SALTWATER DISPOSAL WELL PERMIT
APPLICATION PROCEDURES FOR
FORM UIC-2 SWD

PERMITTING PROCESS

- Upon receipt of the original submittal, an Initial Application Review letter will be sent out by the Injection and Mining Division (IMD) noting missing or incorrect information. Revisions to the application must be submitted within 60 days of the date on the Initial Application Review letter or the application may be denied.

- Additional revisions to the application may be requested as the application progresses through the technical review process. These revisions must be made within 15 days of the request or the application may be denied. Please include the 'Application No.' assigned by IMD on the upper right corner of each page of the revisions. The 'Application No.' can be found on your receipt letter, which you should receive within two weeks of receipt of your Application by IMD.

- The permitting process is a two-step procedure:

1st Step: After the Application is reviewed and found to be complete and to meet the requirements of Statewide Order 29-B, an "Approval to Construct" letter will be issued. This will allow the well to be drilled and completed or to be converted as described in the Application, but **NOT TO INJECT**. A list describing the "Reporting Requirements" will be included with the "Approval to Construct" letter. The "Reporting Requirements" will tell you what you need to file with the Injection & Mining Division (IMD) after completion of the well and before issuance of the final well PERMIT TO INJECT.

2nd Step: The Well History, mechanical integrity test results (witnessed by a IMD inspector), and logs are reviewed. If found adequate, a final "Permit" letter to inject fluids will be issued. If not adequate, the IMD will tell you what remedial action, if any, can be taken to obtain a "PERMIT TO INJECT".

PUBLIC NOTICE

AT LEAST FIFTEEN DAYS PRIOR TO FILING AN APPLICATION (BUT NO MORE THAN 6 MONTHS PRIOR), a notice of the Application shall be published one time **by the applicant** in the official state journal, *The Advocate* (in Baton Rouge). Acceptable wording for such notice is included in this application package as "Attachment 8". **Prior to the approval of the permit, the applicant shall submit proof of publication of such notice (Attachment 8) with the IMD**.

APPLICATION GUIDELINES

- These procedures are intended to provide applicants with a checklist to ensure all information is provided. Depending on the given well, additional items may be required.

- This list applies to new wells to be drilled and those to be converted, re-drilled, or re-permitted for injection.

- Supporting documentation is required in the form of attachments. Label each of the attachments by number in the lower right-hand corner; example: "Attachment 2A".

- Any Orders pertaining to the permitting of this well should also be attached.

- Items 29 through 32 of the Form UIC-2 SWD Application should be certified with an original signature from an associate of the operating company. The associate may be an officer; manager; general partner; proprietor; operator of the well, field or facility; or any direct employee of the operating company employed in a decision-making role. This Division will not accept a signature from an agent or consultant of the operating company to certify the application.

- If the surface casing is not set 100 feet below the base of the Underground Source of Drinking Water (USDW), please contact a Geologist with this Division for guidelines pertaining to surface casing variances.

SUBMIT THE APPLICATION IN THE FOLLOWING ORDER:

- **Application for Permit or to Amend Permit to Drill for Minerals**

  ☐ **For a NEW DRILL or RE-DRILL**, two copies of completed form MD-10-R (Yellow Card)

  ☐ **For a CONVERSION or RE-PERMIT**, two copies of completed form MD-10-R-A (Pink Card)

  ☐ Both cards must have original signatures. The information provided must match items 1 to 10 on the Form UIC-2 SWD Application.

- **Filing Fee**

  ☐ Check made payable to "Office of Conservation". Please refer to LAC 43:XIX.Chapter 7 for the current fee schedule or contact the IMD at (225) 342-5515.

  ☐ a. **NEW DRILL or RE-DRILL**

  ☐ b. **CONVERSION or RE-PERMIT**

- **APPLICATION** -- Saltwater Disposal Well Permit Application

  ☐ Form UIC-2 SWD with an original signature from an officer with the operating company authorized to certify the application.

