

30-025-41013



HOBBS OCD

FEB 21 2013

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H<sub>2</sub>S Contingency Plan

H<sub>2</sub>S Contingency Plan Holders:

Attached is an H<sub>2</sub>S Contingency Plan for COPC Permian Drilling working in the West Texas and Southeastern New Mexico areas operated by ConocoPhillips Company.

If you have any questions regarding this plan, please call Tom Samarripa at ConocoPhillips Company, 432.368.1263.

FEB 27 2013

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# HYDROGEN SULFIDE (H<sub>2</sub>S) OPERATIONS

## Contingency Plan For Permian Drilling Operations

ConocoPhillips Company  
Mid-Continent Business Unit  
Permian Asset Area

## I. PURPOSE

The purpose of this Contingency Plan is to provide an organized plan of action for alerting and protecting the public following the release of a potentially hazardous volume of hydrogen sulfide. This plan prescribes mandatory safety procedures to be followed in the event of a release of  $H_2S$  into the atmosphere from exploration and production operations included in the scope of this plan. The extent of action taken will be determined by the supervisor and will depend on the severity and extent of  $H_2S$  release. Release of  $H_2S$  must be reported to the Drilling Superintendent and documented on the IADC and in Wellview.

## **II. SCOPE**

This Contingency plan shall cover the West Texas and Southeastern New Mexico areas, which contain H<sub>2</sub>S gas and could result in a release where the R.O.E. is greater than 100 ppm at 50' and less than 3000' and does not include a public area and 500 ppm R.O.E. does not include a public road. Radius of exposure is defined as the maximum distance from the source of release that a specified calculated average concentration of H<sub>2</sub>S could exist under specific weather conditions.

### III. PROCEDURES

#### First Employee on Scene

\_\_\_\_\_ Assess the incident and ensure your own safety.

Note the following:

- \_\_\_\_\_ Location of the incident.
- \_\_\_\_\_ Nature of the incident.
- \_\_\_\_\_ Wind direction and weather conditions.
- \_\_\_\_\_ Other assistance that may be needed.

\_\_\_\_\_ Call local supervisory personnel (refer to Section V: Emergency Call List) until personal contact is made with a person on the list.

\_\_\_\_\_ Perform emergency assessment and response as needed. The response may include rescue and/or evacuation of personnel, shutting in a system and/or notification of nearby residents/public (refer to Section VII: Public Notification/Evacuation).

\_\_\_\_\_ Secure the site.

\_\_\_\_\_ Follow the direction of the On-scene Incident Commander (first ConocoPhillips supervisor arriving on-scene).

#### First Supervisor on Scene (ConocoPhillips On-scene Incident Commander)

\_\_\_\_\_ Becomes ConocoPhillips' On-scene Incident Commander upon arrival to location.

\_\_\_\_\_ Follow the principles of the **D.E.C.I.D.E.** process below to assess the incident. (Note wind direction and weather conditions and ensure everyone's safety).

**DETECT** the problem

**ESTIMATE** likely harm without intervention

**CHOOSE** response objectives

**IDENTIFY** action options

**DO** the best option

**EVALUATE** the progress

\_\_\_\_\_ Complete the Preliminary Emergency Information Sheet (refer to Section VIII: Forms/Reports).

\_\_\_\_\_ Call your supervisor (refer to Section V: Emergency Call List).

