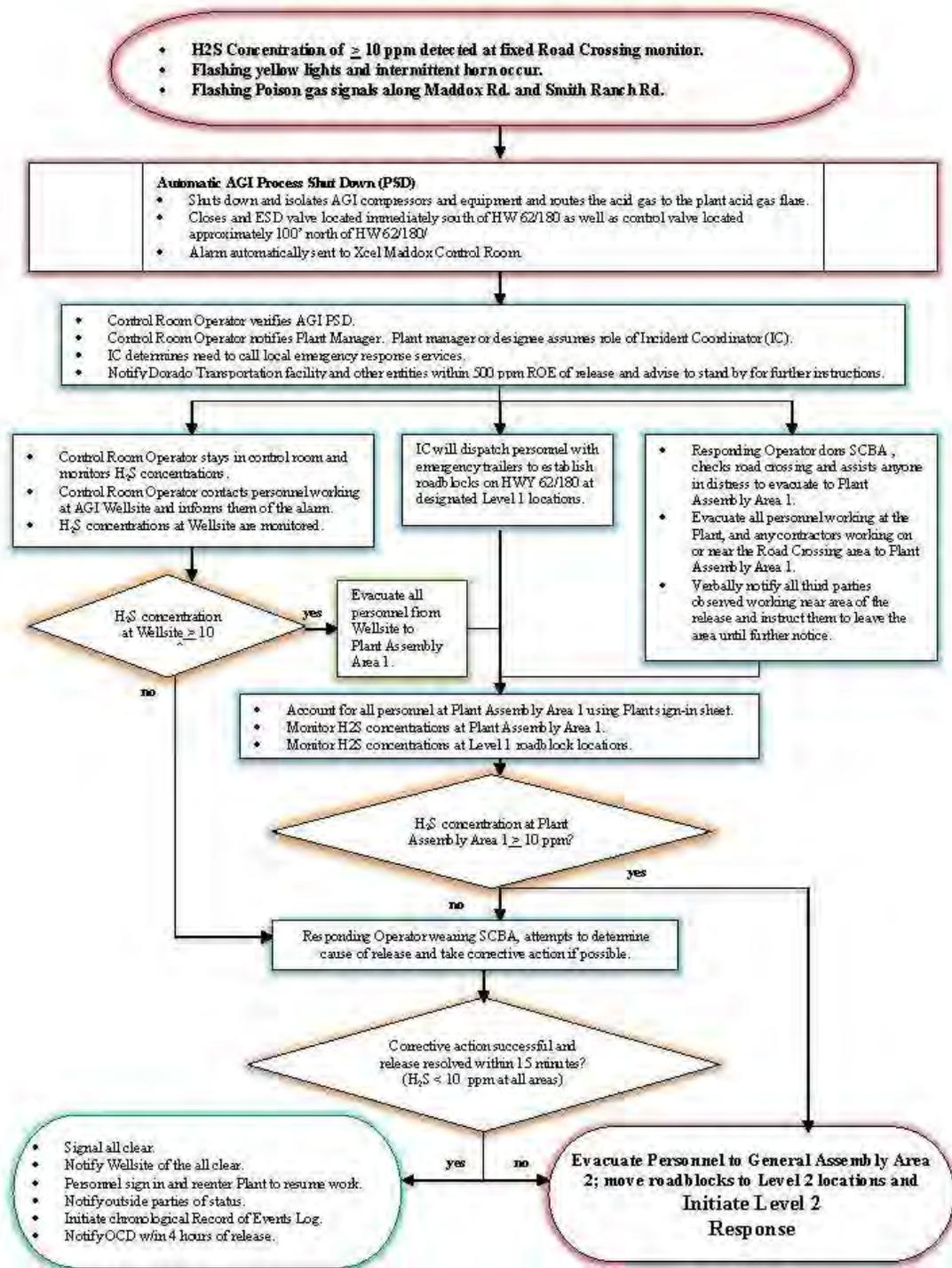
- Flashing yellow light and intermittent horn occur. The horn and flashing lights are redundant systems which function independently of one another so that should one system fail, the other would remain active. These systems incorporate backup battery capabilities as recommended in API RP 55 which insure their operation in the event of a power failure.
- All personnel wear personal monitors that sound an audible alarm at 10 ppm H<sub>2</sub>S or greater.
- AGI Process Shut Down (PSD) will be automatically activated when a fixed monitor at the Road Crossing reaches 10 ppm H<sub>2</sub>S.
  - Shuts down and isolates the AGI compressors and equipment, and routes the acid gas to the plant acid gas flare.
  - Automatically close an ESD valve located immediately south of HW 62/180 as well as a control valve located approximately 100' north of HW 62/180. (See Figure 6)
- When the AGI PSD is activated, an alarm is automatically sent to Xcel Maddox control room.

#### Actions:

1. Control Room Operator will remain in control room, verify AGI PSD and activate manually if necessary.
2. Control Room operator will remain in the control room and notify Plant Supervisor of release. Plant supervisor or designee will assume the role of IC. Control Room Operator monitors H<sub>2</sub>S concentrations throughout the plant and communicates with IC.
3. Responding Operator will put on SCBA, check the road crossing, and assist any persons in distress to evacuate to Plant Assembly Area 1.
4. IC will designate personnel with emergency trailers to block HW 62/180 at designated Level 1 locations (see Figure 6).
5. All employees or contractors who may be working at the Plant or in the area near the road crossing shall evacuate to Plant Assembly Area 1. (See Figures 2 and 6).
6. Any third parties observed working near the road crossing will be advised verbally of the situation and instructed to leave the area and not return until further notice.
7. Control Room Operator will contact any personnel working at AGI Facility, alert them to road crossing alarm conditions, and direct them to monitor air quality (H<sub>2</sub>S concentrations) using the AGI Facility fixed monitors. If H<sub>2</sub>S levels at any AGI Facility fixed monitor increases to 10 ppm, all personnel working on there should evacuate to and Plant Assembly Area 1.
8. At the Plant Assembly Area 1 all personnel will be accounted for using the sign in sheet.
9. Air quality at Plant Assembly Area 1 and Level 1 roadblocks will be monitored for H<sub>2</sub>S. If H<sub>2</sub>S concentrations exceed 10 ppm, all personnel will be moved to General Assembly Area 2 along the designated route, road blocks will be moved to designated Level 2 locations, (see Figure 6) and a Level 2 Response will be initiated.
10. Once all personnel are evacuated, responding Operator, donning SCBA will attempt to determine source of leak and take corrective action if possible.
11. The Dorado Transportation facility and all other entities located within the 500 ppm ROE (see Figure 6) will be notified by the IC or designee that a release is occurring and to stand by for further instructions (see Appendix E for phone numbers).
12. If deemed necessary, local emergency response providers (phone numbers provided in Appendix E) will be contacted by IC or designee and advised of the release and status of containment.
13. If corrective actions are successful, release is resolved, and monitored H<sub>2</sub>S levels in the Plant and AGI pipeline (including fixed monitors at HW 62/180 road crossing) return to less than 10 ppm, Plant Supervisor or designee will signal all clear and personnel will be allowed to sign in and re-enter the plant to resume work.

14. Personnel working at the Wellsite will be notified of the all clear.
15. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)
16. The Plant Supervisor or his designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**
17. If Level 1 release is not resolved and H<sub>2</sub>S levels continue to increase, initiate Level 2 Response.