  ☐ All items must be answered or noted "N/A"--not applicable.

- **ATTACHMENT 1** -- Location Plat

  ☐ **For a NEW DRILL, RE-DRILL, or RE-PERMIT**, include an original certified drilling location plat, labeled "Attachment 1." This plat may be combined with Attachment 2, as long as it is a certified plat. The IMD requires that the Location Plat contains geographic coordinates in GCS- Latitude, Longitude (NAD27 and NAD 83) and State Plane- X,Y (Lambert, NAD27 and NAD83) for the proposed SWD well. The location plat must reflect, at a minimum, a Class D Survey as defined by the Professional and Occupational Standards for Professional Engineers and Land Surveyors in LAC 46:LXI.2905.A.4. A Class D Survey requires a degree of accuracy to the nearest foot.

  ☐ **For a CONVERSION**, include the drilling location plat, labeled "Attachment 1." It may be a photocopy if the correct State Plane- X,Y (Lambert, NAD27) coordinates are available in the DNR database (SONRIS). If State Plane- X,Y coordinates are missing or are incorrect in SONRIS, an original certified location plat must be submitted. This plat may be combined with Attachment 2 and must meet the same requirements as those defined for a new drill, re-drilled, or re-permitted wells.

- **ATTACHMENT 2** -- Area of Review

  ☐ A. An Area of Review (AOR) map (Attachment 2A). The AOR map must identify, within a one-quarter-mile (1320-ft.) radius of the proposed injection well, the locations for the following:

  ☐ The proposed injection well

  ☐ All producing wells

  ☐ All injection wells

  ☐ All shut-in wells

- ☐ All plugged and abandoned wells
- ☐ All dry holes
- ☐ All source water wells (for enhanced recovery)
- ☐ All freshwater wells
- ☐ Include a legend to identify each well and to otherwise clarify the AOR map. Except for freshwater wells, only information on file with the Office of Conservation and pertinent information known to the applicant is required to be included on this map.

☐ B. An "Area of Review Well List" (Attachment 2B) that identifies all wells in the AOR except freshwater wells. Use the enclosed Attachment 2B or you may make up your own list, as long as all the information is included; label the list, "Attachment 2B". If no wells are found within the AOR indicate with "no wells found" on "Attachment 2B".

☐ C. A "Freshwater Well List" (Attachment 2C) identifying the freshwater wells within the AOR. Each freshwater well shall be identified by owner, type of well, and status of well. If unclear on the AOR map (Attachment 2A), also describe how each freshwater well can be located in the field. Use the enclosed Attachment 2C or you may make up your own list, as long as all the information is included and the list is labeled "Attachment 2C". If no fresh water wells are found within the AOR, indicate with "No wells found" on Attachment 2C".

A DILIGENT SEARCH MUST BE ATTEMPTED TO LOCATE ALL FRESHWATER WELLS WITHIN THE AOR, which includes conducting a foot-search of the AOR and searching the Department of Transportation and Development's (DOTD) database of Registered Water Wells in the state of Louisiana (http://www.dotd.state.la.us/intermodal/wells/disclaimer.asp).

☐ D. Include a printout of the DOTD database search of the AOR and label the list "Attachment 2D."

☐ E. Include a laboratory analysis of a water sample from EACH freshwater well listed on "Attachment 2C." Label the analysis from each freshwater well "Attachment 2E", "Attachment 2F", "Attachment 2G", etc. The laboratory analysis must be a **signed original** from a LDEQ LELAP accredited laboratory. A list of laboratories accredited by LDEQ can be found at http://www.deq.state.la.us/laboratory/Accreditation.pdf. The analysis sheet(s) must identify the freshwater well sampled, and, at a minimum, include measurement of:

- ☐ Chloride (mg/l)
- ☐ Total Dissolved Solids (mg/l)

Provide an explanation if samples are not obtainable.

- **ATTACHMENT 3** -- Facility Diagram

The diagram should be to scale (or reasonably close) and labeled, "Attachment 3."

