ExxonMobil / Mobil Producing Tx. & NM Inc.

H_2S CONTINGENCY PLAN

New Mexico

WORK AREA

Lea County

2004

CONTINGENCY PLAN
HYDROGEN SULFIDE AREA
2004

SCOPE

ExxonMobil U.S. Production developed this contingency plan for two geographic areas each having one flowline crossing a pubic road. One flowline is located in the Eunice area and crosses under Ave. J, and Texas New Mexico Railroad tracks in Eunice, NM. The second area has a flowline that is located North of the Buckeye Store on Highway 238.

GENERAL INFORMATION

Name of Facility:	All Facilities Affected & Operated by ExxonMobil in New Mexico
Type of Facility:	Production Flowlines (2)
Location of Facilities:	See Appendix F
Name and Address of Owner or Operator	ExxonMobil - U. S. West Production Company 396 West Greens Road Houston, Texas 77210-4358
Designated Person Accountable for Hydrogen Sulfide Emissions at Facilities:	Lyndal Trout Sr. Field Superintendent New Mexico Work Area

TABLE OF CONTENTS

Last Updated: 2/09/2004

This contingency plan has been reviewed for content and applicability as follows:

BY: _____ DATE: 2/25/04

Johnny Saenz
Operations Superintendent

I. Plan Review and Update Log

1. All ExxonMobil personnel working in this area have reviewed this plan. Personnel are reminded of the hazards and emergency procedures of working in sour areas during annual safety meetings.

2. During and after severe weather, ExxonMobil personnel will check for possible damage to the facility and equipment, which would release H_2S into the atmosphere.

3. The radii of exposure as calculated will be updated as necessary. Unless radius of exposure encompasses a larger area, revisions will be done on a yearly basis.

Please enter any revision to the plan throughout the year. Revisions will be incorporated into the plan during third quarter.

DATE	FIELD AREA OF PLAN UPDATE	UPDATE INFORMATION	UPDATED BY
Example	Bridges State 95	Updated Safety Equipment list	Joe Smith

II. Emergency Call List - Public

The listed Residences below do not fall within the 100 PPM ROE. This list has been compiled because of the residence proximity to our nearest flowlines.

Eunice, New Mexico Area

ROE Map Location	Name	Address	Telephone #
A	**Texas New Mexico RR**	Texas Avenue, Eunice, NM	**505-394-2117**
B	**Arturo Galindo**	924 4th Street	**NA**
C	**Henry Fox**	908 5th Street	**505-394-2682**
D	**Richard Robinson**	Outside City Limits	**505-394-2917**
E	**Vacant (owner moved to Albuquerque)**		**NA**

Note: In cases where persons have no phone, the proper local authorities will be notified of the situation to ensure their notification

Revised: 02/11/2004

III. Emergency Call List

New Mexico Work Area

BUCKEYE, NM OFFICE: 505-396-7300 FAX: 505-396-6253

24 HR ANSWERING SERVICE: 505-393-7155

ExxonMobil: **Last Updated: 01/04**

NAME	TITLE	TELEPHONE NUMBERS		MOBIL #	PAGER #
		OFFICE	HOME		
Buckeye Office		505-396-7300			
Hord, Tony	Field Foreman	505-396-0542	505-392-9890	505- 746-7319	800-571-9528
Rosser, Danny	Field Foreman	806-592-7802	806-562-4048	806-215-0835	
Trout, Lyndal	Sr. Field Superintendent	806-592-7801	806-592-8607	806-215-0835	888-941-5619
Bruton, Doyle	Well Workover Supervisor.	806-592-7803	806-894-2768	806-215-0815	800-529-9506
Luther, Chris	Well Work Tech.	806-592-7846	806-592-3791	806-215-0813	888-353-7659
Henderson, Scott	Operations Compliance Technician	806-592-7805	432-758-9343	806-592-7805	
Shelton, Larry	Operations Compliance Specialist	806-229-6014	806-894-9417	806-790-6162	
Gomez, Mike	Operations Foreman	505-396-0263	505-396-2072	505-390-4478	
Chavez, Harvey	Electrician	806-592-7814	432-758-3023	806-215-0809	800-545-9095
Clay, Don	Measurement Tech.	505-396-0713	505-393-0607	505-390-4475	
Crenshaw, Dwight	Operations Tech.	505-396-6382	505-398-2772	505-390-5344	
Edwards, Henry	Operations Tech.	505-396-6382	505-392-6086	505-390-1742	
Gonzalez, Eloy	Operations Tech.	505-396-6382	505-392-7439	505-390-6085	
Hale, S.J.	Operations Tech.	505-396-1865	505-398-4688	505-390-6719	
Juarez, Trini	Operations Tech.	505-396-6382	505-396-4346	505-390-4477	
O,Neil, Allen	Operations Tech.	505-396-1613	505-396-4479	505-390-4480	
Patman, Dan	Operations Tech.	505-396-6382	505-396-7559	505-390-6371	
Shreffler, Dale	Operations Tech.	505-396-6382	505-392-8122	505-390-4481	
Swain, Robert	Operations Tech.	505-396-6382	505-392-0338	505-390-6373	

Medical:

HOSPITALS	LOCATION	PHONE #
Lea County Regional	Hobbs, New Mexico	505-392-7993
AMBULANCES		**PHONE #**
Eunice EMS	Eunice, New Mexico	(911) 505-394-3258

Hobbs EMS	Hobbs, New Mexico	(911) 505-397-9308
VETERINARIAN		
Great Plans Veterinary Clinic/Hospital	2720 Lovington Highway, Hobbs, NM.	505-392-5513

Agencies:

LOCAL AUTHORITIES	LOCATION	PHONE #
Lea County Sheriff	Hobbs & Eunice, New Mexico	(911) 505-393-2515
New Mexico State Police	Hobbs & Eunice, New Mexico	(911) 505-392-5585
Eunice Police Dept	2301 Ave. O, Eunice, NM	505-394-2112
LEPC (Lovington Fire Dept.) (On duty Captain)	Lovington, NM	505-396-2359 505-396-7380 (Fax)
Eunice City Hall	1106 Avenue J, Eunice, NM 88231	505-394-2576

REGULATORY AGENCIES	LOCATION	PHONE #
New Mexico Oil Conservation Division District 1	Hobbs, New Mexico	505-393-6161
NATIONAL RESPONSE CENTER		1-800-424-8802
STATE EMERGENCY RESPONSE		1-888-754-0055512-463-7727
POISON CONTROL CENTER		1-800-764-7661

Contractors/Company Services:

Service	NAME	LOCATION	TELEPHONE OFFICE
Roustabout/Backhoe Service	**RWI (Ron's Welding)**	**Hobbs, NM**	**505 393-3208**
Vacuum / Pump/ Transport Trucks	**Pate Trucking Service**	**Hobbs, NM**	**505-397-6264**
General Supplies	**Redman Pipe & Supply**	**306 E. Ave. D Lovington, NM 88260**	**505-396-3671**
Pumping Unit Service / Backhoe Service	**Big Bear**	**Denver City, Tx.**	**806-894-9778**
Utilities Electric	**XCEL**	**Box 1261, Amarillo, Tx. 79120**	**800-481-4700**
Utilities Electric	**Lea County Electric**	**P.O. Drawer 1447, Lovington, NM 88260**	**800-510-5232**

Phone Company	**Valor Telephone**	**P.O. Box 660766, Dallas, Tx. 75266-0766**	**505-397-0912**

IV. Area Work Rules

RESPONSIBILITIES & DUTIES

Field Superintendent

1. It is the ExxonMobil Field Superintendent's responsibility to implement the procedures outlined in Sections V through X of the USP Safety Manual; and to see that all personnel observe these procedures on ExxonMobil locations.
2. The Field Superintendent will advise the Operations Superintendent whenever the procedures as specified herein cannot be followed.
3. The Field Superintendent will be responsible for obtaining the necessary safety equipment.
4. The Field Superintendent will keep the number of personnel on location to a minimum during hazardous operations.
5. Annual training sessions will be conducted to familiarize all employees working in the field with the hazards and precautions of working around H_2S including respiratory protection training. Additionally, when deemed necessary by the Field Superintendent, this information will be reviewed with field personnel as it applies to this work area.
6. The Field Superintendent or designated employee will inventory the location periodically to assure the equipment is being properly stored and maintained.
7. The Field Superintendent is responsible for designating 'Safe Briefing Areas' for producing operations. At least two of these areas will be necessary so as to provide an area upwind from the operation at all times. The area to be used at any particular time will depend upon wind conditions at that time.
8. The Field Superintendent is responsible for coordinating employee scheduling.
9. The Field Superintendent is responsible for coordinating transportation of personnel, equipment, and supplies
10. The Field Superintendent is responsible for ensuring someone is keeping a record of events. Refer to Appendix E – “Incident Logs.”

