

SECTION 8 – EMERGENCY AND REMEDIAL RESPONSE PLAN

TABLE OF CONTENTS

8.1	Introduction.....	2
8.2	Resources/Infrastructure in Area of Review	2
8.3	Resources/Infrastructure – Specific Events and Response Plans.....	2
8.3.1	Event Category – Water Quality Impact	2
8.3.2	Event Category – CO ₂ Release to or at the Surface	5
8.3.3	Event Category – CO ₂ Migration	11
8.3.4	Event Category – Entrained Contaminant (Non-CO ₂) In Injection Stream	12
8.3.5	Event Category – Accidents/Unplanned Events (Typical Insurable Events)	13
8.4	Risk Activity Matrix.....	15
8.5	Training	16
8.6	Communications Plan and Emergency Notification Procedures:	17
8.7	Flood Hazard Risk	18
8.8	Emergency and Remedial Response Plan Review and Updates	19

Figures

None included in this section.

Tables

Table 8-1 – Risk Activity Matrix.....	15
Table 8-2 – Risk Mitigation and Threat Scores.....	16
Table 8-3 – Risk Assessment Scores.....	16
Table 8-4 – Emergency Services – CALL 911	17
Table 8-5 – Government Agency Notification.....	17
Table 8-6 – Internal Call List	18

8.1 Introduction

This Emergency and Remedial Response Plan (ERRP) for Pecan Island Injection Wells No. 001 and No. 002 (the Pecan Island Project) was prepared to meet the requirements of Statewide Order (SWO) 29-N-6 **§3623** [Title 40, U.S. Code of Federal Regulations (40 CFR) **§146.94**]. The plan describes potential adverse events that could occur in the development, operation, and post-closure phases of the project and the actions to be taken in the event of such an emergency. This plan will be reviewed and updated annually. Any change in key personnel will also cause the EERP to be updated immediately.

8.2 Resources/Infrastructure in Area of Review

The Pecan Island Project is located [REDACTED] Louisiana, and approximately [REDACTED] Louisiana. The proposed location is approximately 2 miles from the nearest freshwater drinking water well. There are no permanent structures located within the predicted area of review (AOR), but there are seasonally-used camp sites in the AOR. [REDACTED] plugged wellbores exist within the AOR. These wells will be remediated to ensure protection against any possible migration of CO₂ as discussed in *Section 3 – Area of Review and Corrective Action Plan*. Additionally, two above-zone monitoring wells will be installed in the AOR, as discussed in *Section 5 – Testing and Monitoring Plan*. These monitoring wells will be constructed in a manner to prevent migration of CO₂ into the Underground Source of Drinking Water (USDW) and surface atmosphere.

The lowermost USDW in the AOR is estimated to be found at a depth of approximately [REDACTED] in this area.

8.3 Resources/Infrastructure – Specific Events and Response Plans

The following scenarios represent a high-level concept of potentially significant adverse events, methods of prevention and detection, and likely remedial responses.

8.3.1 Event Category – Water Quality Impact

8.3.1.1 Specific Event Description – Leakage of CO₂ outside permitted area into freshwater aquifer

Risk Assessment Matrix, Sections 1.1 and 1.3 (Appendix I-2)

While this event should not happen during operations of the injection facility, ExxonMobil cannot wholly eliminate the risk of CO₂ leakage. Similarly, analysis and modeling should avoid instances of the plume reaching faults or fractures that allow CO₂ migration into another zone, including the USDW, or to the surface. Likewise, there is a nonzero risk that the confining zone fails and such failure allows CO₂ to migrate into the USDW.

Likelihood: Rare

Prevention and Detection:

- The CO₂ plume will be monitored as described in *Section 5 – Testing and Monitoring Plan*.
- The well is specifically designed and constructed to prevent the likelihood of a CO₂ leak.