## ROAD CROSSING—LEVEL 1 RESPONSE



## Highway 62/180 Road Crossing

### LEVEL 2 ACTIVATION

#### Activating Conditions:

- Level 1 corrective actions are unsuccessful;
- More than one AGI pipeline fixed monitor reaches 10 ppm H<sub>2</sub>S;
- Any fixed monitor at road crossing reaches 20 ppm H<sub>2</sub>S or greater;
- Any one of the AGI pipeline fixed monitors reaches 20 ppm H<sub>2</sub>S

#### Alarms and Automated Activations:

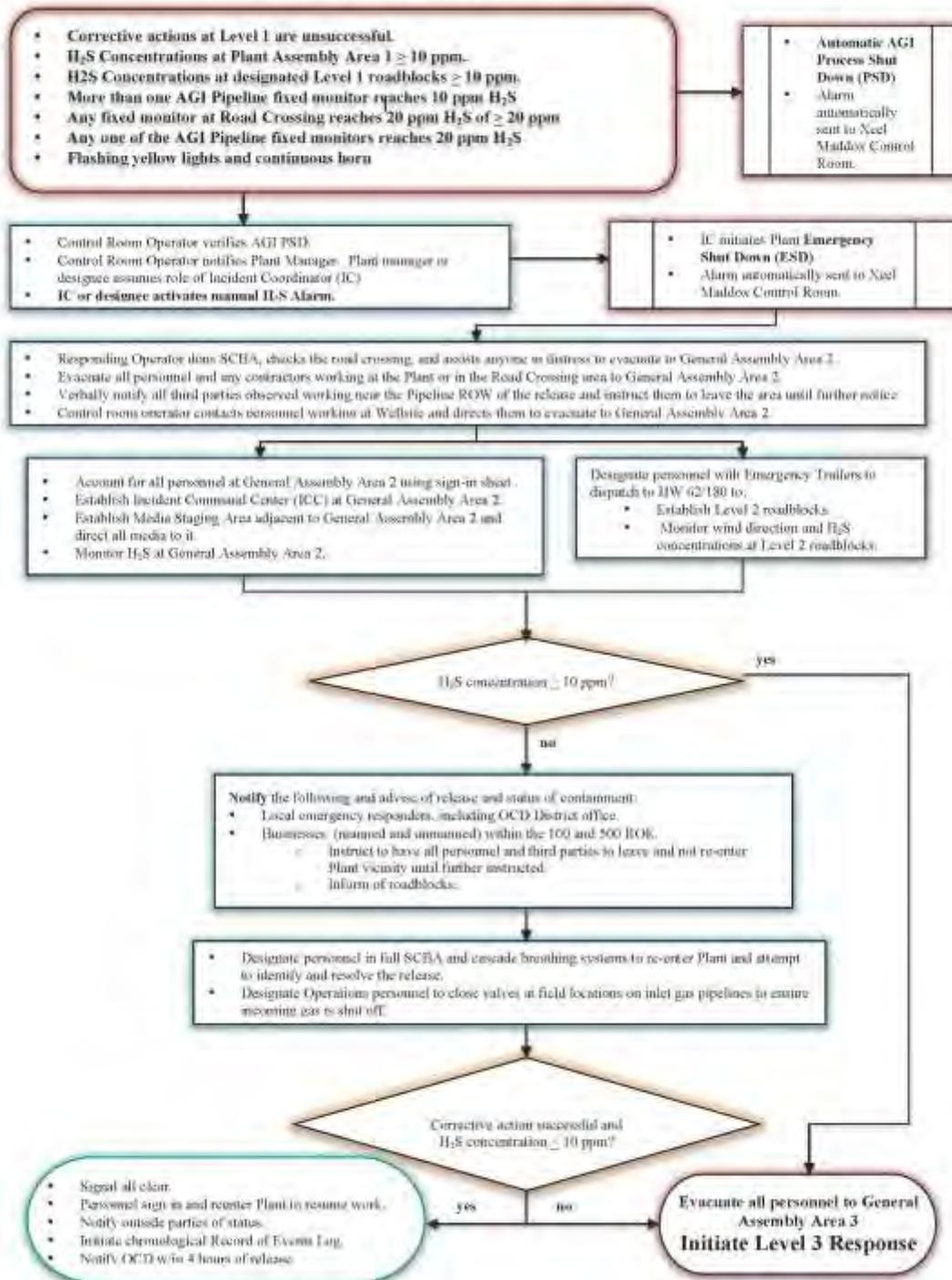
- Flashing yellow light and continuous horn occur. The horn and flashing lights are redundant systems which function independently of one another so that should one system fail, the other would remain active. These systems incorporate backup battery capabilities as recommended in API RP 55 which insure their operation in the event of a power failure.
- All personnel wear personal monitors that sound an audible alarm at 10 ppm H<sub>2</sub>S or greater.
- AGI Process Shutdown (PSD) will be automatically activated when a fixed monitor at the Road Crossing reaches 10 ppm H<sub>2</sub>S.
  - Shuts down and isolates the AGI compressors and equipment, and routes the acid gas to the plant acid gas flare.
  - Automatically close an ESD valve located immediately south of HW 62/180 as well as a control valve located approximately 100' north of HW 62/180. (See Figure 6)
  - Activating AGI PSD automatically sends an alarm to Xcel Maddox control room.
- Plant Emergency Shut Down (ESD)
  - Shuts off all incoming and outgoing gas and NGL product streams.
  - Shuts down all AGI compressors and equipment as well as plant processing equipment.
  - Isolates AGI pipeline between Plant and AGI Facility.
  - Activating Plant ESD automatically sends an alarm to the Xcel Maddox control room.

#### Actions:

1. Control Room operator will remain in the control room, verify AGI PSD and activate manually if necessary.
2. Control room operator will notify Plant Supervisor of release. Plant supervisor or designee will assume the role of IC.
3. IC or designee will activate continuous H<sub>2</sub>S alarm and IC will activate Plant ESD.
4. The responding Operator, will put on SCBA, check road crossing, help any persons in distress, and evacuate any employees or contractors who may be working on or near the road crossing to General Assembly Area 2.
5. IC will designate personnel with emergency trailers to block HW 62/180 at designated Level 2 locations shown on ROE Map (see Figure 6).
6. All plant personnel will be evacuated to General Assembly Area 2 along the designated routes (see Figures 2 and 6).
7. Any third party visibly observed working near the pipeline will be advised verbally of the situation and instructed to leave the area and not return until further notice.
8. The Control Room Operator will contact personnel working at the AGI Facility and direct them to evacuate to General Assembly Area 2 along the designated routes (see Figure 6).
9. All personnel will be accounted for using the Plant sign-in list.
10. Incident Command Center will be established at General Assembly Area 2 as long as H<sub>2</sub>S levels remain less than 10 ppm.
11. A media staging area adjacent to General Assembly Area 2 will be established, and all media will be directed to it.
12. Air quality at General Assembly Area 2 will continue to be monitored for H<sub>2</sub>S.
13. Air quality will be monitored at the roadblocks for H<sub>2</sub>S concentrations.
14. State agencies, including OCD District Office and emergency responders will be notified of the release and status of containment. (Phone numbers provided in Appendix E).

15. Designated personnel will notify individuals, area businesses and producers within the 500 and 100 ppm ROE, both manned and unmanned (phone numbers provided in Appendix E), of the nature of the release and status of containment. All entities will be instructed to standby for further instruction and may be asked to evacuate or shelter in place, depending on wind conditions, etc. 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 release. Those individuals will be instructed to immediately leave and not re-enter the Plant vicinity until further instruction. All shall be informed of the roadblocks on HW 62/180.
16. 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.
17. Additional operations personnel may be directed by IC to close valves at field locations on inlet gas pipelines to ensure incoming gas is shut off.
18. If monitored H<sub>2</sub>S levels at General Assembly Area 2 rise to 10 ppm, evacuate to General Assembly Area 3 along the designated routes (See Figure 6) and initiate Level 3 response
19. If H<sub>2</sub>S levels at the designated Level 2 roadblocks rise to 10 ppm, move road blocks to designated Level 3 locations (See Figure 6) and initiate a level 3 response.
20. If release is resolved and monitored levels of H<sub>2</sub>S in the Plant, the monitors at HW 62/180 road crossing, and the AGI Facility are less than 10 ppm, the IC or designee may authorize personnel to sign in and return to the Plant and AGI Facility.
21. Traffic will be restored on HW 62/180.
22. All businesses, public receptors and producers previously notified will be informed that the release has been resolved and advised of the current monitored H<sub>2</sub>S levels.
23. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)
24. The Plant Supervisor or his designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**
25. If the release is not resolved and/or H<sub>2</sub>S levels continue to increase, initiate Level 3 Response.