- Perform emergency response as necessary. (This may include notification & evacuation of all personnel and/or nearby residents/public (refer to Section VII: Public Notification/Evacuation), requesting assistance from ConocoPhillips personnel or outside agencies (refer to Section V: Emergency Call List) and obtaining any safety equipment that may be required (refer to Section IV: Emergency Equipment and Maintenance).
- Notify appropriate local emergency response agencies of the incident as needed. Also notify the appropriate regulatory agencies. (refer to Section V: Emergency Call List).
- Ensure site security.
  - Set barricades and /or warning signs at or beyond the calculated 100 ppm H<sub>2</sub>S radius of exposure (ROE). All manned barricades must be equipped with an H<sub>2</sub>S monitor and a 2-way radio.
  - Set roadblocks and staging area as determined.
- Establish the Incident Command Structure by designating appropriate on-scene response personnel as follows:
 

Recording Secretary	_____
Public Information Officer	_____
Safety/Medical Officer	_____
Decontamination Officer	_____
- Have the “Recording Secretary” begin documenting the incident on the “Incident Log” (refer to Section VIII: Forms/Reports).
- If needed, request radio silence on all channels that use your radio tower stating that, until further notice, the channels should be used for emergency communications only.
- Perform a Site Characterization and designate the following:
 

Hot Zone	--	Hazardous Area
Warm Zone	--	Preparation & Decontamination Area
Cold Zone	--	Safe Area

AND

On-Scene Incident Command Post	(Cold Zone)
Public Relations Briefing Area	(Cold Zone)
Staging Area	(Cold Zone)
Triage Area	(Cold Zone)
Decontamination Area	(Warm Zone)

- \_\_\_\_\_ Refer all media personnel to ConocoPhillips' On-Scene Public Information Officer (refer to Section VI: Public Media Relations).
- \_\_\_\_\_ Coordinate the attempt to stop the release of H<sub>2</sub>S. You should consider closing upstream and downstream valves to shut-off gas supply sources, and/or plugging or clamping leaks. Igniting escaping gas to reduce the toxicity hazard should be used **ONLY AS A LAST RESORT**. (It must first be determined if the gas can be safely ignited, taking into consideration if there is a possibility of a widespread flammable atmosphere.)
- \_\_\_\_\_ Once the emergency is over, return the situation to normal by:
  - Confirming the absence of H<sub>2</sub>S and combustible gas throughout the area,
  - Discontinuing the radio silence on all channels, stating that the emergency incident is over,
  - Removing all barricades and warning signs,
  - Allowing evacuees to return to the area, and
  - Advising all parties previously notified that the emergency has ended.
- \_\_\_\_\_ Ensure the proper regulatory authorities/agencies are notified of the incident (refer to Section V: Emergency Call List).
- \_\_\_\_\_ Clean up the site. (Be sure all contractor crews have had appropriate HAZWOPER training.)
- \_\_\_\_\_ Report completion of the cleanup to the Asset Environmentalist.  
(Environmentalism will report this to the proper State and/or Federal agencies.)



\_\_\_\_\_ Fill out all required incident reports and send originals to the Safety Department.  
(Keep a copy for your records.)

- Company employee receiving occupational injury or illnesses.
- Company employee involved in a vehicle accident while driving a company vehicle.
- Company property that is damaged or lost.
- Accident involving the public or a contractor; includes personal injuries, vehicle accidents, and property damage. Also includes any situation, which could result in a claim against the Company.
- Hazardous Material Spill/Release Report Form
- Emergency Drill Report

\_\_\_\_\_ Assist the Safety Department in the investigation of the incident. Review the factors that caused or allowed the incident to occur, and modify operating, maintenance, and/or surveillance procedures as needed. Make appropriate repairs and train or retrain employees in the use and operation of the system.

\_\_\_\_\_ If this incident was simulated for practice in emergency response, complete the Emergency Drill Report found in Section VIII: Forms/Reports and submit a copy to the Drilling Manager. (Keep one copy in area files to document exercising of the plan.)

## **Emergency Procedures**

### **Responsibility**

In the event of a release of potentially hazardous amounts of H<sub>2</sub>S, all personnel will immediately proceed upwind/ crosswind to the nearest designated briefing area. The COPC Drilling Rep. will immediately, upon assessing the situation, set this into action by taking the proper procedures to contain the gas and notify appropriate people and agencies.