Potential Response Actions:

- Lower the injection rate or stop the injection and notify the Underground Injection Control (UIC) Program Director (UIC Director) within 24 hours.
- Use vertical seismic profile (VSP) surveys to assess the location and degree of CO₂ movement, as described in *Section 5 – Testing and Monitoring Plan*.
- Resume injection at a reduced rate if possible to do so.
- Continue monitoring the plume at a more frequent interval to determine if migration continues.
- If groundwater/USDW is impacted:
 - Pump CO₂-impacted groundwater to the surface and aerate it to remove the CO₂.
 - Apply “pump and treat” methods to remove trace elements.
 - Drill wells that intersect the accumulations in groundwater and extract CO₂.
 - Provide an alternative water supply if groundwater-based public-water supplies are impacted.
- If surface water is impacted:
 - Shallow lakes will quickly release dissolved CO₂ back into the atmosphere.
 - Create a hydraulic barrier by increasing the reservoir pressure upstream of the leak.
- If the plume continues to migrate out of the zone or beyond the expected plume extent, recomplete uphole into the next planned injection interval.

8.3.1.2 Specific Event Description – Leakage of drilling fluid into freshwater aquifer

Risk Assessment Matrix, Section 1.2 (Appendix I-2)

It is possible, albeit highly unlikely, that drilling fluid could leak during drilling of the well. In the unlikely event drilling fluid leaks, it may impact the freshwater aquifer.

Likelihood: Remote

Prevention and Detection:

- Select a proper drilling-fluids program including freshwater-based muds.
- The well is specifically designed to prevent the likelihood of this occurring.

Potential Response Actions:

- If groundwater/USDW is impacted:
 - Apply “pump and treat” methods to remove trace elements.
 - Extract and treat affected water at an above-ground treatment facility.
 - Provide an alternative water supply if groundwater-based public water supplies are impacted.

8.3.1.3 Specific Event Description – Seismic event occurs in project area resulting in plume leakage into USDW

Risk Assessment Matrix, Section 1.4 (Appendix I-2)

If a seismic event were to occur in the project area that creates or opens faults or fractures, such an event could provide a pathway for CO₂ migration into another zone, including the USDW, or to the surface. Failure of the confining zone caused by a seismic event could also cause CO₂ to migrate and contaminate the USDW.

Likelihood: Remote

Prevention and Detection:

- The CO₂ plume will be monitored as described in *Section 5 – Testing and Monitoring Plan*.
- The chosen project location is both a seismically quiet area and a sufficient distance from nearby shallow faults that could act as a conduit.
- The well and operating strategy are designed to prevent the likelihood of this occurring.

Potential Response Actions:

- Lower the injection rate or stop the injection and notify the UIC Director within 24 hours.
- Use VSP surveys to assess the location and degree of CO₂ movement, as described in *Section 5 – Testing and Monitoring Plan*.
- Resume injection, if possible, at a reduced rate.
- Continue monitoring the plume at a more frequent interval to determine if migration continues.
- If groundwater/USDW is impacted:
 - Pump CO₂-impacted groundwater to the surface and aerate it to remove the CO₂.
 - Apply “pump and treat” methods to remove trace elements.
 - Drill wells that intersect the accumulations in groundwater and extract CO₂.
 - Provide an alternative water supply if groundwater-based public-water supplies are impacted.
- If surface water is impacted:
 - Shallow lakes will quickly release dissolved CO₂ back into the atmosphere.
 - Create a hydraulic barrier by increasing the reservoir pressure upstream of the leak.
- If the plume continues to migrate out of the zone or beyond the expected plume extent, recomplete uphole into the next planned injection interval.

8.3.2 Event Category – CO₂ Release to or at the Surface

8.3.2.1 Specific Event Description – Overpressurization (i.e., induced)

Risk Assessment Matrix, Section 2.1 (Appendix I-2)

Although unlikely, overpressurization during injection-facility operations or by operating equipment over designed pressures could cause CO₂ to be released to the surface. This situation could also occur if the maximum allowable operating parameters change due to depreciation or corrosion of equipment and the changes are not accounted for.

Likelihood: Remote

Prevention and Detection:

- Proper operation and preventive maintenance of all surface facility equipment will be implemented.
- Tubing and annular pressures will be monitored and maintained below the maximum allowed values.
- Surface wellhead tree will be regularly maintained and tested for integrity.
- Subsurface safety valve will be regularly tested.