## ROAD CROSSING—LEVEL 2 RESPONSE



## Highway 62/180 Road Crossing

### LEVEL 3 ACTIVATION

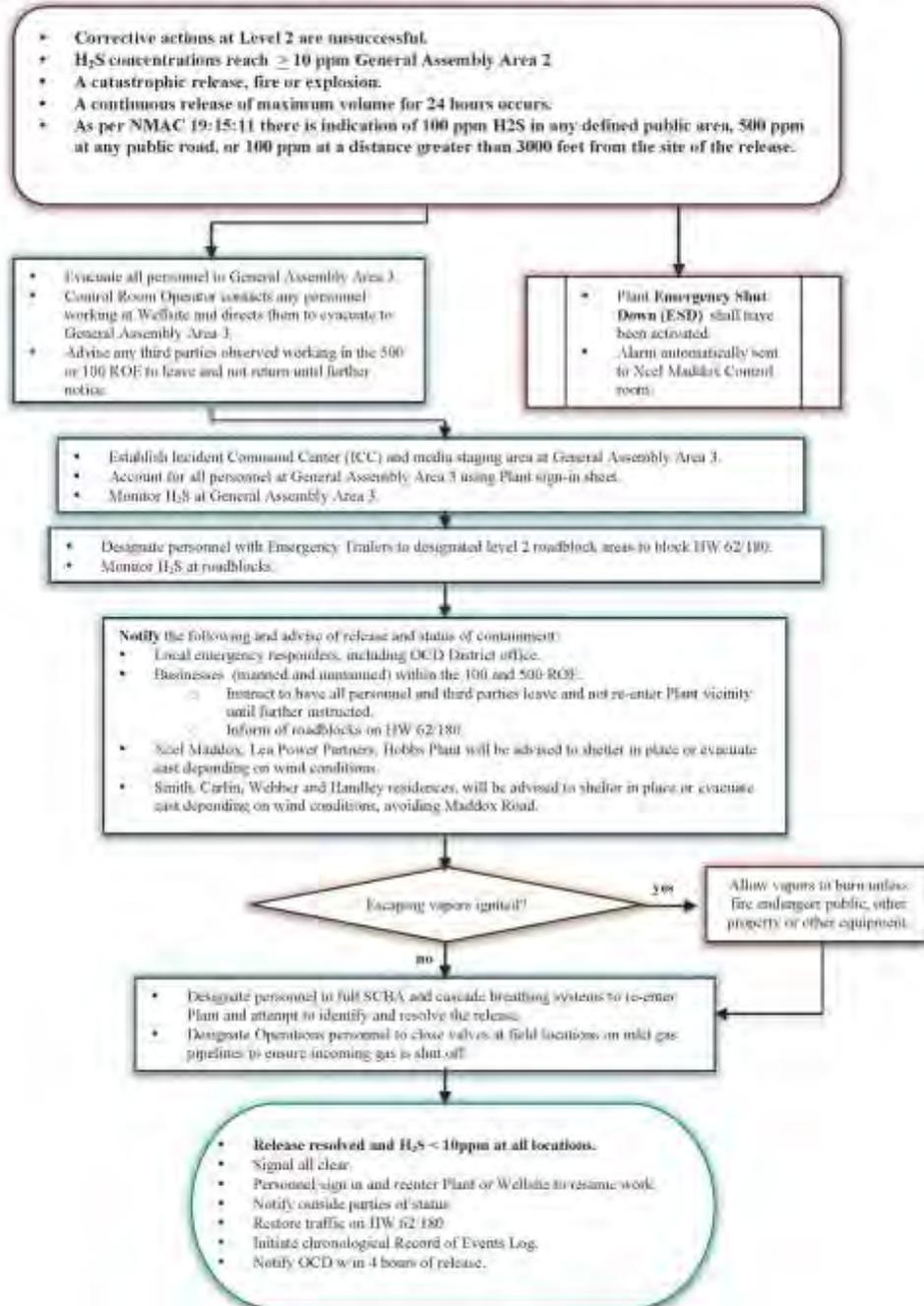
#### Alarms:

- **Corrective actions at Level 2 are unsuccessful;**
- **H<sub>2</sub>S concentrations reach 10 ppm or greater at Assembly Area 2;**
- **There is 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 100ppm H<sub>2</sub>S in any defined public area, 500ppm at any public road, or 100ppm at a distance greater than 3,000 feet from the site of the release.**

#### Actions:

1. IC or designee shall have activated the Plant ESD system on evacuation from Plant facilities. When Plant ESD is activated, an alarm is automatically sent to the Xcel Maddox control room.
2. All personnel will be evacuated to General Assembly Area 3.
3. Control Room operator will contact any personnel working at the AGI Wellsite and direct them to evacuate to Emergency Assembly Area 3.
4. Any third parties observed working in the 500 or 100 ppm ROE area will be advised verbally of the situation and instructed to leave the area and not return until further notice.
5. ICC and media staging area shall be established at General Assembly Area 3.
6. All personnel will be accounted for at General Assembly Area 3 and H<sub>2</sub>S concentrations at General Assembly Area 3 will be monitored.
7. IC will designate personnel with emergency trailers to block HW 62/180 at designated level 2 locations. (See Figure 6) Personnel will monitor air quality at designated roadblocks.
8. Emergency Responders, local law enforcement, and state agencies, including the OCD District Office, will be notified of the release and status of containment. (Phone numbers listed in Appendix E).
9. Designated personnel will notify area businesses, individuals and producers within the 500 and 100 ppm ROE, both manned and unmanned (phone numbers provided in Appendix E), of the nature of the release and status of containment. All entities will be advised to shelter in place or evacuate, depending on wind conditions, etc. and will be instructed to immediately alert all company personnel, third party contractors and/or service companies working in the area and imminently scheduled to work in the area, of the release. Those individuals will be instructed to immediately leave and not re-enter the Plant vicinity until further notice. All shall be informed of the roadblocks on HW 62/180. Notifications will include but not be limited to:
  - a) Xcel Maddox, DCP Hobbs Plant and Lea Power Partners facilities will be advised to shelter in place or evacuate west at the discretion of the IC depending on wind conditions, avoiding Maddox Road.
  - b) Smith, Carlin, Webber and Handley residences will be advised to shelter in place or evacuate east at the discretion of the IC, depending on wind conditions etc., avoiding Maddox Road.
10. If escaping vapors have been ignited, they should be allowed to continue to burn unless the fire endangers personnel, the public, other property or other equipment.
11. 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.
12. Additional operations personnel may be directed by IC to close valves at field locations on inlet gas pipelines to ensure incoming gas is shut off
13. Once release is resolved and monitored levels of H<sub>2</sub>S at the Plant, the monitors at the HW 62/180 road crossing, roadblocks, and Assembly Areas are less than 10 ppm, the Plant Supervisor or his designee may authorize personnel to sign in and return to the Plant and AGI Facility.
14. Traffic will be restored on Highway 62/180
15. All businesses, individuals and producers previously notified will be informed that the release has been resolved and advised of the current monitored H<sub>2</sub>S levels.
16. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)
17. The Plant Supervisor or his designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**

