CLASS III BRINE EXTRACTION WELL PERMIT APPLICATION

OFFICE OF CONSERVATION
INJECTION & MINING DIVISION
P.O. BOX 94275
BATON ROUGE, LA 70804-9275

UIC-3 BR **PLEASE READ APPLICATION PROCEDURES** **TYPE ONLY**

1. APPLICATION TO: ☐ **DRILL NEW BRINE EXTRACTION WELL** ☐ **RE-PERMIT BRINE EXTRACTION WELL**	
2. OFFICE OF CONSERVATION ORDER NO. (IF APPLICABLE)**:** _____	
3. OPERATOR'S NAME AND ADDRESS: **EMAIL:**	**4. OPERATOR CODE:** **5. PHONE:** **FAX:**
6. FACILITY NAME AND ADDRESS:	**7. CONTACT NAME:** **8. PHONE:** **FAX:**

WELL INFORMATION

9. PROPOSED WELL NAME AND NUMBER:		**10. SERIAL NO. (RE-PERMIT ONLY)**		
11. SALT DOME:	**12. PARISH:**	**13. SEC.**	**TWP.**	**RNG.**
14. LEGAL LOCATION DESCRIPTION (FROM LOCATION PLAT):				

15. LOCATION COORDINATES:	**GEOGRAPHIC COORDINATE SYSTEM (NAD27)**	**STATE PLANE COORDINATES (LAMBERT, NAD 27)**
	LATITUDE: ° MIN SEC	☐ **NORTH ZONE** ☐ **SOUTH ZONE**
	LONGITUDE: ° MIN SEC	X: Y:

WELL CONSTRUCTION INFORMATION

16. CASING SIZE (IN.)	**HOLE SIZE (IN.)**	**CASING WEIGHT**	**DEPTH SET**		**SACKS CEMENT**	**TYPE CEMENT**	**TOP OF CEMENT**
			TOP (FT.)	**BOTTOM (FT.)**			

17. ELEVATION OF DATUM: _____ (AMSL/BMSL)	**18. DATUM:** ☐ **BHF** ☐ **KB** ☐ **GL** ☐ **OTHER:** _____	**19. DRILLED DEPTH:** _____ **FT.**

PROPOSED INJECTION INTERVAL INFORMATION				
20. DEPTH OF PROPOSED INJECTION ZONE: (FROM TOP OF SALT TO BOTTOM OF CAVERN)	TOP:	FT.	BOTTOM:	FT.
21. DEPTH OF PROPOSED SALT CAVERN: (FROM TOP OF CAVERN TO BOTTOM OF CAVERN)	TOP:	FT.	BOTTOM:	FT.
22. DESCRIBE COMPLETION TYPE (OPEN HOLE INTERVAL):				

MECHANICAL DATA	
23. DESCRIBE HOW THE MECHANICAL INTEGRITY REQUIREMENTS WILL BE MET AS CALLED FOR IN STATEWIDE ORDER 29-N-1 (LAC 43:XVII.109.B.9):	
24. INJECTION RATE (GALLONS/MINUTE): _____ GPM	25. ESTIMATED INJECTION PRESSURE: _____ PSI
26. TYPE OF ANNULUS PAD FLUID: _____	27. DENSITY OF PAD FLUIDS: _____ GM/CM^3
28. ESTIMATED FRACTURE GRADIENT OF INJECTION ZONE: _____ PSI/FT.	29. DATE OF LAST SONAR SURVEY (RE-PERMIT ONLY): _____

OTHER INFORMATION	
30. IS THE PROPOSED WELL LOCATED ON INDIAN LANDS UNDER THE JURISDICTION OR PROTECTION OF THE FEDERAL GOVERNMENT?	☐ YES ☐ NO
31. IS THE PROPOSED WELL LOCATED ON STATE WATER BOTTOMS OR OTHER LANDS OWNED BY OR UNDER JURISDICTION OF THE STATE?	☐ YES ☐ NO

AUTHORIZED AGENT

32. AGENT OR CONTACT AUTHORIZED TO ACT FOR THE OPERATOR DURING PROCESSING OF THIS APPLICATION.

THE SIGNATURE BY THE OPERATOR CERTIFYING THIS APPLICATION WILL AUTHORIZE THIS AGENT OR CONTACT TO SUBMIT ADDITIONAL INFORMATION AS REQUESTED AND TO GIVE ORAL STATEMENTS IN SUPPORT OF THIS APPLICATION.