Potential Response Actions:

- Shut in flow line upon any detection of CO₂ at the surface.
- Stop the injection and notify the UIC Director within 24 hours.
- Activate downhole safety valve.
- Close wellhead valve.
- Monitor well and annulus pressures.
- Determine if personnel need to be evacuated from the facility and begin gas-monitoring operations.
- Allow pressure to bleed off the equipment and process system and allow atmospheric gas levels to return to normal.
- Determine the cause and severity of the failure in order to initiate repairs.
- Demonstrate mechanical integrity per the methods discussed in *Section 5 – Testing and Monitoring Plan*.
- Notify the UIC Director when injection can be expected to resume.

8.3.2.2 Specific Event Description – Caprock/reservoir failure

Risk Assessment Matrix, Section 2.2 (Appendix I-2)

Unforeseen geological complications could result in release of CO₂ to the surface.

Likelihood: Rare

Prevention and Detection:

- Due diligence will be exercised when collecting information from offset wells in the AOR.
- Pressure and rate monitoring, pressure falloff tests, annulus pressure tests, etc., will all be performed according to *Section 5*.
- Tubing and annular pressures will be monitored and maintained below the maximum allowed values.
- CO₂ detectors will be utilized to continuously monitor ambient air.

Potential Response Actions:

- Shut in flow line upon any detection of CO₂ at the surface.
- Stop the injection and notify the UIC Director within 24 hours.
- Activate downhole safety valve.
- Close wellhead valve.
- Monitor well and annulus pressures.
- Determine if personnel need to be evacuated from the facility and begin gas-monitoring operations.
- Allow pressure to bleed off the equipment and process system and allow atmospheric gas levels to return to normal.
- Determine the cause and severity of the failure in order to initiate repairs.
- Demonstrate mechanical integrity per the methods discussed in *Section 5*.
- Notify the UIC Director when injection can be expected to resume.

8.3.2.3 Specific Event Description – Well blowout during drilling or loss of mechanical integrity of the well pressure equipment

Risk Assessment Matrix, Section 2.3 (Appendix I-2)

Although highly unlikely, a well blowout could occur during wellbore drilling if unexpected changes in reservoir pressures cause a sudden release of hydrocarbons, water, and/or pressure from the subsurface formations.

Likelihood: Remote

Prevention and Detection:

- Maintain appropriate mud weights as required based on offset well data.
- Monitor the rate of drilling-fluid returns vs. rates pumped, penetration rates, pump pressures, etc.
- Proper wellbore design, including proper cement and metallurgy of the casing and tubing, will be implemented in the construction phase.
- Pressure and rate monitoring, pressure falloff tests, annulus pressure tests, etc., will all be performed according to *Section 5*.

Potential Response Actions:

- Stop drilling.
- Close the blowout preventer; insert rams into the well.

- Read and record stabilized shut-in pressures.
- Stop injection and notify the UIC Director within 24 hours.
- Kill the well by pumping fluid down the wellbore that is heavier than the current fluid until the well stops flowing.

8.3.2.4 Specific Event Description – Well seal failure of CO₂ sequestration well

Risk Assessment Matrix, Sections 2.4 and 2.5 (Appendix I-2)

A well seal failure could occur due to the failure of the cement behind the casing, an improperly seated packer, or a tubing leak. This event could also occur due to the corrosive nature of the CO₂ stream causing a break through the casing, allowing for an escape to surface.

Likelihood: Remote

Prevention and Detection:

- Proper wellbore design, including proper cement and metallurgy of the casing and tubing, will be implemented in the construction phase.
- Pressure and rate monitoring, pressure falloff tests, annulus pressure tests, etc., will all be performed according to *Section 5 – Testing and Monitoring Plan*.
- Routine cement bond logs and casing inspection logs.

Potential Response Actions:

- Stop the injection and notify the UIC Director within 24 hours.
- Close wellhead valve.
- Monitor well and annulus pressures.
- Determine the cause and severity of failure to determine if the CO₂ stream or formation fluids may have been released into any unauthorized zone.
- Pull and replace the tubing or the packer.
- Install chemical-sealant barrier and or attempt cement squeeze to block leaks.
- Demonstrate mechanical integrity per the methods discussed in *Section 5*.
- Notify the UIC Director when injection can be expected to resume.