☐ A surface facility diagram that shows the following, where applicable:

- ☐ Proposed well
- ☐ Tanks
- ☐ Pits
- ☐ Containment levees
- ☐ Flow lines entering and leaving the facility
- ☐ Rig supply well
- ☐ Pertinent buildings
- ☐ Landmarks and other significant structures or features

- **ATTACHMENT 4** -- Well Schematic Diagram

☐ **For a NEW DRILL**, two attachments are required:

☐ A schematic diagram of the proposed well, labeled “Attachment 4A".

☐ A work prognosis describing the sequence of work to be performed, labeled “Attachment 4B”,

☐ **For a CONVERSION, RE-DRILL, or RE-PERMIT**, three attachments are required:

☐ A schematic diagram of the well as it currently exists (before conversion to injection), labeled “Attachment 4A”.

☐ A schematic diagram of the well as it is proposed to be completed, labeled “Attachment 4B”.

☐ A work prognosis describing the sequence of work to be performed, labeled “Attachment 4C”. **If a cement bond log (CBL) has been run prior to submission of the application, please submit a copy with the application.**

The schematic diagram(s) must match items 12 to 21 on the Form UIC-2 SWD Application and show the following:

☐ A. Surface equipment:

☐ Well head

☐ Pressure gauges

☐ Flow line diameters at wellhead

☐ Monitoring equipment, if used

☐ B. Subsurface equipment:

☐ 1. All casing strings:

☐ Diameter

☐ Weight (per foot)

Depth set (top and bottom) Surface casing must extend at least 100 feet below the USDW.

☐ 2. ☐ Hole (drill bit) diameters

☐ 3. Cement specifications:

☐ Type of class

☐ Number of sacks

☐ Tops of cement (indicate whether calculated, logged, or to be logged)

☐ 4. Proposed cement squeeze(s), if any:

☐ Type or class

☐ Number of sacks

☐ Calculated top of cement (to be logged)

☐ 5. Injection tubing:

- ☐ Diameter
- ☐ Type or material
- ☐ Depth

☐ 6. Packer:

- ☐ Type
- ☐ Depth set: Packer must be set no higher than 150 feet above the top of the proposed injection zone. Proof of isolation (bonded cement) of the Top of Proposed Injection Zone must be at or above the packer.

☐ 7. Proposed injection zone (see notes for Attachment 7):

- ☐ Top
- ☐ Bottom

☐ 8. Proposed initial perforated, open-hole, or screened interval:

- ☐ Top
- ☐ Bottom

☐ 9. Depths:

- ☐ Total Depth
- ☐ Drilled-out depth (where applicable)
- ☐ Plugged-back depth (where applicable)

- **ATTACHMENT 5** -- Sources of Produced Water

☐ A list of all sources of produced water that is to be disposed in the proposed well. Use the enclosed Attachment 5 or you may make up your own list, as long as all the information on the enclosed list is included on it and is labeled, “Attachment 5".

- **ATTACHMENT 6** -- Injection Fluid Analysis

☐ A laboratory analysis of a representative sample of the fluid to be injected in the proposed well, labeled “Attachment 6". The laboratory analysis must be a **signed original** from a LDEQ LELAP accredited laboratory. A list of laboratories accredited by LDEQ can be found at http://www.deq.state.la.us/laboratory/Accreditation.pdf.

The analysis sheet must indicate the source of the sample and IMD should be able to track the sample to the fluid source wells. At a minimum, the analysis should include measurement of:

- ☐ Chloride (mg/l)
- ☐ Total Dissolved Solids (mg/l)
- ☐ Specific gravity or density (g/cc or ppg)
- ☐ Temperature of sample when specific gravity was measured

- **ATTACHMENT 7** -- Electric Logs

☐ **For a NEW DRILL**, please include electric logs (e-log) of the closest well to the proposed well location which show the proposed injection zone and USDW. E-logs of more than one well may be included, if necessary, to show both the lowermost USDW and proposed injection zone. A diligent search must be made to locate at least one e-log within one mile of the proposed well. If an e-log can not be located

within one mile, a search may be extended up to two miles. If an e-log is not available, use a sheet of paper labeled, "Attachment 7" which states, "No e-logs are available from wells within a two-mile radius of the proposed well location".