11. If an emergency should occur, the Field Superintendent will assess the situation and will advise all personnel in addition to designating responsibilities to obtain control of the upset condition. The following actions will be taken:

    - Ensure that local emergency response groups have been notified
    - Notify Area Operations Manager; also notify USP Safety Department and Environmental & Regulatory Departments as required
    - Act as ExxonMobil media spokesperson if Area Operations Manager or Public Affairs Advisor are not available

Workover Supervisor

1. It is the Workover Supervisor's responsibility to implement the procedures outlined for the workover and well service operations and to see that the procedures are observed by all personnel on ExxonMobil locations.
2. The Workover Supervisor will advise the Field Superintendent whenever the procedures as specified herein cannot be followed.
3. The Workover Supervisor will be responsible for obtaining the necessary safety equipment required at the rig location (both ExxonMobil and contract supplied).
4. The Workover Supervisor will keep the number of personnel on location to a minimum during hazardous operations.
5. The Workover Supervisor will attend the training sessions periodically and will inform those persons who work under his supervision.
6. The Workover Supervisor will inventory the location periodically to assure the equipment is being properly stored and maintained (checklists will be provided for this purpose by ExxonMobil).
7. The Workover Supervisor is responsible for insuring designated 'Safe Briefing Areas' for the rig location. The Field office will generally be an acceptable safe briefing area. In addition, at least two 'Safe Briefing Areas' upwind of the rig location will be necessary.

8. If an emergency should occur, the Workover Supervisor will assess the situation; and advise the Rig Pusher of their required actions; and inform ExxonMobil's Field Superintendent and/or U.S.P.

Field Technical Foreman

1. In the absence of the Field Superintendent, the Field Foreman or his relief will assume all responsibilities designated herein to the ExxonMobil Field Superintendent.
2. In the event of an emergency, the Field Foreman and/or Senior Operator will don air packs and secure the production facilities as circumstances and time permits.
3. Coordinate employee efforts.
4. Monitor efforts and advise employees of changing conditions
5. Continue to monitor emergency control systems.
6. Assign individual to monitor site security. Keep by-standers and the press at the gate or other designated location.
7. Ensure that local emergency response groups have been notified.
8. Notify supervisor / superintendent, other employees in area and Emergency Response Agencies.

Field and All Personnel

It is the responsibility of all personnel in this work area to familiarize themselves with the procedures outlined in this directive as well as the ExxonMobil Safety Manual, Sec. 10-24 to 10-32 (Hydrogen Sulfide) and Sec. 10-23 (Sulfur Dioxide).

When an emergency occurs, the following general actions should be taken:

1. Evaluate the situation.
2. All personnel will attend to their personal safety first.
3. Notify foreman.
4. Help anyone who may be injured or overcome by toxic gases. The Field Superintendent will assign someone to administer first aid to unconscious or injured persons.
5. Attempt to control situation if safe to do so.

6. Report to the designated -'SAFE BRIEFING AREA' and follow the instructions of the Field Superintendent.

NOTIFICATIONS

Per NMOCD Rule 118, the appropriate NMOCD District Office shall be notified as follows:

1. **Notification of the Division. The person, operator or facility shall notify the division upon a release of hydrogen sulfide requiring activation of the hydrogen sulfide contingency plan as soon as possible, but no more than four hours after plan activation, recognizing that a prompt response should supercede notification. The person, operator or facility shall submit a full report of the incident to the division on Form C-141 no later than fifteen (15) days following the release. (Per NMOCD Rule 118)**

2. **If Hydrogen Sulfide Encountered During Operations. If hydrogen sulfide was not anticipated at the time the division issued a permit to drill but is encountered during drilling in a concentration of 100 ppm or greater, the operator must satisfy the requirements of the rule before continuing drilling operations. The operator shall notify the division of the event and the mitigating steps that have been or are being taken as soon as possible, but not later than 24 hours following discovery. The division may grant verbal approval to continue drilling operations pending preparation of any required hydrogen sulfide contingency plan.**

The following situations required immediate notification to U.S.P. Safety, U.S.P. Regulatory, and the area's Operations Superintendent. The notification will be made regardless of the amount of information available. (U.S. Production's Minimum Internal Notification Requirement Matrix should be referenced)

1. Fatality involving employee or contractor.

2. Accident which requires hospitalization of any person.

3. Fire, explosion or equipment damage in excess of $50,000.

4. Any fire, explosion or equipment damage which results in injury to any person.

5. Incident requiring notification of regulatory agency (spills, etc.).

6. Incident that involves or potentially endangers the local community or is highly visible to the news media.

NORMAL OPERATING REQUIREMENTS

A. PRODUCING OPERATIONS

1. Warning signs will be placed at all above ground fixed surface facilities.
2. A warning sign at the entrance and a windsock will be placed at all ExxonMobil facilities.
3. Pipeline crossing signs shall be installed on all buried pipelines, with greater than 500 ppm ROE, crossing a public road and on lines located within a public area or along a public road.
4. All fixed surface facilities involving concentrations of >100 ppm (including wells), except for surface pipelines, within a quarter mile of a residence shall be fenced. Gates to these facilities shall be locked at all times unless the facility is manned by ExxonMobil employees or personnel under contract to ExxonMobil. Keys to the locks will be kept in the field office by ExxonMobil personnel.
5. Only the appropriately designed equipment and materials as determined by field experience, good engineering practice, and in accordance with the requirements of NMOCD Rule 118. **(Note: Copper-bearing metal must not be used, and NACE MR-01-75, latest revision should be followed).**
6. Keep storage tank thief hatches closed except when open gauging, thieving, or inspecting. When thieving a storage tank, or working around open hatches, proper respiratory equipment must be used. Exercise caution and stay upwind of the open hatch.
7. Check work area with an H_2S detector when making vessel or line repairs and any time hazardous concentration of H_2S could be present. Wear a self-contained breathing apparatus if concentration is greater than 10 ppm (Exercise caution when approaching low areas such as ditches, inside firewalls, etc.).
8. Maintain a copy of the contingency plans at the Buckeye Field Office.

9. Field personnel at all times should be aware of the condition of facilities and equipment, and report all faulty or potentially hazardous equipment.

B. WORKOVER and WELL SERVICE OPERATIONS

1. Post warning sign at entrance to well location when a rig moves in for well service.
2. Use only appropriately designed equipment and materials as determined by field experience and good engineering practice (NACE MR-01075, latest revision) and in accordance with NMOCD Rule 118
3. Inventory safety equipment prior to moving on location. Get replacement items at this time.