8.3.2.5 Specific Event Description – Major mechanical failure of flowlines or distribution system

Risk Assessment Matrix, Section 2.6 (Appendix I-2)

Although highly unlikely, a major mechanical failure of the CO₂ flowlines and distribution system is possible during injection-facility operations by operating equipment (1) outside designed operating parameters, (2) beyond recommended preventive maintenance cycles, or (3) improperly.

Likelihood: Remote

Prevention and Detection:

- Operate a closely-monitored facility with competent management of operations.
- Ensure controls are in place to prevent overpressure and release.

- Proper operation and preventive maintenance of all surface-facility equipment will be carried out.
- Tubing and annular pressures will be monitored and maintained below the maximum allowed values.
- Surface wellhead tree will be regularly maintained and tested for integrity.

Potential Response Actions:

- Shut in the flow line upon any detection of CO₂ at the surface.
- Stop the injection and notify the UIC Director within 24 hours.
- Activate downhole safety valve.
- Close wellhead valve.
- Monitor well and annulus pressures.
- Determine if personnel need to be evacuated from the facility and begin gas-monitoring operations.
- Allow pressure to bleed off the equipment and process system and allow atmospheric gas levels to return to normal.
- Determine the cause and severity of the failure in order to initiate repairs.
- Demonstrate mechanical integrity per the methods discussed in *Section 5 – Testing and Monitoring Plan*.
- Notify the UIC Director when injection can be expected to resume.

8.3.2.6 Specific Event Description – Well seal failure of adjacent wells (i.e., P&A wells, monitoring wells) or orphan wells (i.e., wells not identified prior to injection)

Risk Assessment Matrix, Sections 2.7 and 2.8 (Appendix I-2)

It is possible that well seals in adjacent well could fail due to the failure of improper materials in adjacent wellbores, such as cement inside and behind casing, casing and equipment metallurgy, and plugging materials. This event could also occur due to undiscovered orphan wells that create leak paths to the surface due to improper plugging.

Likelihood: Occasional

Prevention and Detection:

- Perform proper corrective action review and design, including appropriate cement and metallurgy of the plugging materials.
- Perform magnetic surveying to discover undocumented/unknown wellbores.
- Continuous pressure monitoring at surface and downhole will highlight potential issues.
- Pressure and rate monitoring, pressure falloff tests, annulus pressure tests, etc., will all be performed according to *Section 5 – Testing and Monitoring Plan*.
- Operate closely-monitored facility and surrounding area with competent management of operations.

Potential Response Actions:

- Stop the injection and notify the UIC Director within 24 hours.
- Close wellhead valve.
- Monitor well and annulus pressures.
- Determine the cause and severity of failure to determine if the CO₂ stream or formation fluids may have been released into any unauthorized zone.
- Determine if personnel need to be evacuated from the facility and begin gas-monitoring operations.
- Allow pressure to bleed off the equipment and process system and allow atmospheric gas levels to return to normal.
- Perform any well reentry and corrective action as necessary to regain isolation of injectate/formation fluids.
- Demonstrate mechanical integrity per the methods discussed in *Section 5*.
- Notify the UIC Director when injection can be expected to resume.

8.3.2.7 Specific Event Description – Sabotage/terrorist attack

Risk Assessment Matrix, Section 2.9 (Appendix I-2)

This event could theoretically happen during injection-facility operations by any person or organization wishing to cause harm to life, property, or environment. This facility is not of strategic or cultural importance; therefore, this event has a very low risk.

Likelihood: Remote

Prevention and Detection:

- Stay current with recent events in the local area, country, and globally that could potentially warrant a threat to the facility.
- Properly secure the facility and surrounding area.
- Proper operation and preventive maintenance of all surface-facility equipment will be carried out.
- Surface wellhead tree will be regularly maintained and tested for integrity.
- Subsurface safety valve will be regularly tested.

Potential Response Actions:

- Shut in the flow line upon any detection of CO₂ at the surface.
- Stop the injection and notify the UIC Director within 24 hours.
- Activate downhole safety valve.
- Close wellhead valve.
- Monitor well and annulus pressures.
- Determine if personnel need to be evacuated from the facility and begin gas-monitoring operations.
- Allow pressure to bleed off the equipment and process system and allow atmospheric gas levels to return to normal.
- Determine the cause and severity of the failure in order to initiate repairs.