### ROAD CROSSING RELEASE—LEVEL 3 RESPONSE



# **APPENDIX D**

## **IMMEDIATE ACTION PLANS AND RESPONSE FLOW DIAGRAMS**

### **AGI PIPELINE LINAM RANCH PLANT**

# AGI Pipeline

## Immediate Action Plan/Emergency Procedures

### LEVEL 1 ACTIVATION

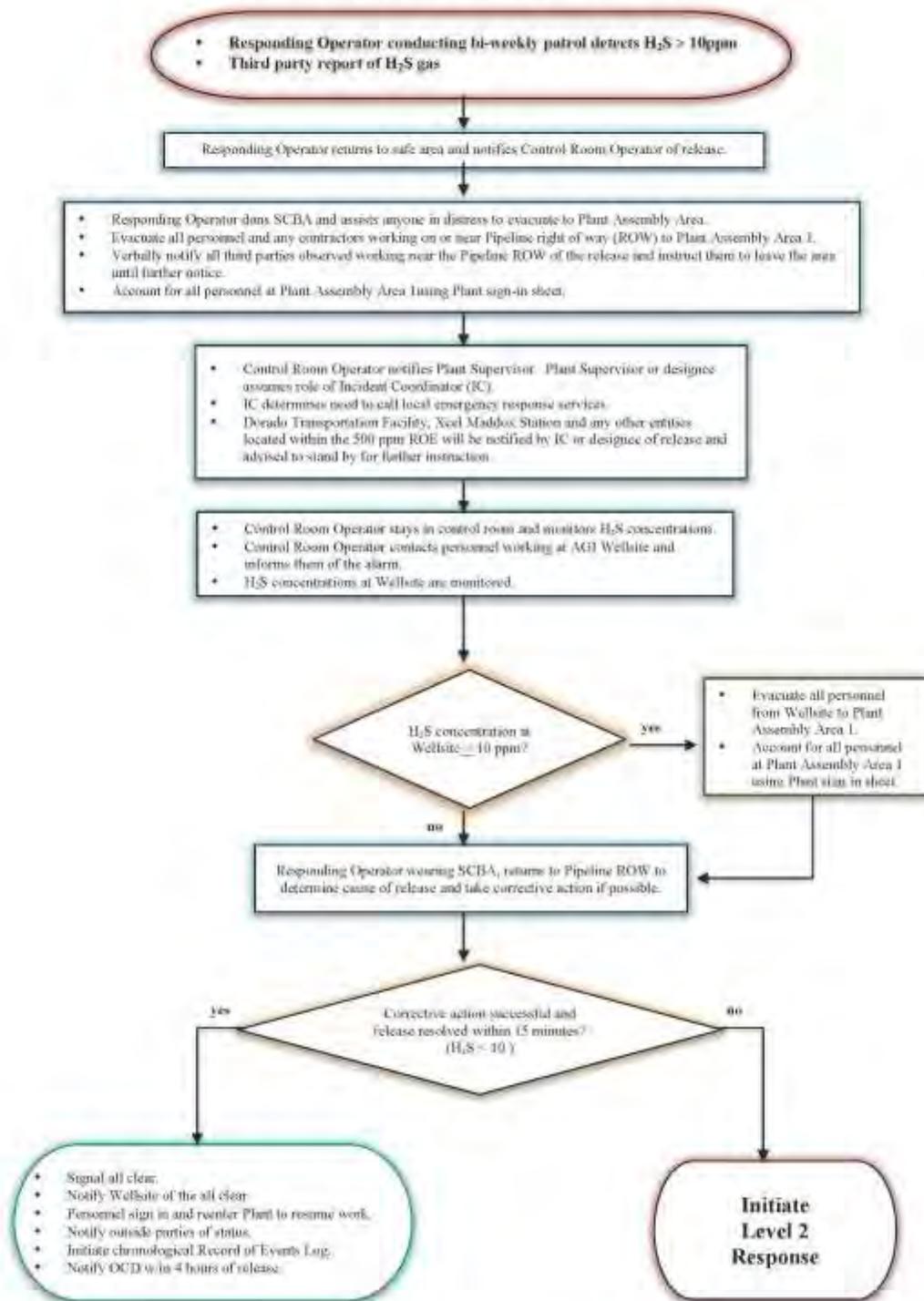
#### Activating Conditions/Alarms:

- Operator conducting biweekly line patrol detects H<sub>2</sub>S concentration of 10 ppm or greater;
- Third party reports H<sub>2</sub>S gas leak.

#### Actions:

1. Responding operator returns to safe area and notifies Control Room Operator of release
2. Responding operator dons SCBA and first helps any persons in distress to evacuate to Plant Assembly Area 1.
3. Evacuate any employees or contractors who may be working on or near the Pipeline right of way (ROW) to Linam Plant Assembly Area 1 along designated routes (see Figure 6).
4. Any third parties observed working near the pipeline ROW will be advised verbally of the situation and instructed to leave the area and not return until further notice.
5. All personnel will be accounted for using the sign in sheets.
6. Wearing SCBA, responding Operator will return to the Pipeline ROW and attempt to determine the source of the release and take corrective actions if possible.
7. Control Room Operator notifies Plant Supervisor of the release. Plant Supervisor or designee will assume the role of IC. Control Room Operator will remain in the control room and monitor H<sub>2</sub>S concentrations throughout the Plant.
8. If deemed necessary, IC or designee will contact local emergency response service providers (phone numbers listed in Appendix E) and advise them of the release and status of containment.
9. The Dorado Transportation Facility and Xcel Maddox Station and any other entities located within the 500 ppm ROE (see Figure 6) will be notified by the IC or designee that a release is occurring and to standby for further instructions (see Appendix E for phone numbers).
10. Control Room Operator will contact any personnel working at AGI Facility, to inform them of the H<sub>2</sub>S alarm on the pipeline, and direct them to monitor air quality (H<sub>2</sub>S concentrations) using the AGI Facility fixed monitors.
11. If levels increase to 10 ppm at AGI Facility monitors, personnel will evacuate to Plant Assembly Area 1 along the designated routes (see Figure 6).
12. If corrective actions are successful, release is resolved and monitored H<sub>2</sub>S levels on the pipeline and road crossing fixed monitors return to less than 10 ppm, Plant Supervisor or designee will signal all clear, and personnel will be allowed to sign in and resume work on the pipeline.
13. Personnel working at the AGI Facility will be notified of the all clear.
14. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)
15. The Plant Supervisor or his designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**
16. If Level 1 release is not resolved within 15 minutes and H<sub>2</sub>S levels continue to increase, initiate Level 2 Response.

### AGI PIPELINE RELEASE—LEVEL 1 RESPONSE



## AGI Pipeline

### LEVEL 2 ACTIVATION

#### Activating Conditions/Alarms:

- **Level 1 corrective actions are unsuccessful;**
- **H<sub>2</sub>S concentration is increasing above 10 ppm or is detected at 20 ppm;**
- **Pipeline leak is visible.**