H_2S EMERGENCY RESCUE AND FIRST AID

EMERGENCY RESCUE

During an emergency, use the "buddy" system to prevent anyone from entering or being left in a gas area alone, even when wearing SCBA. Do not remove masks until area has been tested and a safe breathing environment has been confirmed. If a sudden gas release occurs without warning, hold your breath, move quickly upwind, and put on SCBA.

Help anyone who may be injured or overcome by toxic gases. **ALWAYS PUT ON SCBA BEFORE GOING TO ASSIST ANYONE AFFECTED BY H_2S.**

If affected person is incapacitated in a high concentration area, obtain assistance and attach safety belt with sufficient length tail line. Be prepared to act fast; speed is important. Use wind direction and fans to advantage where possible. Once the person is removed from the H_2S, contaminated area and moved to fresh air, administer first aid.

FIRST AID

If a person is overcome by H_2S gas, immediate first aid treatment is vital. Degree of H_2S poisoning and probability of respiratory failure will vary depending on the concentration of H_2S gas, the duration of exposure, and the physiological and psychological makeup of the individual.

The primary objective in managing first aid treatment for H_2S exposure is to provide the person with fresh breathing air (oxygen), free of gas contamination.

The following steps are a basic guideline to follow in managing first aid treatment for a person overcome by H_2S gas.

1. Once in a fresh breathing area, provide mouth to mouth resuscitation.
2. Provide CPR (Cardiopulmonary Resuscitation) only if required and properly trained.
3. Once revived, treat for shock and do not leave unattended.
4. Transport to a professional medical care facility at once. Although the person may seem to have recovered, do not rely on their senses or appearance. All victims of H_2S gas poisoning should receive professional care as soon as possible. It is important for persons working around H_2S gas to have proper training in CPR and artificial respiration.

Check List for Hydrogen Sulfide Operations

The following should be performed periodically.

1. Check all breathing units for operation:
   - Demand regulator
   - Escape bottle air volume
   - Supply bottle air volume.
2. Check breathing equipment mask assembly to see that straps are loosened and turned back ready to put on.
3. Check pressure on breathing equipment air bottles to make sure that they are charged to full volume.
4. Check breathing equipment to make sure all demand regulators are working. This requires that the air bottle be opened and the mask assembly be put on tight enough to assure the regulator is working properly.
5. Confirm pressure on supply air bottles.
6. Perform breathing equipment drills with on-site personnel.
7. Check the following supplies for availability:
   a. H_2S detector supplies
   b. Full-Body Safety Harness
   c. Emergency telephone lists
8. Test the Tri Function Monitor to verify batteries are good.
9. Perform blowout preventer drills.
10. Check fire extinguishers to see if they have the proper charge.
11. Check the operation of H_2S monitors daily.

V. H_2S Release Emergency Procedures - Production

I. DETAILED PROCEDURES

Any person discovering an emergency condition in ExxonMobil's operations such as a blowout, flowline rupture, vessel rupture, etc., will observe the following procedure:

1. If the opportunity to evacuate, leave the hazardous area immediately, move upwind of the source, and stay out of low areas.

2. If evacuation of the area cannot take place and if in the vicinity of a house, go indoors immediately or remain indoors - do not attempt to enter a car to leave the area.

3. Close all doors, windows, and shutters. Seal doorways and windows with wet towels or duct tape.

4. Turn off heating and air conditioning system. Block off air vents with tape, plastic sheeting, wax paper, or aluminum wrap.

5. Close as many interior doors as possible.

6. Soak a heavy cloth with water and hold it against your nose and mouth as a "filter".

7. Any person discovering any emergency conditions will then notify the field superintendent of the location of the release, including the location of any injured personnel.

8. Further contact will be conducted by phone or field personnel may come to your door for notification.

9. If authorities decide to evacuate the area, you will be given assistance and additional information from field personnel.

ExxonMobil Personnel Only

1. After leaving the area when discovering an emergency condition, immediately begin the hazard assessment and notify the Field Superintendent/Foreman of the release, including the location of any injured personnel.

2. If you are qualified, use respiratory protection equipment and rescue any personnel who may be overcome by gases to a safe area upwind or isolated from the source of gas. DO NOT APPROACH or enter the emergency area without respiratory protection equipment. If possible, use the "buddy system". Start cardio-pulmonary resuscitation until the victim revives or medical help arrives.

3. Do not attempt to shut off the source of H_2S until help has arrived and proper breathing equipment is available unless it can be done from a safe distance (i.e. upstream block valve).

4. The On-Site Incident Commander (OSIC), normally the Field Superintendent/Foreman will direct ExxonMobil employees in shutting off the gas source and will request assistance from fire departments and other service companies, as required, to control the emission.

5. The OSIC will direct ExxonMobil employees to post barricade with signs noting the nature of the emission on all approaches to the contaminated area. No one should be allowed to enter the contaminated area without proper breathing equipment until the gas source has been shut off and the H_2S allowed to disperse.

6. The OSIC will immediately notify the Operations Superintendent or designated relief. In the Operations Superintendent's and/or relief's absence, the OSIC will notify the Production Manager. The OSIC will request assistance from the County Sheriff, Local Police, and State Police for any traffic control which may be necessary to give top priority to notifying and, if necessary, assisting in the evacuation of any resident who may be endangered by the H_2S emission.

7. The OSIC will notify the local New Mexico Oil Conservation Division District Office and ExxonMobil's Operations Integrity Group (Regulatory, Compliance & Safety). Additional notification may be required to the Local Emergency Planning Committee (LEPC) and the State Emergency Response Commission (SERC), depending on circumstances and the amount of H_2S released. See Section IV of the Emergency Action Manual for Regulatory Reporting Requirements.

8. The OSIC or HAZMAT Specialist will use a tube-type gas detector, personal H2S monitor or an Industrial Scientific Tri function meter to ensure that the H_2S concentration has dropped to 10 ppm or less before allowing people to enter the contaminated area without protective equipment.

9. If the source of release cannot be shut off, the OSIC will determine if the situation warrants igniting the flow or a ruptured line, vessel or of an uncontrolled well. The decision should be made as a last resort in a situation where it is clear that personnel and property are endangered and there is no hope of controlling the gas flow under prevailing conditions. However, the decision must not be delayed if human life is threatened. In all cases, an attempt should be made to notify appropriate management prior to ignition. (See Emergency Action Manual pages II-6 through II-17 for proper ignition procedures.)

II. When H_2S release is reported by public citizen or an agency:

A. Person receiving call should obtain the following information:

- Nature of problem such as rotten egg smell, hissing or roaring sounds, liquid release, flames, etc.
- Location of the release.
- Location, name, phone number of caller.
- Wind direction if known.
- Probable travel path of escaping gas.
- People, houses, or animals in area of release or path.

B. Person receiving call should immediately notify supervisor and report all available information. Remain by phone and radio to provide interim communication, if possible.

C. Supervisor dispatches personnel to investigate report. If the conditions are judged hazardous based on available information then:

- Two people should be dispatched.
- Supervisor should proceed to the office (if needed) and establish communications command post.

D. Dispatched personnel must:

- Be equipped with:
  - A means to detect danger levels of H_2S (i.e., electronic gas detector).
  - Self contained breathing apparatus (MSA or Scott Air-Pack).
  - A means of communication.
- Establish and maintain communications between themselves and the communications command post prior to entering a possibly hazardous area.
- Verify condition of safety equipment prior to entering a possibly hazardous area.
- Avoid low areas and enter hazardous area from the upwind side if possible.

E. Dispatched personnel and supervisor will determine:

- Source, cause, and concentration of release.
- Extent of hazard to the surrounding public.
  - Take immediate action to eliminate the discharge, if it can be accomplished safely in time to protect the public from a hazardous concentration of H_2S.