- Demonstrate mechanical integrity per the methods discussed in *Section 5 – Testing and Monitoring Plan*.
- Notify the UIC Director when injection can be expected to resume.

8.3.2.8 Specific Event Description – Induced seismicity directly caused by injection, resulting in leakage

Risk Assessment Matrix, Section 2.10 (Appendix I-2)

Although highly unlikely, the process of injection could induce a seismic event that causes the plume to reach faults or fractures that allow CO₂ migration to the surface.

Likelihood: Remote

Prevention and Detection:

- The CO₂ plume will be monitored as described in *Section 5*.
- The chosen project location is both a seismically quiet area and a sufficient distance from nearby shallow faults that could act as a conduit.
- The well and operating strategy are designed to prevent the likelihood of this occurring.

Potential Response Actions:

- Lower the injection rate or stop the injection and notify the UIC Director within 24 hours.
- Determine if personnel need to be evacuated from the facility and begin gas-monitoring operations.
- Allow pressure to bleed off the equipment and process system and allow atmospheric gas levels to return to normal.
- Determine the cause and severity of the failure in order to initiate repairs.
- Use VSP surveys to assess the location and degree of CO₂ movement, as described in *Section 5*.
- Resume injection, if possible, at a reduced rate.
- Continue monitoring the plume at a more frequent interval to determine if migration continues.
- If the plume continues to migrate out of the zone or beyond the expected plume extent, recomplete uphole into the next planned injection interval.

8.3.3 Event Category – CO₂ Migration

8.3.3.1 Specific Event Description – Injected plume migrates into adjacent pore space

Risk Assessment Matrix, Section 3.1 (Appendix I-2)

This event could occur if the plume expands beyond what the reservoir model predicts and migrates off controlled acreage into neighboring pore space not controlled by the operator.

Likelihood: Rare

Prevention and Detection:

- The CO₂ plume will be monitored as described in *Section 5 – Testing and Monitoring Plan*.
- Model the AOR to confirm ownership and/or control of pore space within AOR.

Potential Response Actions:

- Lower the injection rate or stop the injection and notify the UIC Director within 24 hours.
- Use VSP surveys to assess the location and degree of CO₂ movement, as described in *Section 5*.
- Restart the injection, if possible, at a reduced rate.
- Possibly recomplete into a new, shallower injection interval.
- Continue monitoring the plume at a more frequent interval to determine if migration continues.
- If migration off ExxonMobil pore space is detected or identified to be likely:
 - Negotiate with neighboring landowner to acquire rights to store within the affected pore space.
 - Drill wells that intersect the accumulations within controlled pore space and extract the CO₂.

8.3.3.2 Specific Event Description – Migration of CO₂ by others/competitors on Pecan Island

Risk Assessment Matrix, Section 3.2 (Appendix I-2)

This event could occur if the pore space controlled by the operator is migrated upon by others or competitors.

Likelihood: Remote

Prevention and Detection:

- The CO₂ plume will be monitored as described in *Section 5*.
- Strategically locate the injection operations in an area devoid of other carbon sequestration or injection operations.

Potential Response Actions:

- If migration is detected or identified to be likely:
 - Obtain control of additional pore space through outright ownership or lease

agreements.

- Lower injection rates or stop the injection and notify the UIC Director within 24 hours.
- Use VSP surveys to assess the location and degree of CO₂ movement, as described in *Section 5*.
- Restart the injection, if possible, at a reduced rate.
- Possibly recomplete into a new, shallower injection interval.
- Continue monitoring the plume at a more frequent interval to determine if migration continues.

8.3.4 Event Category – Entrained Contaminant (Non-CO₂) In Injection Stream

8.3.4.1 Specific Event Description – Change in CO₂ composition/properties from its source

Risk Assessment Matrix, Sections 5.1 and 5.2 (Appendix I-2)

This event could occur due to changes in contamination levels in the CO₂ source. The sources of contaminants may impact dissolution, geochemical reactions, and wellbore integrity.

Likelihood: Remote

Prevention and Detection:

- Samples of the CO₂ stream will be collected from the injection-source pipeline. The samples will represent injection conditions and be sent to a third-party laboratory for analysis. The analysis will be used to indicate contaminant levels.