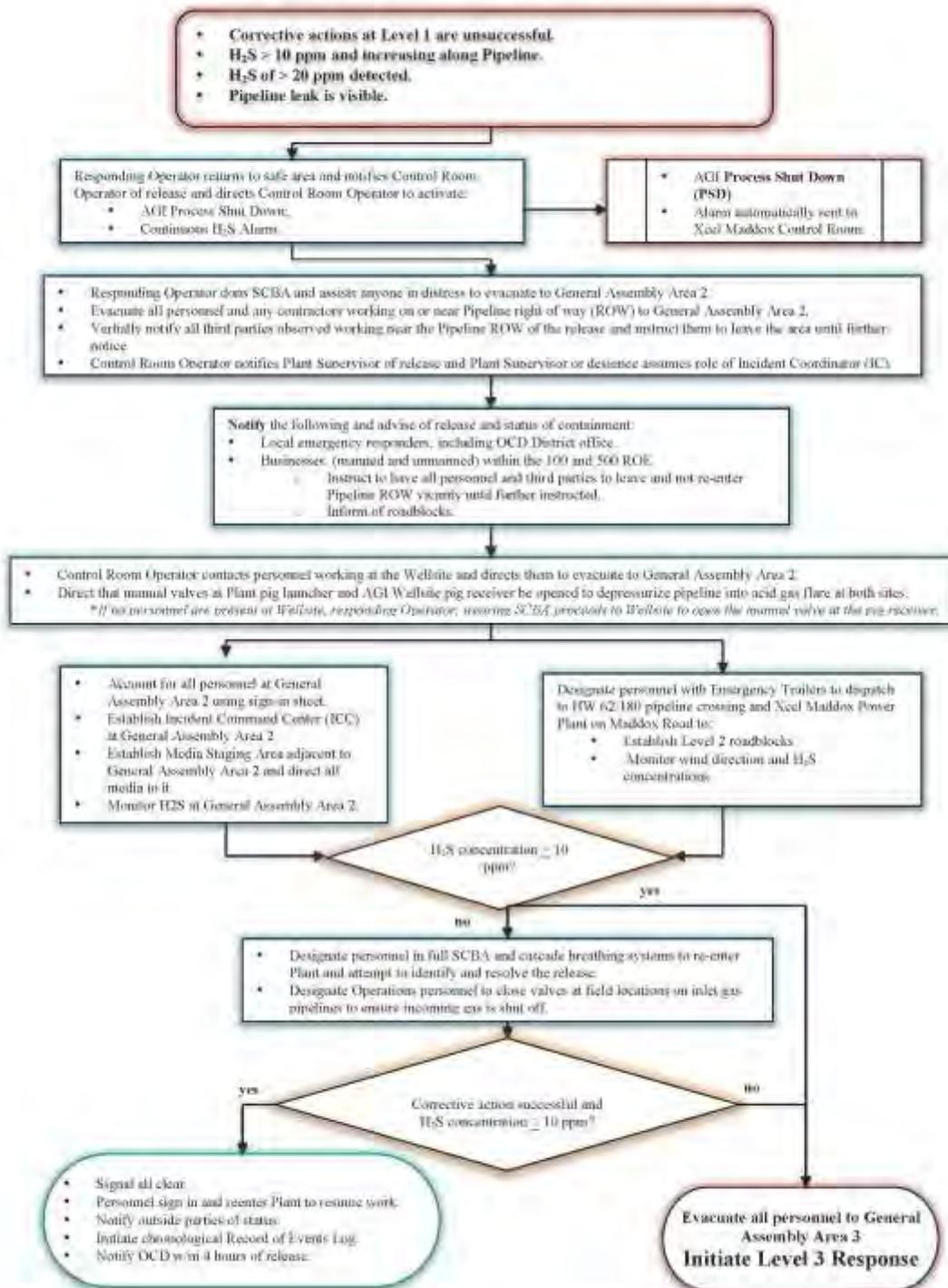
#### Actions:

1. Responding operator, on detecting H<sub>2</sub>S equal to or greater than 10 ppm returns to safe area and immediately contacts control room operator to activate the AGI PSD which shuts down and isolates the AGI compressors and equipment, and routes the acid gas to the plant acid gas flare. When the AGI PSD is activated, an alarm is automatically sent to the Xcel Maddox control room.
2. Control Room Operator activates continuous H<sub>2</sub>S alarm.
3. The responding Operator, upon donning SCBA, 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 General Assembly Area 2 (see Figure 6).
4. All personnel will evacuate to General Assembly Area 2 along designated routes (see Figure 6).
5. Any third party visibly observed working near the pipeline ROW will be advised verbally of the situation and instructed to leave the area and not return until further notice.
6. Control Room operator will remain in the control room and notify Plant Supervisor of release. Plant Supervisor or designee will assume the role of IC.
7. The Control Room Operator will contact personnel working at the AGI Facility and direct them to evacuate to General Assembly Area 2.
8. The control room operator will direct that the manual valves at both the Linam Ranch Plant pig launcher and the AGI Facility pig receiver be opened. The pipeline will be depressurized into the acid gas flares located at both sites. **Note:** *The responding operator, donning SCBA, may, if no personnel are present at the AGI Facility, proceed to the Facility, using H<sub>2</sub>S monitors to insure safety to open the manual valve at the pig receiver.*
9. IC will designate personnel with H<sub>2</sub>S monitors and emergency trailers to be dispatched to the HW 62/180 pipeline crossing and to the Xcel power plant on Maddox Road to establish Level 2 roadblocks and monitor H<sub>2</sub>S concentrations (see Figure 6).
10. IC or designee will notify emergency responders, local law enforcement and state agencies, including OCD District Office (phone numbers listed in Appendix E) of the release and status of containment.
11. Designated personnel will notify individuals, area businesses and producers within the 500 and 100 ppm ROE, both manned and unmanned (phone numbers provided in Appendix E), of the nature of the release and status of containment. All entities will be instructed to standby for further instruction and may be asked to evacuate or shelter in place, depending on wind conditions, etc. 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 release. Those individuals will be instructed to immediately leave and not re-enter the vicinity until further instruction. All shall be informed of the roadblocks on HW 62/180.
12. All personnel will be accounted for at General Assembly Area 2 using the plant sign-in list.
13. Incident Command Center (ICC) will be established at the General Assembly Area 2.
14. A media staging area adjacent to General Assembly Area 2 will be established, and all media will be directed to it.
15. Air quality will be monitored for H<sub>2</sub>S concentrations at General Assembly Area 2.
16. If monitored H<sub>2</sub>S levels at General Assembly Area 2 exceed 10 ppm, all personnel evacuate to General Assembly Area 3 using designated routes and initiate a Level 3 Response (see Figure 6).
17. If H<sub>2</sub>S concentrations reach 10 ppm at roadblocks on HW 62/180 or at Xcel power plant on Maddox Road, a Level 3 response is initiated.
18. 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.
19. If release is resolved and monitored levels of H<sub>2</sub>S in the Plant, the monitors at the HW 62/180 road crossings, the pipeline ROW, and the AGI Wellsite are less than 10 ppm, the IC or his designee may

authorize personnel to sign in and return to the Plant and AGI Wellsite. Third Parties evacuated from the ROW will be advised of the all clear.

20. Traffic will be restored on HW 62/180.
21. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)
22. The Plant Supervisor or his designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**
23. If the release is not resolved and/or H<sub>2</sub>S levels continue to increase, initiate Level 3 Response.