F. All personnel involved will continually monitor the situation to determine the necessity for the following steps:

- Alerting public safety personnel for road blockades and evacuations.
- Notifying ExxonMobil management of "danger" condition.
- Notifying affected local residents of hazard.
- Proceeding with evacuation of area.
- Proceeding with isolation of area.
- Requesting any additional emergency help as needed.
- Making any decision to ignite source.
- Contact the New Mexico Oil Conservation Division Districts 1 Office in Hobbs New Mexico.

G. Safety of reentry to area

- Area of exposure should be thoroughly monitored following abatement procedures.
- General public should be allowed re-entry only after concentration levels are lower than 10 PPM and the area has been determined to be safe by the Field Superintendent.
- Hold post-emergency meeting with all ExxonMobil and public safety personnel who participated in contingency plan activation.
- Complete ExxonMobil's Significant Incident Report (SIR) form.

III. When H_2S is detected by ExxonMobil personnel on location, determine:

A. Immediate Personal Danger

- Put on respiratory protection equipment (SCBA), or leave contaminated area.
- Activate emergency shutdown system (ESD) and/or alarms.
- Determine source, cause, and concentration; and if necessary
  - Evacuate to higher ground upwind from the site and warn others in the immediate area.
  - Notify supervisor of release location, current situation, and any injuries.
  - Remove any personnel overcome by gases to a safe area upwind or isolated from the source if safe to do so. If possible, use the "Buddy System". Administer first aid. If injuries have been sustained, call EMS.
  - Begin monitoring H_2S levels and attempt to correct the situation if safe to do so.

All further steps should be taken either at the direction of or by the supervisor, if possible.

Note: **The Area Hydrogen Sulfide Contingency Plan should be activated if a Potentially Hazardous Volume of Hydrogen Sulfide is released that meets the following definition, (NMOCD Rule 118).**

Potentially Hazardous Volume means the volume of hydrogen sulfide as such concentration that:

- **(a) the 100-ppm radius of exposure includes any public area;**
- **(b) the 500-ppm radius of exposure includes any public road; or**
- **(c) the 100-ppm radius of exposure exceeds 3,000 feet.**

B. Extent of Hazard to the Public

- Take immediate action to eliminate the discharge if it can be accomplished safely.
- Continually monitor situation to determine necessity for the following steps:

- Alert public safety personnel to stand by for evacuation and road blockades.
- Notify ExxonMobil management of "danger" condition.
- Notify affected local residents of hazard.
- Proceed with evacuation of area.
- Proceed with isolation of area.
- Request any additional emergency help.

- If source of release cannot be controlled, determine if situation warrants igniting the flow. Refer to Emergency Action Manual, Section II-7, II-10 & II-13 for ignition procedures.

C. Safety of Reentry into Area

- Area of exposure should be thoroughly monitored following abatement procedure.
- General public should be allowed reentry only after H_2S concentration levels are lower than 10 PPM and the area has been determined to be safe by the Field Superintendent.
- Hold post-emergency meeting with all ExxonMobil and public safety personnel

  who participated in contingency plan activation.
- Complete ExxonMobil's Significant Incident Report (SIR) Form.

IV. H_2S EMERGENCY PROCEDURES UNMONITORED AREAS

ALL PERSONNEL / VISITORS / CONTRACTORS

1. Keep yourself "wind conscious". Be prepared to quickly move upwind and away in the event of any emergency involving the release of H_2S.
2. If you suspect an H_2S gas release, immediately move upwind and away from the area. Do not return to the area until it has been tested for H_2S.
3. Notify the ExxonMobil Foreman of the suspected H_2S release.
4. Ensure potentially contaminated areas are checked with an H_2S monitor by personnel wearing proper SCBA prior to initiating any repairs.

VI. H_2S Release Emergency Procedures - Workovers

INTRODUCTION

This contingency plan details a general precautionary measure to be implemented during a workover on wells that may contain hydrogen sulfide gas. ExxonMobil intends to make every effort to provide adequate safeguards against harm to persons both on location and in the immediate vicinity from the effects of hydrogen sulfide released to the atmosphere. The plan outlines precautionary and emergency procedures, safety equipment, and responsibilities pertaining to workovers in general.

To be effective, this plan requires the daily cooperation and effort of each individual to keep all safety equipment properly stored, easily accessible, and routinely maintained. This extra effort will help ensure the safety of all personnel involved at a workover site.

First Aid

The following should be emphasized during breathing equipment drills until everyone is familiar with the procedures:

1. Whenever H_2S is discovered in harmful concentrations, put on SCBA
2. Stop the operation of the rig and secure equipment. Close blowout preventers if necessary.
3. Help anyone who may be affected by gas. Do not enter the contaminated area without respiratory protection. Never attempt to rescue a person by holding your breath while entering a contaminated area.
4. Remove the victim to fresh air immediately, keep the victim warm and at rest.
5. If the victim is breathing, this is all that may be necessary.
6. If the victim is not breathing, institute mouth-to-mouth or mouth-to-nose resuscitation. An EMS unit should be called immediately.
7. Refer to the ExxonMobil USP Safety Manual for first aid and respiratory details (Section V, pages 13-23 & Section VIII for First Aid).

8. **DO NOT PANIC**. The Workover Supervisor should assess the situation and assign duties to various persons to bring the situation under control. When time permits, U.S.P. should be notified and ensure the appropriate operating condition warning flag is displayed.

9. Do not allow anyone who has been overcome by H_2S to return to work without a doctor's written permission.

Workover Provisions and Precautionary Procedures

1. General

A. NMOCD Rule 118 specifies the minimum requirements for operations in an H_2S environment. The basis of the specific requirements depends on the 100 and 500 ppm radius of exposure calculation.

For determining the location of the 100 ppm radius of exposure (ROE):

$$ROE = [(1.589)(\text{mole fraction of } H_2S)(Q)]^{(0.6258)}$$

For determining the location of the 500 ppm radius of exposure (ROE):

$$ROE = [(0.4546)(\text{mole fraction of } H_2S)(Q)]^{(0.6258)}$$

Where:

Q = Maximum volume of gas determined to be available for escape in cubic feet per day. For existing gas wells this is the current adjusted open flow rate or the operator's estimate of the well's capacity to flow against zero back pressure at the wellhead.

H_2S = Mole fraction of hydrogen sulfide in gaseous mixture available for escape.

B. Rig components should be arranged on the location in the best possible configuration so the prevailing wind will blow across the rig toward the reserve pit(s), burner pits, and mud tanks.

C. Two cleared areas will be designated as "SAFE BRIEFING AREAS." During an emergency, personnel will assemble in one of these areas for instructions from the Workover Supervisor. Prevailing wind direction should be considered in

locating the protection center briefing areas on either side of the location at a safe distance from the wellbore. One area should offset the other at an angle of 45 to 90 degrees with respect to the prevailing wind direction to allow for wind shifts during the work period . The areas should be as close to a road as possible.

D. Safety equipment not having a specified location will be located in the "SAFE BRIEFING AREA".

E. Workover fluids should be maintained at or above a pH of 10.0 to prevent hydrogen sulfide attack on downhole well equipment. If well equipment is made of aluminum such as some 1-inch tubing, soda ash rather than caustic soda should be used to increase pH to prevent dissolving the aluminum.

F. Wind direction indicators shall be installed at strategic locations around the well site and be readily visible from the site.

(1) A windsock will be installed and positioned so as to be seen from the rig floor.

(2) Additional wind streamers will be posted at various points so as to be visible from any location at the well site (i.e., at the top of the derrick, at the entrance of the lease or location and at each briefing location).

(3) Personnel should develop a wind direction consciousness. Personnel should form the habit of quickly moving upwind in the event of any emergency involving the release of gas.