☐ **For a CONVERSION, RE-DRILL, or RE-PERMIT**, please include a duplicate of the original e-log or a photocopy of the e-log from the well proposed for conversion. If the lowermost USDW was not logged, please include an e-log from a well within a one-mile radius that shows the lowermost USDW.

Please apply the guidelines below and mark the following information on the e-logs:

☐ A. The Serial Number of the well must be written on all e-logs attached to the application. Please submit complete e-logs, from the heading to the depth logged; the 5-inch/100-ft-scale portion is not necessary.

☐ B. The base of the lowermost Underground Source of Drinking Water (USDW).

- Please conduct a one-mile search from the proposed well location to locate the closest well with an e-log that shows the lowermost USDW. The USDW can be determined from the deep induction curve, generally the dotted curve, on the e-log. Resistivity changes with temperature and depth, therefore the guidelines below are used to approximate the lowermost USDW in sands at the following depths:

  - **Ground surface to 1,000 feet: 3 ohms or higher is considered USDW;**
  - **1,000 feet to 2,000 feet: 2 ½ ohms or higher is considered USDW; and**
  - **2,000 feet and deeper: 2 ohms or higher is considered USDW.**

  Clay or shale intervals with resistivities higher than these are not considered USDW's.

- Please provide an e-log from the search area that shows there is at least 100 feet of net shale between the top of the proposed injection zone and the base of the USDW.

☐ C. The top and bottom of the proposed injection zone.

- An injection zone consisting of multiple sands may be permitted, provided that the USDW and sands capable of hydrocarbon production are isolated. Permitting a zone of multiple sand units will allow for future perforations within the permitted injection zone by applying for a work permit (Form UIC-17).

- Cement isolation confining the top of the proposed injection zone must be confirmed by a Cement Bond Log (CBL). The CBL must show cement in the wellbore bonded to the first isolating shale formation immediately above the approved injection zone.

- The packer must be set at or below the cement isolation confining the top of the proposed injection zone, but no more than 150 feet above the top of zone.

- Please conduct a one-mile search from the proposed well location to locate productive wells. Ensure that there is at least 100 feet of net shale between the proposed injection zone and any productive intervals.

☐ D. The proposed perforated interval.

- **ATTACHMENT 8** -- Public Notice

☐ An original copy of proof of publication of the legal notice. Please check for accuracy of serial number; well name and number; section, township, and range; etc. If these are not correct, the publication will not be acceptable. You will be billed by *The Advocate* for the publication. Complete the legal notice attachment and send the notice to: ***The Advocate*, Legal Ad Department, P.O. Box 588, Baton Rouge, LA 70821, (225) 388-0128.**

The Advocate will send you a notarized “Proof of Publication”, which is to be labeled, “Attachment 8", and included as part of the Application. If the Proof of Publication is not received when the Application is sent to the IMD, it may be sent later provided you also write the Application No. on the Public Notice. The “Application No.” can be found on your receipt letter, which you should receive with in two weeks after your Application reaches the IMD.

- **ATTACHMENT 9** -- Well History and Work Resume Report

  ☐ **For a CONVERSION or RE-PERMIT**, a photocopy of each Well History and Work Resume Report (Form WH-1) that have previously been filed with the Office of Conservation.

  ☐ **For a RE-DRILL**, a photocopy of the previously filed WH-1 that documents the plugging and abandonment of the well.

  ☐ **For a NEW DRILL**, there is no Attachment 9.

- **DUPLICATE COPY**

  ☐ Please include a photocopy of the **complete application and attachments**. Both the “original” and the “photocopy” must be included to be considered a complete Application.