## AGI PIPELINE RELEASE—LEVEL 2 RESPONSE



## AGI Pipeline

### LEVEL 3 ACTIVATION

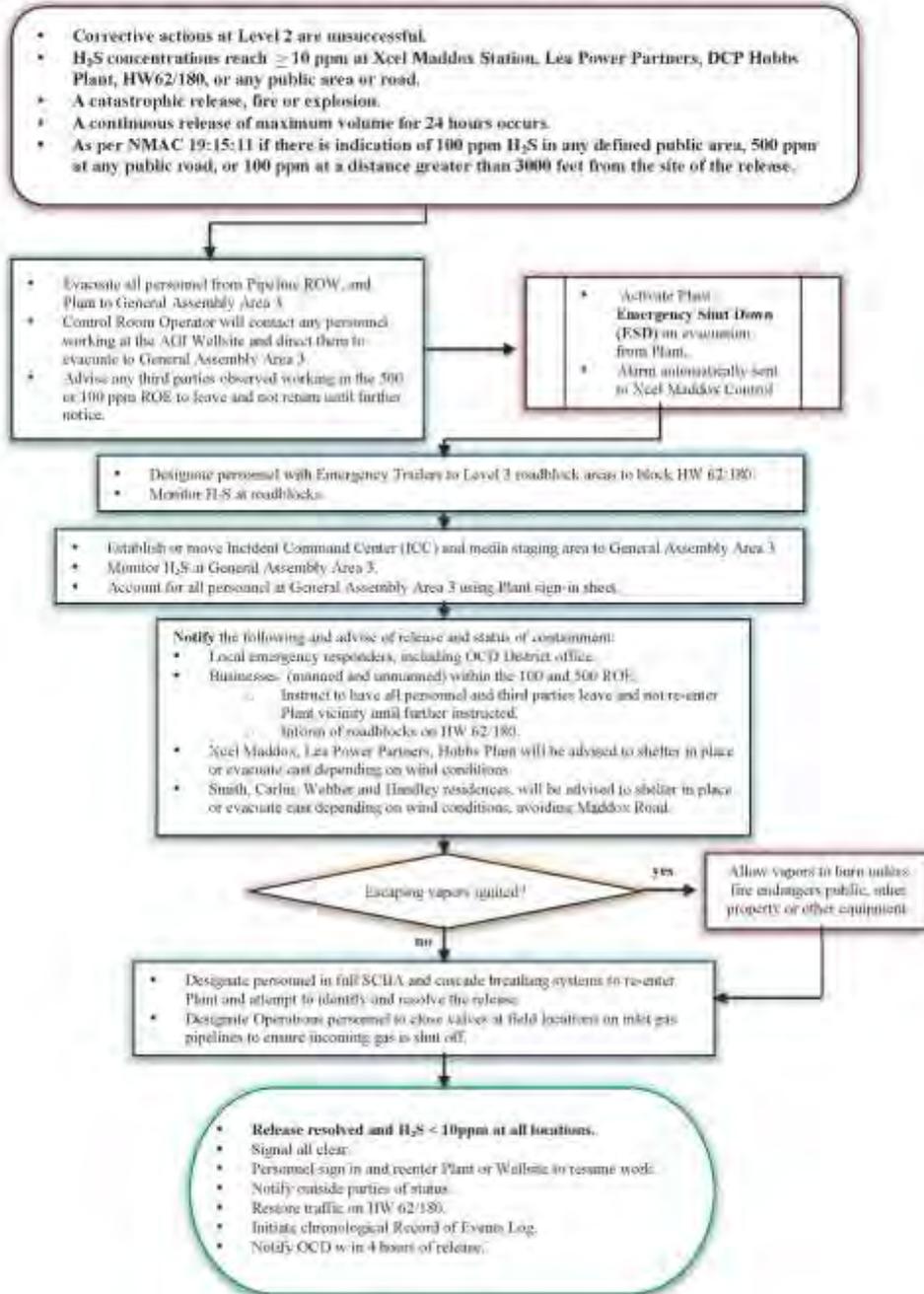
#### Alarms:

- Corrective actions at Level 2 are unsuccessful;
- H<sub>2</sub>S concentrations reach 10 ppm or greater at Xcel Power Plant, Lea Power Partners, DCP Hobbs Plant, or HW 62/180, or any other public area or road;
- A catastrophic release, fire, or explosion occurs;
- A continuous release of maximum volume for 24 hours occurs;
- As per NMAC 19.15.11 there is indication of 100ppm H<sub>2</sub>S in any defined public area, 500ppm at any public road, or 100ppm at a distance greater than 3,000 feet from the site of the release.

#### Actions:

1. Evacuate all personnel from Pipeline ROW and Plant to General Assembly Area 3 (see Figure 6).
2. Plant operators will activate the plant ESD system on evacuation from Plant facilities. When Plant ESD is activated, an alarm is automatically sent to the Xcel Maddox control room.
3. Control Room operator will contact any personnel working at the AGI Facility and direct them to evacuate to General Assembly Area 3 along designated routes (see Figure 6).
4. Any third parties observed working in the 500 or 100 ppm ROE will be advised verbally of the situation and instructed to leave the area and not return until further notice.
5. The Incident Command Center, media staging area shall be re-established at General Assembly Area 3.
6. All personnel will be accounted for at General Assembly Area 3 using the plant sign-in sheet.
7. H<sub>2</sub>S concentrations at General Assembly Area 3 will be monitored.
8. IC will designate personnel with emergency trailers will to be dispatched to block HW 62/180 at designated locations shown on the ROE Map (see Figure 6). Personnel will monitor air quality at the designated roadblocks.
9. State agencies including the OCD District Office and Emergency Responders (phone numbers listed in Appendix E) will be notified of the release and status of containment.
10. Designated personnel will notify area businesses, individuals and producers within the 500 and 100 ROE, both manned and unmanned (phone numbers provided in Appendix E), of the nature of the release and status of containment. All entities will be advised to shelter in place or evacuate depending on wind conditions etc., and will be instructed to immediately alert all company personnel, third party contractors and/or service companies working in the area and imminently scheduled to work in the area of the release. Those individuals will be instructed to immediately leave and not re-enter the Pipeline ROW vicinity until further notice. All shall be informed of the roadblocks on HW 62/180. Notifications will include but are not limited to the following:
  - a) Xcel Maddox Station, Lea Power Partners and DCP Hobbs Plant will be advised to shelter in place, or evacuate to the west at the discretion of the IC depending on wind conditions, avoiding Maddox Road.
  - b) Smith, Carlin, Webber and Handley residences will be notified and advised to shelter in place or evacuate to the east at the discretion of the IC depending on wind conditions, avoiding Maddox Road.
11. If escaping vapors have been ignited, they should be allowed to continue to burn unless the fire endangers personnel, the public other property or other equipment
12. 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.
13. Once release is resolved and monitored levels of H<sub>2</sub>S at the Plant, the monitors at the HW 62/180 road crossing, road blocks and Assembly Areas are less than 10 ppm, the Plant Supervisor or his designee may authorize personnel to sign in and return to the Plant and AGI Wellsite.
14. Traffic will be restored on Highway 62/180.
15. All businesses, individuals and producers previously notified will be informed that the release has been resolved and advised of the current monitored H<sub>2</sub>S levels.
16. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix H)
17. The Plant Supervisor or his designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**

### AGI PIPELINE RELEASE—LEVEL 3 RESPONSE



## APPENDIX E TELEPHONE NUMBERS EMERGENCY CALL LIST

### BUSINESSES AND PUBLIC RECEPTORS WITHIN THE ROE

NAME	ADDRESS	CONTACT	PHONE NUMBER
Xcel Maddox Station On border of ROE	9 Miles W of Hobbs on Hwy 62/180	Maddox Control	575-391-3410 or 575-391-3411
		Maddox Cell	575-631-4966
		Cunningham Control Room	575-391-3711 or 575-391-3710
		Cunningham Cell	575-631-4967
DCP Hobbs Plant	139 W. US Hwy 62-180 Hobbs, NM	Control Room	575-393-5826
Bill Carlin	9800 W. Carlsbad Hwy., Hobbs, NM		575-393-2766
L.S. Webber	9801 W. Carlsbad Hwy., Hobbs, NM		575-393-4784
Lea Power Partners – Hobbs Generating Station	98 N. Twombly Lane Hobbs, NM 88242	Control Room	575-397-6788 or 575-779-5037
		Roger Schnabel	575-397-6706 or 801-360-4189
Dorado Transportation	169 W. US Hwy 62-180 Hobbs, NM 88240	Richard Lentz Hobbs	575-399-4070
		Michael Brandon Midland	432-269-8120
El Paso	2316 Bender Blvd Hobbs, NM	Kenny Morrow	575-492-2380 (o) 575-390-3716 (c)
		Bill Havenan	806-592-4150 (o) 806-893-1479 (c)
		Tim Howell	575-492-3128 (o) 575-390-7980 (c)
Northern Natural	801 South Fillmore Suite 210 Amarillo, Tx 79101	Control Center Randy Lebeau	888-367-6671 (24 hr) 402-530-3501 (o) 806-679-3650 (c)
Targa	P.O. Box 1909 Eunice, NM 88231	James Lingnau	575-602-0251
Joe Handley (Located on border of ROE)	9201 W. Carlsbad Hwy., Hobbs, NM		575-397-6546
Randy & Naomi Smith	NNE of Maddox Road Hobbs NM (Sec 18, 18S,37E)		575-885-9011 575-361-1512 (cell)