Potential Response Actions:

- Lower the injection rate or stop the injection.
- Notify the UIC Director within 24 hours.
- Determine the cause of contaminants.
- Investigate downhole issues.
- Remediate the source of contaminants.
- Chemically treat the stream to reduce the effect of contaminants.
- Replace tubing and packer if necessary.
- Demonstrate mechanical integrity per the methods discussed in *Section 5 – Testing and Monitoring Plan*.
- Notify the UIC Director when injection can be expected to resume.

8.3.4.2 Specific Event Description – Microbial activity initiated by injection process or composition, allowing possible production of H₂S

Risk Assessment Matrix, Section 5.3 (Appendix I-2)

This event could occur due to changes in contamination levels in the CO₂ source that allow microbial activity for possible production of H₂S gas. These sources of contaminants may impact dissolution, geochemical reactions, and wellbore integrity.

Likelihood: Remote

Prevention and Detection:

- Samples of the CO₂ stream will be collected from the injection-source pipeline. The samples will represent injection conditions and be sent to a third-party laboratory for analysis. The analysis will be used to indicate contaminant levels.

Potential Response Actions:

- Lower the injection rate or stop the injection.
- Notify the UIC Director within 24 hours.
- Determine the cause of contaminants.
- Investigate downhole issues.
- Remediate the source of contaminants.
- Chemically treat the stream to reduce effect of contaminants.
- Replace tubing and packer if necessary.
- Demonstrate mechanical integrity per the methods discussed in *Section 5 – Testing and Monitoring Plan*.
- Notify the UIC Director when injection can be expected to resume.

8.3.5 Event Category – Accidents/Unplanned Events (Typical Insurable Events)

8.3.5.1 Specific Event Description – Surface infrastructure damage

Risk Assessment Matrix, Section 6.1 (Appendix I-2)

Unforeseen events, such as surface infrastructure damage, pipeline leak, compressor failure, boater or animal damage, or weather-related events, may occur while operating Pecan Island Injection Well No. 001 or No. 002.

Likelihood: Remote

Prevention and Detection:

- Equipment will be maintained regularly to prevent or minimize damage.
- Damage prevention infrastructure will be installed, and markers placed to alert the public of the potential hazards. The markers will include the name of the operator and telephone number.

- Barricades will be installed to prevent accidental damage to any equipment, and to prevent animals from entering the facility.
- Weather will be continuously monitored and, during the possibility of an adverse event, precautions will be taken to limit the potential impact.

Potential Response Actions:

- Stop the injection and notify the UIC Director within 24 hours.
- Activate the downhole safety valve, if necessary.
- Determine the cause and severity of the failure and initiate repairs.
- Demonstrate mechanical integrity per the methods discussed in *Section 5*.
- Notify the UIC Director when injection can be expected to resume.

8.3.5.2 *Specific Event Description – Hurricane*

Risk Assessment Matrix, Section 6.2 (Appendix I-2)

Unforeseen weather-related events, such as a hurricane, are likely to occur while operating Pecan Island Injection Wells No. 001 and No. 002.

Likelihood: Imminent

Prevention and Detection:

- Equipment will be maintained regularly to prevent or minimize damage.
- Damage-prevention infrastructure will be installed and markers placed to alert the public of the potential hazards. The markers will include the name of the operator and telephone number.
- Weather will be continuously monitored and, during the possibility of an adverse event, precautions will be taken to limit the potential impact.

Potential Response Actions:

- Stop the injection and notify the UIC Director within 24 hours.
- Activate the downhole safety valve, if necessary.
- Determine the cause and severity of the failure and initiate repairs.
- Demonstrate mechanical integrity per the methods discussed in *Section 5 – Testing and Monitoring Plan*.
- Notify the UIC Director when injection can be expected to resume.

The following tables (8-1 to 8-3) outline the risk assessment process discussed above.