1. In an emergency situation, the Drilling Rep. on duty will have complete responsibility and will take whatever action is deemed necessary in an emergency situation to insure the personnel's safety, to protect the well and to prevent property damage.
2. The Toolpusher will assume all responsibilities of the Drilling Rep. in an emergency situation in the event the Drilling Rep. becomes incapacitated.
3. Advise each contractor, service company, and all others entering the site that H<sub>2</sub>S may be encountered and the potential hazards that may exist.
4. Authorize the evacuation of local residents if H<sub>2</sub>S threatens their safety.
5. Keep the number of persons on location to a minimum during hazardous operations.
6. Direct corrective actions to control the flow of gas.
7. Has full responsibility for igniting escaping gas to reduce the toxicity hazard.  
This should be used **ONLY AS A LAST RESORT**.

#### **IV. EMERGENCY EQUIPMENT and MAINTENANCE**

##### **Emergency Equipment Suppliers**

###### **Safety International – Odessa, Tx.**

H<sub>2</sub>S monitors

432.580.3770

Breathing air includes cascade systems

First aid and medical supplies

Safety equipment

H<sub>2</sub>S Specialist

###### **Total Safety US Odessa, Tx/ Hobs, NM**

432.561.5049 Odessa, Tx.

H<sub>2</sub>S monitors

575.392.2973 Hobbs, NM

Breathing air includes cascade systems

Fire fighting equipment

First aid and medical supplies

Safety equipment

###### **Indian Fire & Safety – Hobbs, NM**

575.393.3093

H<sub>2</sub>S monitors

Breathing air including cascade systems trailer mounted

30 minute air packs

Safety Equipment

## **Emergency Equipment and Maintenance (continued)**

### **General Information**

Materials used for repair should be suitable for use where H<sub>2</sub>S concentrations exceed 100 ppm. In general, carbon steels having low-yield strengths and a hardness below RC-22 are suitable. The engineering staff should be consulted if any doubt exists on material specifications.

Appropriate signs should be maintained in good condition at location entrance and other locations as specified in Texas Rule 36 and NMOCD Rule 118.

All notification lists should be kept current with changes in names, telephone numbers, etc.

All shutdown devices, alarms, monitors, breathing air systems, etc., should be maintained in accordance with applicable regulations.

All personnel working in H<sub>2</sub>S areas shall have received training on the hazards, characteristics, and properties of H<sub>2</sub>S, and on procedures and safety equipment applicable for use in H<sub>2</sub>S areas.

## H2S Safety Equipment and Monitoring Systems

An H2S emergency response package will be maintained at locations requiring H2S monitoring. The package will contain at a minimum the following:

3 – Fixed H2S sensors located as follows:

- 1 – on the rig floor
- 1 – at the Bell Nipple
- 1 – at the Shale Shaker or Flowline

1 – Entrance Warning Sign located at the main entrance to the location, with warning signs and colored flags to determine the current status for entry into the location.

2 – Windssocks that are clearly visible.

1 – Audible warning system located on rig floor

2 – Visual warning systems (Beacon Lights)

- 1 – located at the rig floor
- 1 – located in the mud mixing room

**Note: All alarms (audible and visual) should be set to alarm at 10 ppm.**

2 – Briefing areas clearly marked

- 2 - SCBA's at each briefing area
- 1- SCBA located at the Drilling Reps office

**Note:**

- 1. All SCBA's must be positive pressure type only!!!**
- 2. All SCBA's must either be Scott or Drager brand.**
- 3. All SCBA's face pieces should be size large, unless otherwise specified by the Drilling Supervisor.**

5 – Emergency Escape Paks located at Top Doghouse.

Note: Ensure provisions are included for any personnel working above rig floor in derrick.

1 – Tri or Quad gas monitor located at the Drilling Reps office. This will be used to determine if the work area is safe to re-enter prior to returning to work following any alarm.