G Automatic hydrogen sulfide detection and alarm equipment that will warn of the presence of hydrogen sulfide gas in concentrations that could be harmful shall be utilized at the site.

(1) Monitors should be installed with an audible alarm systems located where they can be heard throughout the location.

(2) Automatic monitors should be set to trigger the alarms when H_2S concentrations in the atmosphere reach 10 ppm.

(3) Each H_2S continuous monitoring-type detector on location must be tested, as needed, to ensure proper operation. **A record of the test should be made and entered on the daily rig reports**.

H. Caution Poison Gas Warning signs and No Smoking signs shall be located at the entrance to the rig location.

I. Wellsites should be secured by fencing to protect against unauthorized public access.

J. All materials and equipment used must satisfy the latest version of NACE Standard MR-01-75.G. The ExxonMobil Workover Supervisor will ensure that only those contractor and ExxonMobil personnel who are adequately trained in accordance with NMOCD Rule 118, will work at the well site.

K. The ExxonMobil Workover Supervisor will ensure that only those contractor and ExxonMobil personnel who are adequately trained in accordance with NMOCD Rule 118 will work at the well site. In addition, ExxonMobil must have on file assigned statement from the contractor that only those personnel who are adequately trained will work at the well site.

Responsibilities and Duties of the Workover Supervisor

1. Ensure that safety and emergency procedures outlined in this manual are observed by all personnel on location.
2. Advise the Operations Superintendent whenever the procedures as specified herein are complied with or cannot be followed.
3. Keep the number of personnel on location to a minimum during hazardous operations.
4. Designate the two SAFE BRIEFING AREAS
5. If an unexpected emergency occurs or if Hydrogen Sulfide gas is detected, the Workover Supervisor will assess the situation and will advise all personnel what condition exists by voice, sounding the alarm if it has not already sounded automatically, and/or by displaying the appropriate condition warning sign.
6. Ensure all safety equipment is on location and is in proper working order. (listed in appendix)
7. Ensure all contractors on location have current hydrogen sulfide/sulfur dioxide training.
8. Ensure that the planned work operations have been properly classified.
9. Designate who will assume all of his responsibilities in the event he is absent or incapacitated.
10. Inventory the well site periodically to ensure that the equipment is being properly stored and maintained.
11. Notify the workover contractors and service companies of the H_2S environment that could be encountered at the location and require the contractor and the service companies to provide breathing equipment and refill bottles for their personnel while on location.

APPENDICES

A. TOXIC PROPERTIES OF HYDROGEN SULFIDE (H_2S)

Hydrogen Sulfide is, under normal conditions, a flammable, colorless gas, which is heavier than air. It has a characteristic "rotten-egg" odor at low concentrations. At higher concentrations it has a sweetish odor: at still higher concentrations, an odor may not be detected. It is capable of causing death when found at certain levels of concentrations. Hydrogen Sulfide is found in some oil and gas wells, and associated production facilities.

It should be emphasized that the odor, which is detectable at low concentrations, is less detectable or undetectable at high concentrations due to olfactory nerve anesthesia. H_2S acts as a chemical asphyxiant, preventing the body from utilizing oxygen in the tissue. This can lead to respiratory failure. Consequently, ODOR MUST NOT BE CONSIDERED AS A SAFE MEANS OF DETECTION.

Characteristics of Hydrogen Sulfide - H_2S

Molecular Weight = 34.08 g/mol
Colorless gas at room temperature
Boiling point = 76° F (-60° C)
Soluble in liquid (437 ml in 100 ml of water at 0°C. 186 ml in 100 ml of water at 40°C)
Vapor Pressure = 145psi (10 kg/cm2) 0°C
Specific Gravity (Density) = 1.19 (Specific Gravity of air is 1.0)
Auto Ignition temperature = 482° F (250°C) to 500°F (260°C)
Flame is practically invisible
One combustion by-product is SO_2 which is also toxic
Explosive at mixtures between 4.3% by volume in air and 46% by volume in air Upper Limit
Noxious at low concentrations (rotten egg odor)
Corrosive to high carbon steel

Effects of exposure to various concentrations of H_2S are:

Concentration	Effect
0.13 ppm	Minimal perceptible odor.
4.60 ppm	Easily detectable, moderate odor.
10.0 ppm	Beginning eye irritation (OSHA permissible exposure level).
27.0 ppm	Strong, unpleasant odor, but not intolerable.
50-100 ppm	Slight conjunctivitis (eye inflammation) and respiratory tract irritation after 1 hour exposure.
100 ppm	- Coughing, eye irritation, loss of sense of smell after 2-15 minutes. - Altered respiration, eye pain and drowsiness after 15 to 30 minutes, followed by throat irritation after 1 hour. - Several hours of exposure results in gradual increases in severity of these symptoms and death may occur within the next 48 hours.
200-300 ppm	Marked conjunctivitis and respiratory tract irritation after 1 hour of Exposure.
500-700 ppm	Loss of consciousness and possibly death after ½ to 1 hour exposure.
700-1000 ppm	Rapidly produces unconsciousness, cessation of respiration and death in less than ½ hour.
Above 1000 ppm	Unconsciousness at once, cessation of respiration and death in a few Minutes.

A. TOXIC PROPERTIES OF SO_2

Sulfur dioxide (SO_2) is a colorless, non-combustible gas with an extremely pungent odor. SO_2 is a by-product of flared H_2S gas. Although SO_2 is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures. SO_2 gas causes irritation of the eyes, mucous membranes, and upper respiratory tract. It has a suffocating odor, and is a corrosive and poisonous compound. At high concentrations it affects the upper respiratory tract and the bronchi, possibly causing edema of the lungs and respiratory paralysis.

Effects of exposure to various concentrations of SO_2 are:

Concentration	Effect
0.3 –1 ppm	Detectable by taste
3 – 5 ppm	Detectable by odor
8 –12 ppm	Moderately irritating to eyes, throat and upper respiratory tract
50 – 100 ppm	Maximum permissible concentration for short-term exposure (30 min.)
150 ppm	Extremely irritating to eyes, throat and upper respiratory tract
400 – 500 ppm	Immediately hazardous to life. Sense of suffocation.

Characteristics of SO_2:

Specific Gravity = 2.21 (S.G. of air is 1.00
Molecular Weight = 64.06 g/mol
Vapor Pressure = 2538 mm @ 21.1°C

B. Flowlines Crossing Public Road / RailRoad Tracks
LATITUDES AND LONGITUDES

WELL NAME	LATITUDES	LONGITUDES
FF Hardison Well # 3 (Well Site- Eunice, NM)	32-26.242N	103-08.914W
FF Hardison Well # 3 (Crosses under Avenue J.- Eunice, NM)	32-26.242N	103-08.912W
FF Hardison Well # 3 (Eunice Area - Crosses under Texas New Mexico RailRoad Tracks.)	32°-26.550N	103°-08.704W
North Vacuum Abo Well #251 (Well Site - Buckeye Area)	32°-49.34N	103°-30.57W
North Vacuum Abo Well #251 (Flowline Crossing Highway 238, North of Buckeye Store - Buckeye Area)	32°-49.421N	103°-30.750 W

C. RADIUS OF EXPOSURE FOR WELLS IN LEA COUNTY

100 PPM ROE Ft.=(589xPPMxMMCF/D) RAISED TO THE 0.6258 POWER
500 PPM ROE Ft.=(0.4546xPPMxMMCF/D) RAISED TO THE 0.6258 POWER