NAME:

COMPANY:

ADDRESS:

PHONE:

EMAIL:

WRITTEN CORRESPONDENCE SHOULD BE SENT TO (CHOOSE ONE): ☐ OPERATOR ☐ AUTHORIZED AGENT

CERTIFICATION BY OPERATOR

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my personal knowledge or inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

33. NAME (PRINT)	34. TITLE (PRINT)
35. SIGNATURE	36. DATE

CLASS III BRINE EXTRACTION WELL PERMIT
APPLICATION PROCEDURES FOR
FORM UIC-3 BR

PERMITTING PROCESS

- Upon receipt of the original submittal, an Initial Application Review letter will be sent out by the Injection and Mining Division (IMD) notifying receipt of the application and noting any missing or incorrect information.
- Additional revisions to the application may be requested as the application progresses through the technical review process. 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.
- Once the commissioner has determined that an application is complete, a draft permit, fact sheet, and public notice will be prepared.
- The commissioner will issue a public notice of the preparation of a draft permit and will allow at least 30 days for public comment.
- If the commissioner finds, on the basis of requests, a significant degree of public interest in (a) draft permit(s), he/she will hold a public hearing. The commissioner also may hold a public hearing at his/her discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision.
- The commissioner will issue a public notice of a public hearing at least 30 days before the hearing.
- Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.
- After closure of the public comment period, including any public hearing, the commissioner shall issue a final permit decision in a timely manner.

APPLICATION GUIDELINES

- These procedures are intended to provide applicants a checklist to be sure all information is provided.
- This list applies to new wells to be drilled or those re-permitted for brine extraction (solution mining).
- 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 Conservation Orders pertaining to the permitting of this well should also be attached.
- An applicant may apply for an Area or Project Permit provided that the application meets the provisions of LAC 43:XVII.109.B.11.
- The Form UIC-3 BR 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.

SUBMIT THE APPLICATION IN THE FOLLOWING ORDER:

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

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

☐ **For a 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 14 on the Form UIC-3 BR Application.

- **Filing Fee**

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

- **APPLICATION** -- Brine Extraction Well Permit Application

☐ Form UIC-3 BR 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**, 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 brine extraction 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 RE-PERMIT**, 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). As defined at LAC 43:XVII.109.B.2, the AOR for individual Class III brine extraction wells is a fixed radius around the proposed well of no less than one-quarter mile (1320-ft.). The AOR of a Class III brine extraction area project is the area project plus a circumscribing area the width of which is no less than one-quarter mile (1320-ft.). The AOR map must identify the locations for the following:

☐ The proposed brine extraction well

☐ All producing wells

☐ All disposal/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 analyses of water samples from a representative number of freshwater wells listed on "Attachment 2C." **The IMD should be contacted to discuss which freshwater wells in the AOR should be sampled.** 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 from a well.

- **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(s)
- ☐ Existing wells
- ☐ Water wells
- ☐ Pumps
- ☐ Tanks
- ☐ Ponds
- ☐ Containment levees
- ☐ Flow lines entering and leaving the facility
- ☐ 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”. **A Cement Bond Log (CBL) must be provided for each string of cemented casing.**

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

☐ A schematic diagram of the well as it currently exists (before recompletion to solution mining), 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 16 to 22 on the Form UIC-3 BR 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 (Outer)

☐ Weight (pounds per foot)

☐ Grade

☐ Depth set (top and bottom)

Surface casing should extend below the USDW.

☐ 2. ☐ Hole (drill bit) diameters

☐ 3. Cement specifications:

☐ Type or class

☐ Number of sacks

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

☐ Cement yield

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

☐ Type or class

☐ Number of sacks

☐ Calculated top of cement (to be logged)

☐ Cement yield

☐ 5. Proposed cavern:

- ☐ Top of the cavern
- ☐ Bottom of the cavern
- ☐ Cavern Diameter

☐ 6. Depths:

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

- **ATTACHMENT 5** -- Sources of Mining Water

☐ A list of all sources of mining water that is to be injected 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** – Mining Water Analysis

☐ A laboratory analysis of a representative sample of the water 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 wells providing mining water. At a minimum, the analysis should include measurement of:

☐ Chloride (mg/l) ☐ Specific gravity or density (g/cc or ppg)

☐ Total Dissolved Solids (mg/l) ☐ Temperature of sample when specific gravity was measured

- **ATTACHMENT 7** -- Electric Logs

☐ **For a NEW DRILL**, please include electric logs (e-log) from the closest well to the proposed well location which show the top of the proposed brine extraction zone and USDW. E-logs of more than one well may be included, if necessary, to show both the lowermost USDW and the top of the proposed brine extraction 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 RE-PERMIT**, please include a duplicate of the original e-log or a photocopy of the e-log from the well proposed for re-permitting. 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).

- 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 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.

☐ C. The approximate top of the caprock.

☐ D. The approximate top of the salt.