AREA OF REVIEW WELL LIST

OPERATOR: ______________________ WELL STATUS*: ______________________
WELL NAME: ______________________ SERIAL NUMBER: ______________________
TOTAL DEPTH: ______ FT. PERFORATED OR COMPLETED INTERVAL: ______ FT. TO ______ FT.

OPERATOR: ______________________ WELL STATUS*: ______________________
WELL NAME: ______________________ SERIAL NUMBER: ______________________
TOTAL DEPTH: ______ FT. PERFORATED OR COMPLETED INTERVAL: ______ FT. TO ______ FT.

OPERATOR: ______________________ WELL STATUS*: ______________________
WELL NAME: ______________________ SERIAL NUMBER: ______________________
TOTAL DEPTH: ______ FT. PERFORATED OR COMPLETED INTERVAL: ______ FT. TO ______ FT.

OPERATOR: ______________________ WELL STATUS*: ______________________
WELL NAME: ______________________ SERIAL NUMBER: ______________________
TOTAL DEPTH: ______ FT. PERFORATED OR COMPLETED INTERVAL: ______ FT. TO ______ FT.

OPERATOR: ______________________ WELL STATUS*: ______________________
WELL NAME: ______________________ SERIAL NUMBER: ______________________
TOTAL DEPTH: ______ FT. PERFORATED OR COMPLETED INTERVAL: ______ FT. TO ______ FT.

OPERATOR: ______________________ WELL STATUS*: ______________________
WELL NAME: ______________________ SERIAL NUMBER: ______________________
TOTAL DEPTH: ______ FT. PERFORATED OR COMPLETED INTERVAL: ______ FT. TO ______ FT.

OPERATOR: ______________________ WELL STATUS*: ______________________
WELL NAME: ______________________ SERIAL NUMBER: ______________________
TOTAL DEPTH: ______ FT. PERFORATED OR COMPLETED INTERVAL: ______ FT. TO ______ FT.

OPERATOR: ______________________ WELL STATUS*: ______________________
WELL NAME: ______________________ SERIAL NUMBER: ______________________
TOTAL DEPTH: ______ FT. PERFORATED OR COMPLETED INTERVAL: ______ FT. TO ______ FT.

OPERATOR: ______________________ WELL STATUS*: ______________________
WELL NAME: ______________________ SERIAL NUMBER: ______________________
TOTAL DEPTH: ______ FT. PERFORATED OR COMPLETED INTERVAL: ______ FT. TO ______ FT.

*Well Status: Producing, SWD, EOR Injection, Shut-in (future utility) P&A, etc.

(ATTACH ADDITIONAL LISTS IF NEEDED)

FRESHWATER WELL LIST

☐ **A DILIGENT SEARCH WAS MADE TO LOCATE ALL FRESHWATER WELLS WITHIN A 1/4 MILE RADIUS OF THE PROPOSED WELL AND NO WELLS WERE LOCATED.**

☐ **A DILIGENT SEARCH WAS MADE TO LOCATE ALL FRESHWATER WELLS WITHIN A 1/4 MILE RADIUS OF THE PROPOSED WELL AND THE FOLLOWING WELLS WERE LOCATED.**

OWNER: ______________________ TOTAL DEPTH: __________ FT.

TYPE*: ______________________ STATUS**: ______________________

LOCATION: ______________________

OWNER: ______________________ TOTAL DEPTH: __________ FT.

TYPE*: ______________________ STATUS**: ______________________

LOCATION: ______________________

OWNER: ______________________ TOTAL DEPTH: __________ FT.

TYPE*: ______________________ STATUS**: ______________________

LOCATION: ______________________

OWNER: ______________________ TOTAL DEPTH: __________ FT.

TYPE*: ______________________ STATUS**: ______________________

LOCATION: ______________________

OWNER: ______________________ TOTAL DEPTH: __________ FT.

TYPE*: ______________________ STATUS**: ______________________

LOCATION: ______________________

OWNER: ______________________ TOTAL DEPTH: __________ FT.