WELL NAME	H_2S PPM	A.O.F. KCF/D	100 PPM R.O.E. (Ft.)	500PPM R.O.E. (Ft.)	Contingency Plan Required
JL Greenwood # 11	0	110	0	0	No
JL Greenwood # 12	2110	92	36	16.5	No
JL Greenwood # 13	2110	127	44	20.2	No
JL Greenwood # 14	2110	48	24	11.0	No
JL Greenwood # 15	2110	163	52	23.6	No
JL Greenwood # 16	2110	179	55	25.0	No
JL Greenwood # 8	2110	59	27	12.5	No
JL Greenwood # 9	2110	82	34	15.4	No
***FF Hardison # 3**	**580**	**45**	**10**	**4.7**	**Yes, Public Street & RailRoad Track Crossing**
FF Hardison # 4	300	94	11	0.0	No
FF Hardison # 6	320	59	8	0.0	No
FF Hardison # 1U	440	73	12	0.0	No
FF Hardison # 2	440	10	3	0.0	No
FF Hardison # 8U	95	186	0	0.0	No
FF Hardison #7U	310	130	14	0.0	No
FF Hardison #5 cmgl	330	37	6	0.0	No
NG Penrose #1cmgl	170	10	2	0.0	No
NG Penrose #2 cmgl	170	110	8	0.0	No
NG Penrose #3 cmgl	170	53	5	0.0	No
NG Penrose #4	170	38	4	0.0	No
State S #30	0	83	0	0.0	No
State S #33	60	187	0	0.0	No
State S #12 cmgl	236	29	4	0.0	No
State S # 36 cmgl	236	51	6	0.0	No
State S # 37 cmgl	236	180	14	0.0	No
State S #13 cmgl	236	323	20	0.0	No
State S #14U	236	96	9	0.0	No
WELL NAME	**H_2S PPM**	**A.O.F. KCF/D**	**100 PPM R.O.E. (Ft.)**	**500PPM R.O.E. (Ft.)**	**Contingency Plan Required**

State S #21U	236	156	13	0.0	No
State S #22U	236	104	10	0.0	No
State S #27	236	90	9	0.0	No
State S #28	236	34	5	0.0	No
State S #29L	236	7	2	0.0	No
State S #31	236	32	5	0.0	No
State S #32	236	152	13	0.0	No
State S #34U	236	23	4	0.0	No
State S #35	236	55	7	0.0	No
State S #38	236	150	12	0.0	No
State S # #39	236	72	8	0.0	No
State S #7	236	72	8	0.0	No
State S #20	236	218	16	0.0	No
State S #40	236	125	11	0.0	No
State S #23	236	188	14	0.0	No
State S #24L	236	23	4	0.0	No
AJ Adkins #1	330	68	9	0.0	No
AJ Adkins #2	330	54	8	0.0	No
AJ Adkins #8	330	56	8	0.0	No
AJ Adkins #9	330	4	2	0.0	No
AJ Adkins #10	330	120	13	0.0	No
Blinebry#1 oil cmgl	330	70	10	0.0	No
Aggie State #13	2000	20	13	6.1	No
Aggie State #7	2000	80	32	14.6	No
Aggie State #4	2000	110	39	17.8	No
JD Knox #1	330	4	2	0.0	No
JD Knox #9	330	68	9	0.0	No
JD Knox #12	330	10	3	0.0	No
JD Knox #13	330	0.2	0	0.0	No
JD Knox #10	330	32	6	0.0	No
JD Knox #11	330	0	0	0.0	No
Eumont Gas Com 1 # 1	3330	22	20	9.0	No
Eumont Gas Com 1 #2-1A	3330	54.7	35	15.9	No
Eumont Gas Com 1 #3	3330	70	41	18.5	No
Eumont Gas Com 1 #4	3330	70	41	18.5	No
Eumont Gas Com 1 #5	3330	39	28	12.8	No
Eumont Gas Com 2 #1	2220	36	21	9.5	No
Eumont Gas Com 2 #2	2220	72	32	14.6	No
Eumont Gas Com 2 #3	2220	31	19	8.6	No
Eumont Gas Com 2 #4	2220	11	10	4.5	No
Eumont Gas Com 2 #5	2220	125	45	20.6	No
State B #2	7770	120	96	44.1	No
State B #1L	7770	0	0	0.0	No
State B #1U	7770	3.9	11	5.2	No
State B #6	7770	23.9	35	16.1	No
State G #27	8730	40	52	23.8	No
State G #16	8730	18	32	14.5	No
State G #2	8730	35	48	21.9	No
State G #10	8730	3	10	4.7	No
State G -2 #21	1871	9	8	3.6	No
Wantz Federal #1	440	10	3	0.0	No
WELL NAME	**H_2S PPM**	**A.O.F. KCF/D**	**100 PPM R.O.E. (Ft.)**	**500PPM R.O.E. (Ft.)**	**Contingency Plan Required**
Wantz Federal #2	440	12	4	0.0	No
Wantz Federal #4 TA'D	440	0	0	0.0	No

Wantz Federal #5 TA'D	440	0	0	0.0	No
State FO #1	8418	37	49	22.2	No
State V #5	9821	24	41	18.6	No
State V #7	9821	23	40	18.1	No
State V #10	9821	150	128	58.7	No
North Vacuum Abo 120 #252	240	4	1	0.0	No
North Vacuum Abo 120 #255	240	5	1	0.0	No
North Vacuum Abo 120 #256	240	4	1	0.0	No
North Vacuum Abo 120 #257	240	5	1	0.0	No
North Vacuum Abo 120 #259	240	7	2	0.0	No
North Vacuum Abo 120 #260	240	9	2	0.0	No
North Vacuum Abo 120 #262	240	8	2	0.0	No
North Vacuum Abo 120 #263	240	6	2	0.0	No
North Vacuum Abo 120 #275	240	4	1	0.0	No
North Vacuum Abo 120 #282	240	9	2	0.0	No
North Vacuum Abo 120 #283	240	8	2	0.0	No
North Vacuum Abo 120 #284	240	13	3	0.0	No
North Vacuum Abo 120 #285	240	2	1	0.0	No
North Vacuum Abo 120 #295	240	14	3	0.0	No
North Vacuum Abo 120 #296	240	10	2	0.0	No
North Vacuum Abo 120 #297	240	12	3	0.0	No
North Vacuum Abo 120 #298	240	10	2	0.0	No
North Vacuum Abo 120 #165 cmgl	240	34	5	0.0	No
NVA 134 Sat. #134	100	16	2	0.0	No
NVA 134 Sat. #223	100	5	1	0.0	No
NVA 134 Sat. #226	100	7	1	0.0	No
NVA 134 Sat. #227	100	10	1	0.0	No
NVA 134 Sat. #233	100	5	1	0.0	No
NVA 134 Sat. #261	100	8	1	0.0	No
NVA 134 Sat. #274	100	12	1	0.0	No
Bridges State 120 #502	200	0	0	0.0	No
WELL NAME	**H_2S PPM**	**A.O.F. KCF/D**	**100 PPM R.O.E. (Ft.)**	**500PPM R.O.E. (Ft.)**	**Contingency Plan Required**
Bridges State 120 #512	200	20	3	0.0	No
Bridges State 120 #120	200	11	2	0.0	No
State N #1	200	5	1	0.0	No
State N #3	200	5	1	0.0	No