## PRODUCERS WITH WELLS WITHIN THE ROE

PRODUCER	OFFICE LOCATION	CONTACT	Office Phone	Contact Phone
Oxy USA	1017 W Stanolind Rd., Hobbs, NM 88240	Steve Bishop Herbie Bruton	575-397-8237	575-390-4784 432-634-6152
Bradley McInroe	P.O. Box 669, Levelland 79336	Bradley McInroe	806-894-1511	806-778-4705
Apache Corp.	800 W Broadway, Hobbs, NM 88240	Tony Chanault	575-394-2743	432-556-1774
Morexco, Inc.	306 W. Wall, Midland, TX 79701	Willie Dean	432-684-4344	575-631-6730
Alternate (Owner)		Deeg Becker		432-934-7042
Lanexco, Inc.	Jal, NM 88252	Robert Lansford	575-395-3056	
Lewis B. Burleson, Inc.	200 N. Loraine, Midland, TX 70701	Buddy Raymond	432-683-4747	575-631-9301
Alternate (Field Sup)		Wayne Jarvis		432-557-5559
XTO Energy, Inc.	200 N. Loraine, Midland, TX 70701	Jerry Parker	432-682-8873	575-441-1628
Chevron USA	Eunice, NM 88231	Larry Williams	575-394-2764	575-390-7165
Sahara Operating Co.	306 W Wall, Midland, TX 79701	Buddy Raymond	432-697-0967	575-631-9301
Mack Energy Corp.	11367 Lovington Hwy., Artesia, NM 88210	Mark Brewer	575-748-1288	575-748-7794
Westbrook Oil Corp.	1320 NW County Rd., Hobbs, NM 88240	Pat Westbrook	575-393-9714	
ConocoPhillips	1410 NW Co. Rd., Hobbs, NM 88240	Kenny Kidd	575-393-2153	575-391-3107
Southwest Royalties, Inc.	1708 N. Dal Paso, Hobbs, NM 88240	Al Perry	575-393-5577	575-390-0194

## DCP COMPANY INTERNAL NOTIFICATIONS

NAME	TITIE	OFFICE	CELL
Linam Ranch Plant	Control Room	575-391-5792 575-391-5793 575-391-5794	575-802-5187
Jacob Strickland	Linam Ranch Plant Supervisor	575-394-5003	575-973-7317
John Cook	SENM South Asset Director	575-397-5597	432-238-8875
Russ Ortega	SENM North Asset Director	575-397-5597	575-390-7160
Tom Tomlinson	SENM Asset Safety Coordinator	575-391-5752	575-631-5532
Steve Harless	GM Operations SENM	575-397-5505	970-396-0333
Greg Smith	President Mid-Con and Permian Business Unit		720-480-4941
Glenn Bowhay	Safety Manager Permian Region	432-620-4009	432-425-7635
	DCP Gas Control – Houston, TX	800-435-1679	

## EMERGENCY RESPONDERS

AGENCY	PHONE
EMERGENCY DISPATCH	911
HOBBS FIRE DEPARTMENT	575-397-9308
HOBBS AMBULANCE SERVICE	575-397-9308
NEW MEXICO STATE POLICE (Hobbs)	575-392-5588
LEA COUNTY SHERIFF'S OFFICE	575-396-3611
HOBBS-LEA REGIONAL MEDICAL CENTER	575-392-6581
LUBBOCK UNIVERSITY MEDICAL CENTER (UMC) (Level 1 Trauma Center)	806-775-8200
POISON CONTROL (Albuquerque)	800-222-1222
HELICOPTER SERVICES	
Southwest Medivac (Hobbs)	800-971-4348
AeroCare (Lubbock)	800-823-1991
Air Med (El Paso)	915-772-9292

## COUNTY AND LOCAL LAW ENFORCEMENT AND PUBLIC AGENCIES

<b>AGENCY</b>	<b>PHONE NUMBER</b>
OIL CONSERVATION DIVISION – DISTRICT Santa Fe Office District 1 Office, Lea County (Hobbs)	505-476-3440 575-370-3186
LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) Lea County	575-396-8602
NEW MEXICO STATE POLICE (Hobbs)	575-392-5588
LEA COUNTY SHERIFF’S OFFICE	575-396-3611
NATIONAL RESPONSE CENTER (NRC)	800-424-8802
NEW MEXICO DEPARTMENT OF HOMELAND SECURITY & EMERGENCY MANAGEMENT (NMDHSEM)	505-476-9600
NEW MEXICO EMERGENCY RESPONSE COMMISSION CONTACT IN NMDHSEM	505-476-0617

## **APPENDIX F**

### **WORST CASE SCENARIO AND RADIUS OF EXPOSURE (ROE) CALCULATIONS**

## **WORST CASE SCENARIO**

The basis for Linam Ranch Plant worst case calculations is 4,387 parts per million (ppm) or 0.44 mole percent of H<sub>2</sub>S and a maximum daily (24 hour) processing volume of 225,000 MSCF. The basis for the AGI Facility and Pipeline worst case calculation is 185,434 ppm or 18.54 mole percent and a maximum daily processing volume of 5,323 MSCF. The ROE calculations assume an uncontrolled instantaneous release from the area near the amine contact towers, the center of the AGI Facility or any location along the pipeline between the Plant and AGI Facility. Calculations using the ROE formula pursuant to NMAC 19.15.1 1 are provided on the next page.

### **Plant**

It should be noted that relative to the Plant ROE calculations the above escape rate, though used as worst case in this Plan, would be very unlikely due to the fact that the Plant has an ESD systems that when activated shuts down the Plant. ESD valves on the inlet pipelines to prevent gas from entering the Plant. In addition, each inlet pipeline has field located shutdown valves as follows:

- Eddy Co. Line – pipeline shutdown valve, capable of remote or manual closing, 300 ft. north of Hwy 62/180. Second pipeline shutdown valve, manual closing, 5 miles west of Linam Ranch Plant.
- Buckeye Line – pipeline shutdown valve, manual closing, 300 ft. north of Hwy 62/180. Second pipeline shutdown valve 7 miles northwest of Linam Ranch Plant.
- Shell 12' Line – pipeline shutdown valve, manual closing at south fence line of Linam Ranch Plant. Second pipeline shutdown valve 7 miles southwest of Linam Ranch Plant.

The secondary, “outside-of-the ROE” valve locations are shown with roads on Figure 5 of this Plan. These valves, when closed, shut off all gas from the gathering systems flowing into Linam Ranch Plant. These valves would be closed as directed by the IC in the event that Plant ESD valves failed to function properly.

### **AGI Facility and Pipeline**

It should also be noted that although the above referenced escape rate has been utilized to calculate the AGI Facility and Pipeline ROE worst case scenario for purposes of this Plan, this escape rate for either the AGI Facility or pipeline would also be extremely unlikely because:

- The AGI has a PSD which, when activated, shuts down and isolates the AGI compressors and equipment and routes the acid gas safely to the plant acid gas flare.
- The Plant ESD systems which, when activated, shut down the Plant and close ESD valves on the inlet pipelines preventing all gas from entering the Plant.

## **RADIUS OF EXPOSURE CALCULATIONS**

The formulas for calculating the two ROEs (as specified by the regulations) are as follows:

### **500-ppm RADIUS OF EXPOSURE CALCULATION**

$$X=[(0.4546)(\text{H}_2\text{S conc.})(Q)]^{(0.6258)}$$

Where:

X = Radius of exposure in feet

H<sub>2</sub>S Conc. = Decimal equivalent of mole or volume fraction of H<sub>2</sub>S 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)

### **LINAM RANCH PLANT**

For existing facilities or operations, the escape rate (Q) is the maximum daily rate of the gaseous mixture produced or handled or the best estimate thereof for the Linam Gas Plant. For purposes of this Plan the volume rate used for contingency planning purposes is an "escape rate" equal to the maximum inlet gas volume of 225,000 MCFD. The inlet gas volume at the Plant is somewhat variable and is continuously metered. The Plant records daily inlet gas volumes and prepares a daily volume report. The volume of 225,000 MCFD of inlet gas has been selected as the escape rate since it is the highest volume that the Plant would handle under its current operations and is considered worst case interpretation of the volume of gas.