## V. EMERGENCY CALL LIST:

The following is a priority list of personnel to contact in an emergency situation:

<b>Supervisory Personnel</b>	<b>Office No.</b>	<b>Home</b>	<b>Cellular</b>
<b>R.W. "Cottton" Hair</b> Permian Drilling Supt.	432.368.1302	432.563.9467	432.556.9116
<b>Dennis Paschall</b> Permian Drilling Field Supt.	432.368.1517	432.683.9400	432.238.3150
<b>Tom Samarripa</b> WSER	423.368.1263	432.367.4961	432.556.9113
<b>Ty Maxey</b> Permian Asset Operations Manager	432.368.1100		281.217.8492
<b>Leo Gatson</b> Safety and Environmental Coordinator	432.368.1248		432.631.066
<b>Lynn Dooley</b> Drilling Mngr.	832.486.2567	281.225.8063	281.435.3517

### EMERGENCY CALL LIST: State Officials

#### Regulatory Agencies

##### New Mexico Oil Conservation Commission

P. O. Box 1980

Hobbs, New Mexico 88240-1980

Office: 575.393.6161

##### Bureau of Land Mngt.

Carlsbad Field Office

620 E. Greene St.

Carlsbad, NM 88220

Office: 575.234.5972

Fax: 575.885.9264

BLM 24 Hr on call # Lea County: 575-393-3612

### EMERGENCY CALL LIST: Local Officials

Refer to the Location Information Sheet

Note: The LIS should include any area residents (i.e. rancher's house, etc)

## ConocoPhillips Emergency Call List and Location Information Sheet

**ConocoPhillips- 281-293-3600**

Drilling Superintendent	Cotton Hair	Office: 432-368-1302 Cell: 432-556-9116
Safety (WSER)	Tom Samaripa	Office: 432-368-1263 Cell: 432-556-9113
Drilling Engineer	Steve Moore	Office: 832-486-2459 Cell: 281-467-7596
Regulatory Contact	Susan Maunder	Office: 432-688-6913 Cell: 907-441-2651

**Emergency Numbers**

Hospital: Lea Co. Regional Medical Center (Hobbs) .....575-492-5000  
Ambulance: Hobbs Fire Dept. ....575-397-9308  
Air Ambulance: Care Star .....888-624-3571  
                  Aero Star .....800-627-2376  
Fire Dept. (Hobbs) .....575-397-9308  
                  (Maljamar non-emerg) .....575-676-4100  
State Police (Artesia) .....575-748-9718  
                  (Hobbs) .....575-392-5580  
Sheriff (Lovington)..... 575-396-3611  
Police (Lovington) .....575-396-5166  
NMOCD .....575-393-6161  
                  (Emerg) .....575-370-3186  
BLM Switchboard.....575-393-3612  
BLM 24 Hr on Call, Lea County.....575-393-3612  
New Mexico Emergency Response Comm (Santa Fe) .....505-476-9600  
New Mexico State Emerg Ops Ctr .....505-476-9635  
National Emerg Response Center .....800-424-8802

**Number of Residences within 1 mile of Well:** There are no residences within one mile of the well to be drilled.

## **VI. Public Media Relations**

The **Public Information Officer** becomes the ConocoPhillips on-scene contact (once designated by the Phillips On-Scene Incident Commander).

Confers with Houston Office's Human Relations Representative, who is responsible for assisting in the coordination of local public relations duties.

Answer media questions honestly and **only with facts**, do not speculate about the cause, amount of damage, or the potential impact of the incident on the community, company, employees, or environment. (This information will be formally determined in the incident investigation.)

If you are comfortable answering a question or if you are unsure of the answer, use terms such as the following:

- "I do not know. I will try to find out."
- I am not qualified to answer that question, but I will try to find someone who can."
- "It is under investigation."

**Note:**

**Do Not Say "No Comment."** (This implies a cover-up.)

**Do Not Disclose Names of Injured or Dead!** Confer with the Houston Office's Human Relations Representative, who is responsible for providing that information.