State N #4	200	4	1	0.0	No
North Vacuum Abo 131 #122	570	8	3	1.6	No
North Vacuum Abo 131 #215	570	5	3	1.2	No
North Vacuum Abo 131 #225	570	3	2	0.9	No
North Vacuum Abo 131 #264	570	6	3	1.3	No
North Vacuum Abo 131 #265	570	4	2	1.0	No
North Vacuum Abo 131 #266	570	5	3	1.2	No
North Vacuum Abo 131 #267	570	7	3	1.5	No
North Vacuum Abo 131 #268	570	5	3	1.2	No
North Vacuum Abo 131 #269	570	6	3	1.3	No
North Vacuum Abo 131 #270	570	9	4	1.7	No
North Vacuum Abo 131 #271	570	5	3	1.2	No
North Vacuum Abo 131 #272	570	4	2	1.0	No
North Vacuum Abo 131 #273	570	7	3	1.5	No
North Vacuum Abo 131 #299	570	7	3	1.5	No
North Vacuum Abo 131 #300	570	7	3	1.5	No
North Vacuum Abo 131 #301	570	8	3	1.6	No
North Vacuum Abo 131 #303	570	8	3	1.6	No
NVA 95 BATT #234	359	21	5	0.0	No
NVA 95 BATT #237	359	44	8	0.0	No
NVA 95 BATT #239	359	21	5	0.0	No
NVA 95 BATT #240	359	15	4	0.0	No
NVA 95 BATT #241	359	16	4	0.0	No
NVA 95 BATT #242	359	20	5	0.0	No
NVA 95 BATT #243	359	18	4	0.0	No
NVA 95 BATT #244	359	22	5	0.0	No
NVA 95 BATT #249	359	17	4	0.0	No
NVA 95 BATT #276	359	19	4	0.0	No
NVA 95 BATT #277	359	15	4	0.0	No
NVA 95 BATT #278	359	30	6	0.0	No
NVA 95 BATT #280	359	8	3	0.0	No
WELL NAME	**H_2S PPM**	**A.O.F. KCF/D**	**100 PPM R.O.E. (Ft.)**	**500PPM R.O.E. (Ft.)**	**Contingency Plan Required**
NVA 95 BATT #281	359	12	3	0.0	No
NVA 95 BATT #288	359	14	4	0.0	No
NVA 95 BATT #289	359	25	5	0.0	No
NVA 95 BATT #294	359	16	4	0.0	No
NVA 204 #221	915	9	5	2.3	No
NVA 204 #222	915	9	5	2.3	No

NVA 204 #235	915	8	5	2.1	No
NVA 204 #236	915	7	4	2.0	No
NVA 204 #246	915	7	4	2.0	No
NVA 204 #247	915	11	6	2.6	No
NVA 204 #248	915	10	5	2.4	No
NVA 204 #250	915	14	7	3.0	No
***NVA 204 #251**	**915**	**6**	**4**	**1.8**	**Yes, Public Highway Crossing (238) Buckeye**
NVA 204 #253	915	5	3	1.6	No
NVA 204 #254	915	8	5	2.1	No
NVA 204 #258	915	8	5	2.1	No
NVA 203 Sat. #245	290	15	3	0.0	No
NVA 203 Sat. #279	290	13	3	0.0	No
NVA 203 Sat. #290	290	13	3	0.0	No
NVA 203 Sat. #291	290	13	3	0.0	No
NVA 203 Sat. #292	290	15	3	0.0	No
NVA 203 Sat. #293	290	14	3	0.0	No
State J #4	380	15	4	0.0	No
State J #5	380	10	3	0.0	No
Bridges State 95 #13	1013	7	5	2.1	No
Bridges State 95 #27	1013	60	17	8.0	No
Bridges State 95 #153	1013	32	12	5.4	No
Bridges State 95 #108 cmgl	1013	29	11	5.1	No
Bridges State 95 #104 cmgl	1013	119	27	12.2	No
Bridges State 12 #12	10600	2	9	4.1	No
Bridges State 12 #15	10600	1	6	2.7	No
Bridges State 12 #25	10600	1	6	2.7	No
Bridges State 12 #177	10600	1	6	2.7	No
Bridges State 12 #182	10600	2	9	4.1	No
Bridges State 12 #190	10600	1	6	2.7	No
Bridges State 12 #199	10600	1	6	2.7	No
Bridges State 12 #500	10600	1	6	2.7	No
Bridges State 12 #503	10600	1	6	2.7	No
Bridges State 12 #504	10600	1	6	2.7	No
Bridges State 12 #507	10600	1	6	2.7	No
Bridges State 14 #14	28700	3	22	9.9	No
Bridges State 14 #16	28700	1	11	5.0	No
Bridges State 14 #176	28700	2	17	7.7	No
Bridges State 14 #178	28700	1	11	5.0	No
NVA East #12	340	4	2	0.0	No
NVA East #13	340	5	2	0.0	No
NVA East #15	340	7	2	0.0	No
NVA East #16	340	8	2	0.0	No
WELL NAME	**H_2S PPM**	**A.O.F. KCF/D**	**100 PPM R.O.E. (Ft.)**	**500PPM R.O.E. (Ft.)**	**Contingency Plan Required**
NVA East #17	340	8	2	0.0	No
NVA East #18	340	6	2	0.0	No
NVA East #19	340	9	3	0.0	No
NVA East #20	340	11	3	0.0	No
NVA East #21	340	14	4	0.0	No
NVA East #22	340	8	2	0.0	No
NVA East #23	340	11	3	0.0	No
State ZZ #1	200	5	1	0.0	No

State B O #1	380	15	4	0.0	No
State B O #2	380	13	4	0.0	No
State B O #3	380	39	7	0.0	No
State B O #5	380	38	7	0.0	No
State B O #7	380	10	3	0.0	No
State B O #8	380	14	4	0.0	No

D. SAFETY EQUIPMENT LIST

Buckeye Field Office

1. First Aid Supplies
2. An H_2S contingency plan with current emergency telephone numbers and a map of the local area with residences.
3. Spare of electronic H_2S monitors
4. Additional Tri Function Monitor

Field Facilities - Each well site

1. Caution Poison Gas Signs at each well.

Field Operations Personnel Trucks

1. One (1) SCBA with 45 cu. ft. air tank.
2. One electronic personal hydrogen sulfide monitor
3. First aid kit

Well Service and Workover Rigs (minimum equipment required and provided by contract services):

1. One hydrogen sulfide rig monitor
2. Windsock & streamers in view of rig floor.

3. One (1) portable warning sign to be placed at the well's service road entrance
4. One full body safety harnesses
5. List of emergency telephone numbers
6. First aid kit (Supplied by contractor)
7. Personal electronic H_2S monitor
8. No Smoking signs