As to H<sub>2</sub>S concentration of the inlet gas, daily monitoring data indicates variable concentrations; 4,387 is used in this Plan as a worst case scenario, based on data gathered in 2014.

The calculation of worst case scenario has been done as follows:

Q = 225,000,000

H<sub>2</sub>S conc = 4,387 ppm or 0.44 mole%

### **500 ppm RADIUS OF EXPOSURE CALCULATION**

$$[(0.4546)*(\text{H}_2\text{S concentration})*(\text{gas volume (Q)})]^{0.6258}$$
$$[(0.4546)*(4,387*.000001)*(225,000,000)]^{0.6258}$$

**500-ppm ROE = 3,443 feet**

### **100 ppm RADIUS OF EXPOSURE CALCULATION**

$$[(1.589)*(\text{H}_2\text{S concentration})*(\text{gas volume (Q)})]^{0.6258}$$
$$[(1.589)*(4,387*.000001)*(225,000,000)]^{0.6258}$$

**100-ppm ROE = 7,535 feet**

DCP Midstream			
LP Plant Inlet - Linam Plant		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	0.43866	4386.6	
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	0	
Use ppm derived from either of above calculations to input data below			
Input Data Here	H <sub>2</sub> S Concentration (ppm)	4386.6	
	24 Hour Throughput (MMSCFD)	225	
The radius of exposure is calculated using the following equations:			
100 ppm ROE calculation (as per 19 NMAC 15.11.7.K.1)			
$X_{100\text{ppm}} = [(1.589)(\text{Conc}_{\text{H}_2\text{S}})(Q)]^{(0.6258)}$			
500 ppm ROE calculation (as per 19 NMAC 15.11.7.K.2)			
$X_{500\text{ppm}} = [(0.4546)(\text{Conc}_{\text{H}_2\text{S}})(Q)]^{(0.6258)}$			
Where:			
X = radius of exposure (ft)			
Conc <sub>H<sub>2</sub>S</sub> = the decimal equivalent of the mole or volume fraction of H <sub>2</sub> S in the gas			
Q = daily plant throughput corrected to standard conditions (SCFD)			
Plant parameters			
Q =	225 MMSCFD =	225000000 SCFD	
Conc <sub>H<sub>2</sub>S</sub> =	4386.6 ppm =	0.43866 Mole % =	0.004387 Mole Fraction
ROE calculation:			
$X_{100\text{ppm}} =$	[[1.589)*(0.0043866)*(225000000)]^(0.6258)		
$X_{100\text{ppm}} =$	7535 ft =	1.43 miles	
$X_{500\text{ppm}} =$	[[0.4546)*(0.0043866)*(225000000)]^(0.6258)		
$X_{500\text{ppm}} =$	3443 ft =	0.65 miles	

## LINAM AGI FACILITY AND AGI PIPELINE

For existing facilities or operations, the escape rate (Q) is the maximum daily rate of the gaseous mixture transmitted or handled, or the best estimate thereof for the Linam AGI Pipeline and AGI Facility. For purposes of this Plan the volume rate used for contingency planning purposes is an "escape rate" equal to the maximum treated acid gas volume of 5.322555 MMSCFD. The gas volume transmitted through the Pipeline and handled at the AGI Facility is variable and is continuously metered. The Plant records daily TAG volumes and prepares a daily TAG volume report. The volume of 5.322555 MMSCFD of TAG has been selected as the escape rate as it is the highest volume that the plant would produce under its current operations and is considered worst case interpretation of the volume of TAG. Daily monitoring data indicate H<sub>2</sub>S concentrations in TAG of 18.54% which is somewhat variable.

As to H<sub>2</sub>S concentration of TAG, daily monitoring data indicates variable concentrations; 18.54% is used in this Plan as a worst case scenario, based on data gathered in 2014.

The calculation of worst case scenario has been done as follows:

$$Q = 5,322,555$$

$$\text{H}_2\text{S conc} = 185,434.4 \text{ ppm or } 18.5434439 \text{ mole\%}$$

### **500 ppm RADIUS OF EXPOSURE CALCULATION**

$$\begin{aligned} [(0.4546) * (\text{H}_2\text{S concentration}) * (\text{gas volume (Q)})] & 0.6258 \\ [(0.4546) * (0.185434438911387) * (5,322,555)] & 0.6258 \end{aligned}$$

$$\mathbf{500\text{-ppm ROE} = 3,443 \text{ feet}}$$

### **100 ppm RADIUS OF EXPOSURE CALCULATION**

$$\begin{aligned} [(1.589) * (\text{H}_2\text{S concentration}) * (\text{gas volume (Q)})] & 0.6258 \\ [(1.589) * (0.185434438911387) * (5,322,555)] & 0.6258 \end{aligned}$$

$$\mathbf{100\text{-ppm ROE} = 7,535 \text{ feet}}$$

DCP Midstream LP Treated Acid Gas - Linam Plant ROE CALCULATIONS PURSUANT TO RULE 11					
<b>If data is provided in mole% use calculator below for getting ppm</b>					
Enter Mole % in cell C3	Mole %	ppm			
Convert mole% to ppm	18.54344389	185434.439			
<b>If data is provided in mole fraction use calculator below for getting ppm</b>					
Enter Mole Fraction in cell C10	Mole Fraction	ppm			
Convert mole fraction to ppm	0	0			
<b>Use ppm derived from either of above calculations to input data below</b>					
<b>Input Data Here</b>		H <sub>2</sub> S Concentration (ppm)		185434.4	
		24 Hour Throughput (MMCFD)		5.322555	
The radius of exposure is calculated using the following equations:					
100 ppm ROE calculation (as per 19 NMAC 15.11.7.K.1)					
$X_{100\text{ppm}} = [(1.589)(\text{Conc}_{\text{H}_2\text{S}})(Q)]^{(0.6258)}$					
500 ppm ROE calculation (as per 19 NMAC 15.11.7.K.2)					
$X_{500\text{ppm}} = [(0.4546)(\text{Conc}_{\text{H}_2\text{S}})(Q)]^{(0.6258)}$					
Where:					
X = radius of exposure (ft)					
Conc <sub>H<sub>2</sub>S</sub> = the decimal equivalent of the mole or volume fraction of H <sub>2</sub> S in the gas					
Q = daily plant throughput corrected to standard conditions (SCFD)					
<b>Plant parameters</b>					
Q =	5.322555	MMSCFD =	5322555	SCFD	
Conc <sub>H<sub>2</sub>S</sub> =	185434.4	ppm =	18.5434439	Mole % =	0.185434 Mole Fraction
<b>ROE calculation:</b>					
$X_{100\text{ppm}}$ =	[(1.589)*(0.185434438911387)*(5322555)]^(0.6258)				
$X_{100\text{ppm}}$ =	7535 ft	=		1.43 miles	
$X_{500\text{ppm}}$ =	[(0.4546)*(0.185434438911387)*(5322555)]^(0.6258)				
$X_{500\text{ppm}}$ =	3443 ft	=		0.65 miles	

## **APPENDIX G**

### **H<sub>2</sub>S PLAN DISTRIBUTION LIST**

New Mexico Oil Conservation Division, Santa Fe Office

New Mexico Department of Public Safety (State Office)

Lea County LEPC/Emergency Manager\*

Lea Power Partners, Hobbs Plant

Linam Ranch Plant Office

Linam Emergency Trailers

New Mexico State Police, Hobbs Office

State Emergency Response Commission (SERC)

Xcel Maddox Power Plant

\*Note: 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 H**

### **CHRONOLOGIC RECORD OF EVENTS LOG**

