

## Enhanced Recovery (ER) Scheme

DAY	MONTH	YEAR

APPLICANT'S REFERENCE

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The applicant certifies that the information provided here and in all supporting documentation is correct and in accordance with all regulatory requirements or as directed by the Energy Resources Conservation Board.

### 1 APPLICATION TYPE

1. Type of ER scheme being proposed or amended:

- Waterflood
- Immiscible gas/Solvent flood
- Miscible flood
- Gas cycling
- Other

2. Is this application for a new ER scheme or an amendment to an existing ER scheme approval?

New  Amendment

*If you select "New,"*

- *proceed to Section 2; do not answer questions 3 and 4;*
- *attachments required: Isopach Map, Well Log(s), Pressure Data, and Interpretation.*

3. What is the existing ERCB approval number proposed for amendment?

4. Type of amendment:

- Add injection well location(s)
- Amend approval area
- Amend approval conditions
- Scheme termination

*If you select "Add injection well location(s)" only,*

- *you must respond to questions in Sections 2, 3, and 5. Do not respond to questions in Section 4.*

*If you select "Amend approval area" only,*

- *you must respond to questions in Sections 2, 4, and 5. Do not respond to questions in Section 3.*

*If you select "Add injection well location(s)" and "Amend approval area,"*

- *you must respond to questions in Section 2, 3, 4, and 5.*

*If you select "Amend approval conditions" only,*

- *you must respond to questions in Section 2 and 5. Do not respond to questions in Sections 3 and 4.*

*If you select "Scheme termination" only,*

- *you must respond to questions in Section 2 and 5. Do not respond to questions in Sections 3 and 4 or question 18 in Section 5.*

## 2 OWNERSHIP AND NOTIFICATION INFORMATION

5. The primary applicant must
- be the proposed approval holder for a new scheme or the current approval holder for an existing scheme, and
  - represent all well licensees in the proposed approval area.

Have these requirements been met?

Yes  No

*If your answer is "No," you cannot submit this application.*

6. An ER scheme application cannot be submitted until notification of all well licensees has been completed in accordance with *Directive 65*.

Has notification been completed in accordance with *Directive 65*?

Yes  No

*If your answer is "No," you cannot submit this application.*

7. Are there outstanding concerns from well licensees?

Yes  No

If yes, the Licensee Concerns attachment must be submitted as part of the application, in accordance with *Directive 65*.

## 3 PROPOSED INJECTION WELL LOCATIONS AND INJECTION INTERVALS

8. An ER scheme application cannot be submitted unless the proposed injection wells have been drilled.

Have the proposed injection wells been drilled?

Yes  No

*If your answer is "No," you cannot submit this application.*

9. An ER scheme application cannot be submitted unless the source of the proposed injection fluid has been secured.

Has the source of the proposed injection fluid been secured?

Yes  No

*If your answer is "No," you cannot submit this application.*

10. Provide the following for the proposed injection well locations:

Well Licence Number	Unique Well Identifier (UWI)							Injection Interval (TVD mKB)		Porosity Interval (TVD mKB)		Fluid Interface (TVD mKB) if applicable	
	LE	LSD	SEC	TWP	RG	MER	ES	Top	Base	Top	Base	Gas/Oil	Oil/Water

11. What type of injection fluid, as identified by *Directive 051*, will be used?

- Class II – produced water (brine) without H<sub>2</sub>S
- Class II – produced water (brine) with H<sub>2</sub>S
- Class III – hydrocarbons or other gases without H<sub>2</sub>S
- Class III – hydrocarbons or other gases with H<sub>2</sub>S
- Class IV – non-saline water

*If you select “Class II – produced water (brine) without H<sub>2</sub>S” only,*  
 · do not respond to question 11a. Proceed to question 12.

*If you select “Class III – hydrocarbons or other gases without H<sub>2</sub>S” only,*  
 · do not respond to question 11a, and  
 · proceed to question 12.

*If you select “Class IV – non-saline water,”*  
 · do not respond to question 11a, and  
 · proceed to question 12.

11a. If an injection fluid contains H<sub>2</sub>S and an emergency response plan (ERP) is required, the ERCB must ensure that an up-to-date ERP is in place prior to its decision on the application.

Is an ERCB-approved ERP incorporating the proposed scheme in place? Yes  No

If no, a discussion addressing the status of the ERP must be included in the Application attachment, in accordance with *Directive 65*.

12. Will injection commence in all proposed injection wells within three months of receipt of approval?

Yes  No

If no, a discussion addressing the anticipated commencement of injection and the reason for the delay must be included in the Application attachment, in accordance with *Directive 65*.

#### 4 PROPOSED APPROVAL AREA

13. Is the entire proposed approval area within the ERCB's Pool Order boundary for the subject pool? Yes  No

*If you select "No," you must respond to question 15.*

14. Does your interpretation of pool extent correspond to the ERCB's Pool Order boundary for the subject pool? Yes  No

*If you select "No," you must respond to question 15.*

15. Is the difference in pool delineation interpretation pertinent to the proposed ER scheme, in accordance with *Directive 65*? Yes  No

Provide a discussion of the difference in pool delineation and the pertinence to the proposed ER scheme in the Application attachment, in accordance with *Directive 65*.

#### 5 SCHEME DETAILS

16. Is the scheme area currently administered under good production practice (GPP)? Yes  No

17. Will produced gas from the ER scheme area be conserved, in accordance with *Directive 060* requirements? Yes  No

18. What is the proposed voidage replacement ratio (VRR), on a monthly basis, for the scheme?

The ERCB normally specifies a VRR of 1.0 to fully maintain reservoir pressure. If the VRR will not be 1.0, provide a technical justification in the Application attachment, in accordance with *Directive 65*.

19. Is or will any gas-cap gas be produced from the subject pool during the operation of the ER scheme? Yes  No

If yes, include a discussion on the potential for fluid migration into the gas cap in the Application attachment, in accordance with *Directive 65*.

*If you select "No," do not respond to questions 20, 20a, 20b, or 20c.*

20. Is gas-cap gas currently being produced from the scheme area? Yes  No

*If you select "No," do not respond to questions 20a, 20b, or 20c.*

- 20a. Has the appropriate concurrent production (CCP) approval been issued? Yes  No

*If you select "Yes," do not respond to questions 20b or 20c.*

- 20b. An application for CCP is required. Has an application for CCP been registered? Yes  No

*If you select "No," do not respond to question 20c.*

- 20c. If yes, provide the CCP application number.