E. INCIDENT LOGS

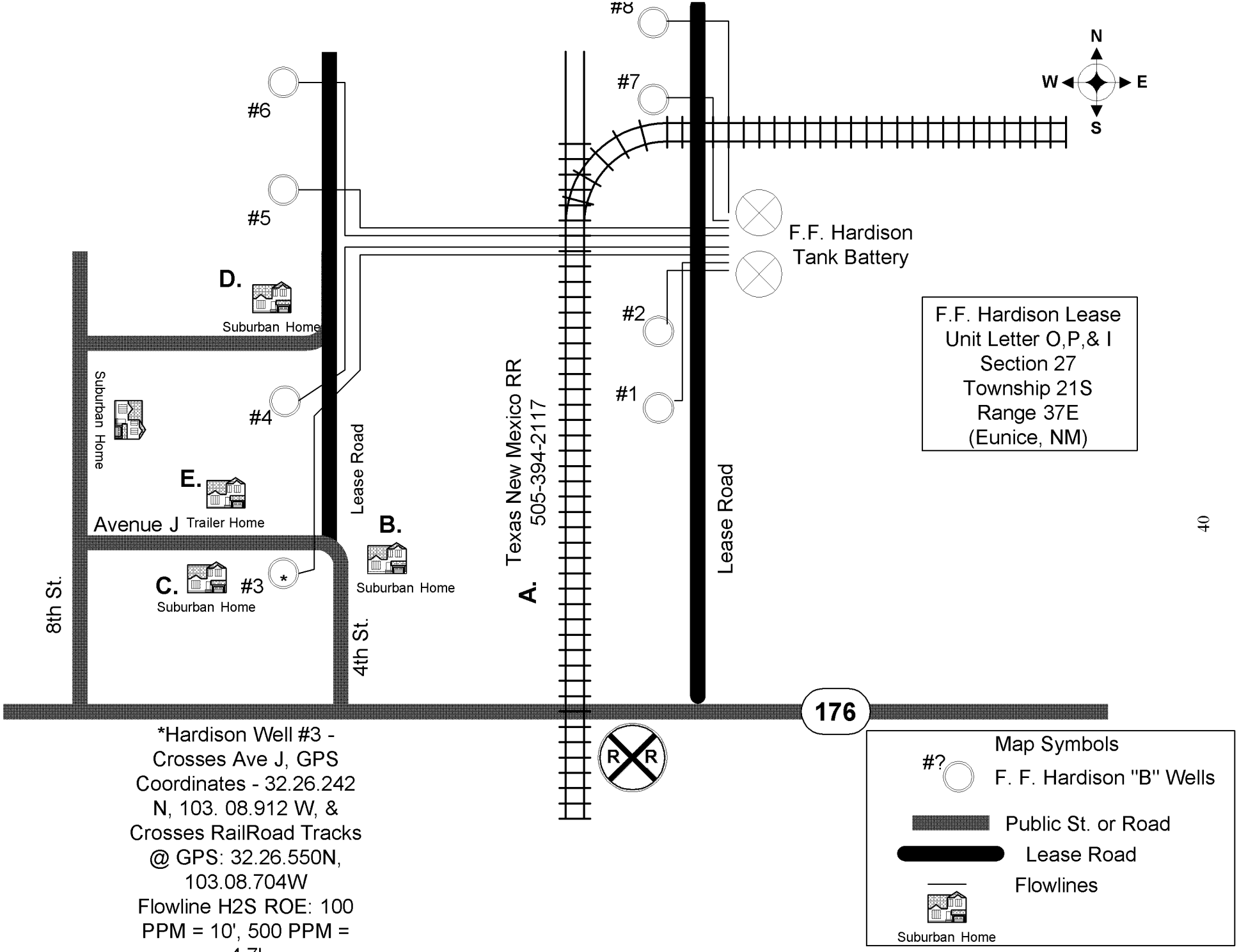
DOCUMENTATION

During a large-scale emergency, a person should be designated as a recording secretary. A chronological log should be kept of how the incident proceeded. A tape recorder would be helpful in this situation. The following is a partial list of items to be documented. Additional reference material can be found in the Emergency Action Manual.

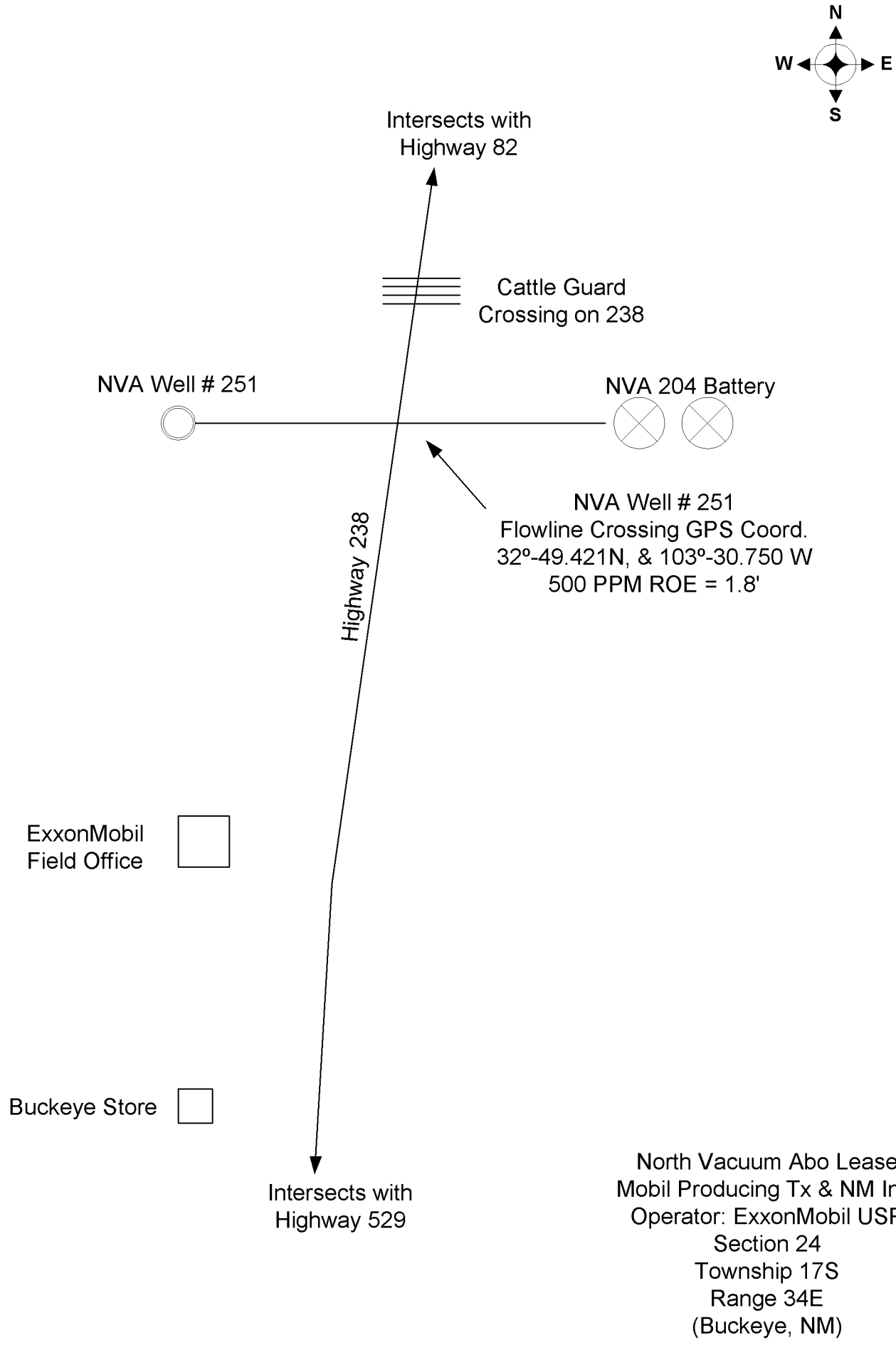
- All notifications to agencies and organizations
- Major incidents like explosions, injuries
- Media contacts
- Meetings – attendees, topics, decisions
- Activities undertaken
- Contacts made for the purchase of supplies and equipment
- Approvals or directives obtained from outside agencies or ExxonMobil support groups.
- Photograph the incident as thoroughly as possible during and after the event.
- Take samples and record results to document concentrations. Try to collect samples at the same time as outside agencies.

Everything that can be documented should be documented before repairs or clean-up operations are started.

APPENDIX F
Radius of Exposure Maps



*Hardison Well #3 - Crosses Ave J, GPS Coordinates - 32.26.242 N, 103. 08.912 W, & Crosses RailRoad Tracks @ GPS: 32.26.550N, 103.08.704W Flowline H2S ROE: 100 PPM = 10', 500 PPM = 4.7'


N
W
E
S
Intersects with
Highway 82
Cattle Guard
Crossing on 238
NVA Well # 251
NVA 204 Battery
NVA Well # 251
Flowline Crossing GPS Coord.
32º-49.421N, & 103º-30.750 W
500 PPM ROE = 1.8'
Highway 238
ExxonMobil
Field Office
Buckeye Store
Intersects with
Highway 529
North Vacuum Abo Lease
Mobil Producing Tx & NM Inc.
Operator: ExxonMobil USP
Section 24
Township 17S
Range 34E
(Buckeye, NM)