## VII. Public Notification/Evacuation

### Alert and/or Evacuate People within the Exposure Area

1. Public Notification – If the escape of gas could result in a hazard to area residents, the general public, or employees, the person **first** observing the leak should take **immediate** steps to cause notification of any nearby residents. The avoidance of injury or loss of life should be of prime consideration and given top priority in all cases. If the incident is of such magnitude, or at such location as to create a hazardous situation, local authorities will be requested to assist in the evacuation and roadblocks of the designated area until the situation can be returned to normal.

Note: Bilingual employees may be needed to assist in notification of residents.

2. Evacuation Procedures – Evacuation will proceed upwind from the source of the release of H<sub>2</sub>S. Extreme caution should be exercised in order to avoid any depressions or low-lying areas in the terrain. The public area within the radius of exposure should be evacuated in a southwesterly and southeasterly direction so as to avoid the prevailing southern wind direction.

Roadblocks and the staging area should be established as necessary for current wind conditions.

**Note:** In all situations, consideration should be given to wind direction and weather conditions. H<sub>2</sub>S is heavier than air and can settle in low spots. Shifts in wind direction can also change the location of possible hazardous areas.

## VIII. FORMS & REPORTS

- I. Incident Log
- II. Preliminary Emergency Information Sheet
- III. Emergency Drill Report
- IV. Onshore Hazardous Material Spill/Release Report Form
- V. Immediate Report of Occupational Injury or Illness
  - Report of Accident-Public Contractor
  - Report of Loss or Damage to Company Property
  - Report of Automotive Incident



## Enviro Liner 4000

### 1. Product Description

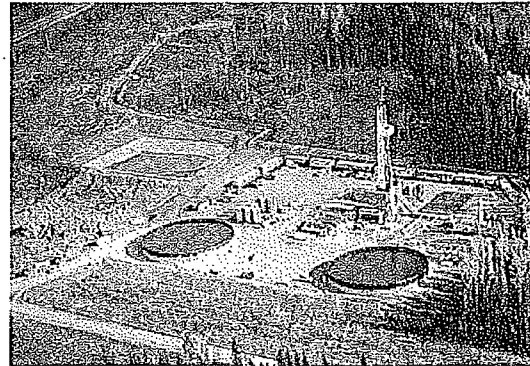
The Enviro Liner® 4000 series is a specialized polyethylene lining material that combines flexibility, UV stability, and chemical resistance. The Enviro Liner® 4000 series was originally designed as a flexible cap material for landfills. Its good flexibility allows it to accommodate differential settlement that is often seen in landfill applications. This flexibility also allows it to be prefabricated (welded, folded and rolled) so that many jobs can be lined using a one-piece liner. The Enviro Liner® 4000 series is manufactured by Layfield. Each step in the production of your liner panel, from the geomembrane production, to fabrication into a custom panel, is governed by Layfield's registered quality management system. Enviro Liner® 4000 is stabilized against UV degradation with carbon black. If you plan to leave the liner exposed then the additional UV stabilizers that we add to the Enviro Liner® 6000<sup>HD</sup> series might be of interest to you to maximize the exposed life of the liner.

### 2. Technical Data

Materials information is on page 2.

### 3. Installation

Layfield's LLDPE is flexible enough to be prefabricated at our facility into large panels (Up to 27,000 square feet at 30 mil). The prefabricated panel is accordian folded, rolled on a core, and delivered to the job site secured to a pallet. Prefabricated panels can often cover a small project with a single panel. Local labor forces can be used to unroll and unfold the panel, while on larger projects layfield installation forces can be used to join panels. Layfield has spent years developing innovative thin film seaming technology. All of our primary field welding of LLDPE is based on hot wedge welding technology. Field wedge welding of LLDPE provides strong seams, and fast installations on large projects. Small welds and repairs can be completed with the Enviro Liner welding kit. Ask us about our Enviro Liner® Welding Gun for small repairs.