TYPE*: ______________________ STATUS**: ______________________

LOCATION: ______________________

OWNER: ______________________ TOTAL DEPTH: __________ FT.

TYPE*: ______________________ STATUS**: ______________________

LOCATION: ______________________

*Type of Well: PUBLIC SUPPLY, DOMESTIC (supplies one or a few homes), INDUSTRIAL (including commercial), LIVESTOCK, IRRIGATION (including catfish & crawfish farming), MONITORING, RIG SUPPLY, HEAT PUMP SUPPLY, OBSERVATION (by a qualified agency or company), AQUIFER DEWATERING, RECOVERY (of contaminants), other (describe).

**Status of Well: ACTIVE (used at least once a month), STANDBY, INACTIVE (but useable with minor work or effort), PLUGGED & ABANDONED, etc.

(ATTACH ADDITIONAL LISTS IF NEEDED)

INJECTION FLUID SOURCE WELL LIST

OPERATOR: ______________________ OPERATOR CODE: __________

WELL NAME: ______________________ SERIAL NUMBER: __________

FIELD: ______________________ FORMATION: __________

TOTAL DEPTH: ________ FT. PERFORATED INTERVAL: ________ FT. TO ________ FT.

OPERATOR: ______________________ OPERATOR CODE: __________

WELL NAME: ______________________ SERIAL NUMBER: __________

FIELD: ______________________ FORMATION: __________

TOTAL DEPTH: ________ FT. PERFORATED INTERVAL: ________ FT. TO ________ FT.

OPERATOR: ______________________ OPERATOR CODE: __________

WELL NAME: ______________________ SERIAL NUMBER: __________

FIELD: ______________________ FORMATION: __________

TOTAL DEPTH: ________ FT. PERFORATED INTERVAL: ________ FT. TO ________ FT.

OPERATOR: ______________________ OPERATOR CODE: __________

WELL NAME: ______________________ SERIAL NUMBER: __________

FIELD: ______________________ FORMATION: __________

TOTAL DEPTH: ________ FT. PERFORATED INTERVAL: ________ FT. TO ________ FT.

OPERATOR: ______________________ OPERATOR CODE: __________

WELL NAME: ______________________ SERIAL NUMBER: __________

FIELD: ______________________ FORMATION: __________

TOTAL DEPTH: ________ FT. PERFORATED INTERVAL: ________ FT. TO ________ FT.

OPERATOR: ______________________ OPERATOR CODE: __________

WELL NAME: ______________________ SERIAL NUMBER: __________

FIELD: ______________________ FORMATION: __________

TOTAL DEPTH: ________ FT. PERFORATED INTERVAL: ________ FT. TO ________ FT.

OPERATOR: ______________________ OPERATOR CODE: __________

WELL NAME: ______________________ SERIAL NUMBER: __________

FIELD: ______________________ FORMATION: __________

TOTAL DEPTH: ________ FT. PERFORATED INTERVAL: ________ FT. TO ________ FT.

(ATTACH ADDITIONAL LISTS IF NEEDED)

PUBLIC NOTICE

In accordance with the laws of the State of Louisiana and the particular reference to the provisions of LA R. S. 30:4, and the provisions of Statewide Order No. 29-B as amended and adopted by the Office of Conservation of the State of Louisiana

Company Name:

Address:

City, State, Zip:

Phone:

is applying to the Injection and Mining Division of the Office of Conservation for a permit to dispose of produced fluids generated from oil and gas production by means of an injection well, which is identified as

_____ SWD Well No. _____

Serial Number _____ (Conversion or Re-Permit Only), with the injection interval at an approximate depth of _____ ft. to _____ ft. The well location is Section _____ , Township _____ , Range _____ _____ Field, _____ Parish, Louisiana.

All interested parties are hereby given an opportunity to submit written comments no later than fifteen (15) days from the date of this publication. Identify the well when corresponding. Direct comments to:

Office of Conservation
Injection & Mining Division
P.O. Box 94275
Baton Rouge, LA 70804-9275
Re: Comments for SWD Application