8.4 Risk Activity Matrix

Table 8-1 – Risk Activity Matrix

Section	Risk (Feature, Event, or Process)	Likelihood	Severity			Estimated Costs	Total Score
			Safety	Environmental	Financial		
			40%	40%	20%		
1	Water Quality Impact	1-Remote, 5-Imminent	1-Harmless, 5-Destructive				
2	CO ₂ Migration	Assigned	Assigned	Assigned	Assigned		
3	Entrained Contaminant (Non-CO ₂) Releases						
4	Accidents/Unplanned Events (Typical Insurable Events)						
	Total						

Table 8-2 – Risk Mitigation and Threat Scores

THREAT SCORES	RISK MITIGATION
≥15	Avoid. Mitigate through immediate responsive action to reduce likelihood to an acceptable level.
10.0-14.9	Preventive and mitigative (P&M) measures required.
3.5-9.9	P&M measures are optional. Monitoring required.
0-3.4	No P&M measures are required. Monitor situation.

Table 8-3 – Risk Assessment Scores

Risk Assessment Scores							
LIKELIHOOD	5	Almost Certain	5	10	15	20	25
	4	Likely	4	8	12	16	20
	3	Occasional	3	6	9	12	15
	2	Rare	2	4	6	8	10
	1	Remote	1	2	3	4	5
	1	2	3	4	5		
SEVERITY							

8.5 Training

Personnel will be trained in their duties and responsibilities related to these facilities during annual on-site or table-top training exercises. All plant personnel, visitors, and contractors must attend a plant overview orientation before entering any of the facilities. A refresher course on this training is required annually for all personnel.

ExxonMobil will provide a copy of the ERRP to local first responders that includes potential response scenarios.

8.6 Communications Plan and Emergency Notification Procedures:

Table 8-4 – Emergency Services – [CALL 911](#)

Agency	Telephone Number
Vermilion Parish Fire Department	911 or
Pecan Island Vol. Fire Department	(337) 737-2501
Seventh Ward Vol. Fire Department	(337) 893-8023
Vermilion Parish Sheriff	911 or (337) 893-0871
Vermilion Parish Health Unit	(337) 893-1443
Vermilion Parish Office of Emergency Preparedness	(337) 898-4308
Louisiana Emergency Preparedness Office	(225) 763-3535
Louisiana State Police	(504) 310-7000
Louisiana State Police – Hazardous Material Hotline	(877) 925-6595
Louisiana Department of Fish and Wildlife Service	(225) 765-2800

Table 8-5 – Government Agency Notification

Agency	Telephone Number
EPA Region 6	(214) 665-2200
Class VI Contact	(214) 665-8473
Louisiana Department of Natural Resources	(225) 342-5515
Injection Well Incidents	(225) 342-5515
Vermilion Parish Local Emergency Planning Committee (LEPC)	(337) 898-4308
National Response Center (NRC)	(800) 424-8802
Louisiana State Police – Hazardous Material Hotline	(877) 925-6595

Table 8-6 – Internal Call List

Name	Title	Telephone Number

As appropriate, ExxonMobil will communicate with the public regarding events that require an emergency response, including the impact of the event on drinking water or the severity of the event, actions taken or planned to address the event, and other information needed to protect the public during the event.

8.7 Flood Hazard Risk

Due to its location near the coast, the Pecan Island Injection Wells No. 001 and No. 002 and surrounding area are designated as a mixture of FEMA flood hazard Zone VE and flood hazard zone AE. Flood hazard zone “VE” corresponds to a coastal area within the 1% annual chance flood event, with additional hazards due to storm-induced velocity-wave action. Flood hazard zone “AE” corresponds to an area within the 1% annual chance of flood event. Both zones are subject to a 26% chance of flooding over a 30-year lifespan. Floodplain management standards apply. The well locations and FEMA flood zones are shown in *Appendix I-3*.

8.8 Emergency and Remedial Response Plan Review and Updates

This EERP will be reviewed and updated annually. Any amendments to the plan must be approved by the UIC Director and will be incorporated into the permit:

- Within 1 year of an AOR evaluation;
- Following any significant changes to the facility, such as addition of injection or monitoring wells;
- After a change in key personnel; or
- As required by the UIC Director.

The following attachments are in *Appendix G*:

- Appendix G-1 Resources and Infrastructure in AOR Map
- Appendix G-2 Complete Risk Assessment Matrix
- Appendix G-3 FEMA Flood Zone Hazards Map
- Appendix G-4 Emergency Operations Plan