### 4. Availability and Cost

Available from Layfield or distributors. Call  
425-254-1075 Pacific time  
780-453-6731 Mountain time, or  
905-761-9123 Eastern time

### 5. Manufactured By

Layfield Environmental Systems Corp.  
Layfield Geosynthetics & Ind. Fabrics Ltd.

### 6. Warranty

Products sold will meet Layfield's published specifications. Any extended warranty required by the buyer must be negotiated at the time of order. Extended warranties may be available on this product and may be at extra cost. Full warranty details are available from Layfield.

### 7. Maintenance

Geomembranes should be inspected at least once per year for damage, stress, or any other detrimental condition. The entire containment area should be visually inspected annually. Layfield provides geomembrane maintenance services on request.

### 8. Filing Systems

[www.LayfieldGroup.com](http://www.LayfieldGroup.com)  
[www.geomembranes.com](http://www.geomembranes.com)

**9. Enviro Liner 4000 Material Properties**

19 Nov 2011	Enviro Liner® 4000 Minimum Properties			
Style	ASTM	Enviro Liner® 4020	Enviro Liner® 4030	Enviro Liner® 4040
Thickness (Minimum Average)	D5199	20 mil 0.5 mm	30 mil 0.75 mm	40 mil 1.0 mm
Thickness (Lowest Individual of 10 values)	D5199	-10%	-10%	-10%
Density (Max)	D792	0.939	0.939	0.939
Tensile Strength at Break	D638 Type IV	76 psi 13.3 N/mm	114 psi 20.0 N/mm	152 psi 26.6 N/mm
Elongation	D638	800%	800%	800%
Tear Resistance	D1004	11 lbs 49 N	16 lbs 71 N	22 lbs 98 N
Puncture Resistance	D4833	32 lbs 142 N	42 lbs 186 N	61 lbs 271 N
Carbon Black Content	D1603	2.0-3.0%	2.0-3.0%	2.0-3.0%
Low Temperature Impact Resistance	D746	-69°F -56°C	-69°F -56°C	-69°F -56°C

**10. Shop Seam Strengths**

19 Nov 2011	Enviro Liner® 4000 Minimum Shop Seam Strengths			
Style	ASTM	Enviro Liner® 4020	Enviro Liner® 4030	Enviro Liner® 4040
Heat Bonded Seam Strength	D6392 25.4 mm (1") Strip	30 psi 5.15 N/mm	45 psi 7.75 N/mm	60 psi 10.35 N/mm
Heat Bonded Peel Adhesion Strength	D6392 25.4 mm (1") Strip	FTB 25 psi 4.3 N/mm	FTB 38 psi 6.53 N/mm	FTB 50 psi 8.62 N/mm

**11. Field Seam Strengths**

19 Nov 2011	Enviro Liner® 4000 Minimum Field Seam Strengths			
Style	ASTM	Enviro Liner® 4020	Enviro Liner® 4030	Enviro Liner® 4040
Heat Bonded Seam Strength	D6392 25.4 mm (1") Strip	30 psi 5.15 N/mm	45 psi 7.7 N/mm	60 psi 10.35 N/mm
Heat Bonded Peel Adhesion Strength	D6392 25.4 mm (1") Strip	FTB 25 psi 4.2 N/mm	FTB 38 psi 6.5 N/mm	FTB 50 psi 8.6 N/mm

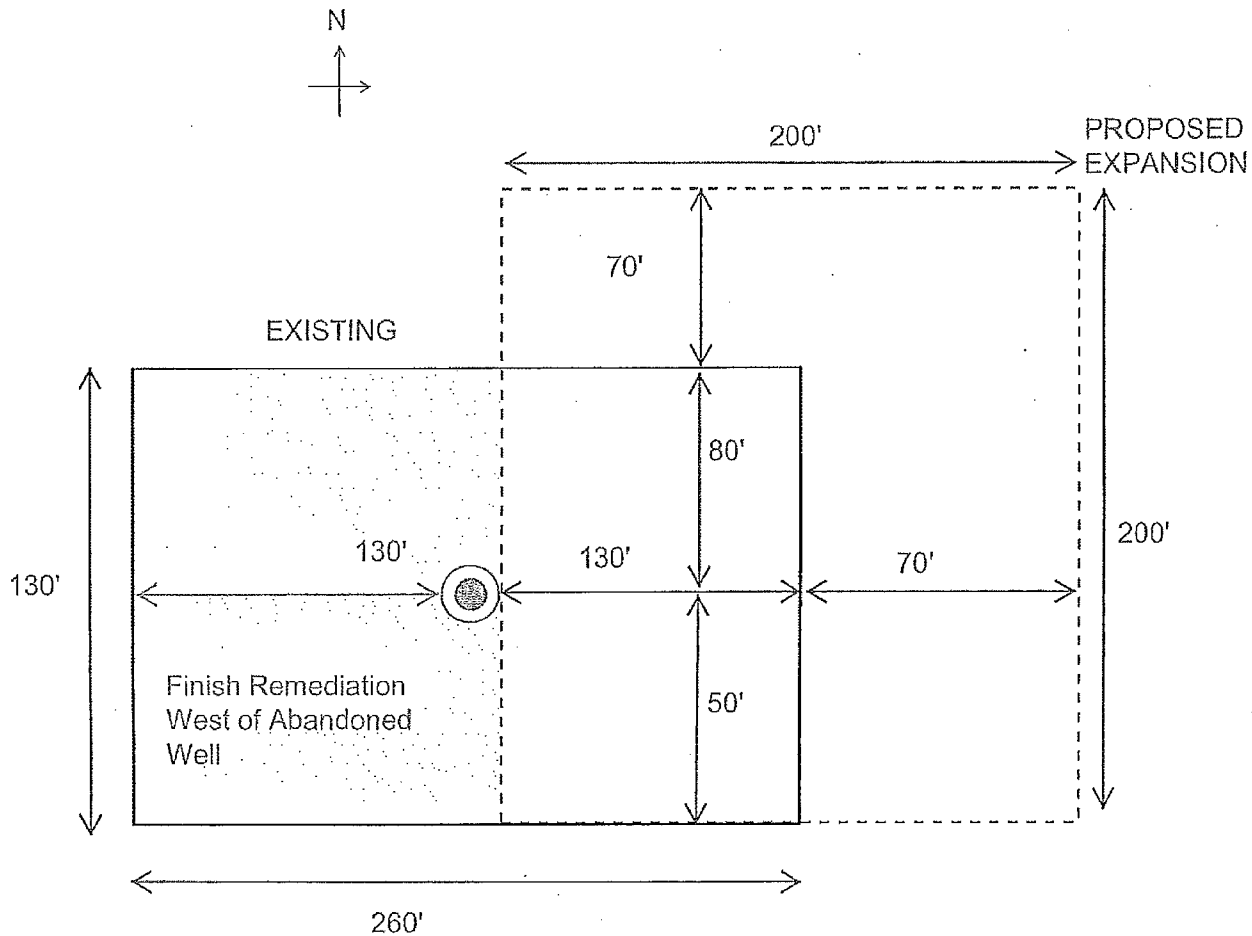
Layfield  
Environmental Systems

www.geomembranes.com  
service@geomembranes.com

Tel (US): 1-800-796-6068  
Tel (Canada): 1-800-840-2884

Design | Manufacture | Fabrication | Installation | Maintenance

MITCHELL B #7  
ABANDONED WELL  
PROPOSED FRESH WATER TANK PLOT



EXISTING PAD IS 130 FT (NORTH/SOUTH) AND 260 FT (EAST/WEST). EXPAND PAD 70 FT TO NORTH AND 70 FT TO EAST. NEW PAD DIMENSIONS WILL BE 200 FT X 200 FT. TANK DIAMETER IS 150 FT.