- **ATTACHMENT 8** – Sonar Log (Re-Permits Only)

☐ A copy of the most recent sonar survey of the well.

- **ATTACHMENT 9** – Structure Map and Cross Section

☐ A. A structure map of the top of the salt dome.

☐ B. North-South and East-West vertical cross-sections showing the proposed cavern, all surrounding storage and brine caverns, all other bore holes and wells, and any other structures within the salt body. Sections should be oriented to indicate the closest approaches to surrounding caverns and bore holes or wells. All wells within one mine of the proposed cavern should be included. Identify each well by listing the following on the cross sections or attach a separate sheet:

☐ Operator
☐ Well Name and Number
☐ Well Serial Number
☐ Well Status (Producing, Brine, Storage, Shut-in, et.)
☐ Perforated or injection interval (top and bottom)
☐ Horizontal and vertical scales

- **ATTACHMENT 10** – Technical Report

☐ A. A technical report must accompany all new facilities and/or wells and all re-permit applications. The bulk of the application package by a proposed operator is in reality the technical report submitted as a companion to the application form. This report will describe the proposed project as a whole which includes geological, geochemical, geomechanical evaluations of the specific salt dome, well and cavern design and integrity, area of review (including distances to adjacent caverns); overall cavern operating ranges, system monitoring, safety procedures and equipment, financial responsibility, closure, etc.

☐ B. The applicant must address the information requested in:

☐ Statewide Order No. 29-N-1 (LAC 43:XVII.105.F)
☐ Statewide Order No. 29-N-1 (LAC 43:XVII.109.B)

- **ATTACHMENT 11** – Contingency Plan

☐ A contingency plan shall be provided in the event of leakage into underground sources of drinking water or catastrophic collapse of the salt dome.

- **ATTACHMENT 12** – Well History and Work Resume Report

  ☐ **For a NEW DRILL**, there is no Attachment 12.

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

- **ATTACHMENT 13** – Closure Plan and Cost Estimate

  ☐ Provide a closure plan and cost estimate to implement the closure plan.

- **ATTACHMENT 14** – Financial Responsibility

  ☐ Provide a statement of the means by which the applicant proposes to comply with financial responsibility requirements to plug and abandon the well. Financial documentation may be a letter of credit, bond, certificate of deposit, or other instrument acceptable to the Office of Conservation. The funds to be available shall be no less than the amount identified in the closure plan and cost estimate.

- **ATTACHMENT 15** – Adjacent Landowners

  ☐ Provide a list of all adjacent landowners to the proposed project area. Use the enclosed Attachment 15 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 15".

- **ATTACHMENT 16** – “IT Decision” Questions

  ☐ See the attached documentation.

- **DUPLICATE COPIES**

  ☐ Please include the original and **two (2) photocopies of the complete application and attachments**. Both the “original” and the “photocopies” 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, ABANDONED (but not plugged).

SOURCES OF MINING WATER

OWNER: ______

WELL ID: ______ SCREENED INTERVAL: ______ FT. TO ______ FT. TOTAL DEPTH: ______ FT.

GEOLOGIC UNIT: ______ LOCATION: ______

OWNER: ______

WELL ID: ______ SCREENED INTERVAL: ______ FT. TO ______ FT. TOTAL DEPTH: ______ FT.

GEOLOGIC UNIT: ______ LOCATION: ______

OWNER: ______

WELL ID: ______ SCREENED INTERVAL: ______ FT. TO ______ FT. TOTAL DEPTH: ______ FT.

GEOLOGIC UNIT: ______ LOCATION: ______

OWNER: ______

WELL ID: ______ SCREENED INTERVAL: ______ FT. TO ______ FT. TOTAL DEPTH: ______ FT.

GEOLOGIC UNIT: ______ LOCATION: ______

OWNER: ______

WELL ID: ______ SCREENED INTERVAL: ______ FT. TO ______ FT. TOTAL DEPTH: ______ FT.

GEOLOGIC UNIT: ______ LOCATION: ______

OWNER: ______

WELL ID: ______ SCREENED INTERVAL: ______ FT. TO ______ FT. TOTAL DEPTH: ______ FT.

GEOLOGIC UNIT: ______ LOCATION: ______

OWNER: ______

WELL ID: ______ SCREENED INTERVAL: ______ FT. TO ______ FT. TOTAL DEPTH: ______ FT.

GEOLOGIC UNIT: ______ LOCATION: ______

OWNER: ______

WELL ID: ______ SCREENED INTERVAL: ______ FT. TO ______ FT. TOTAL DEPTH: ______ FT.

GEOLOGIC UNIT: ______ LOCATION: ______

OWNER: ______

WELL ID: ______ SCREENED INTERVAL: ______ FT. TO ______ FT. TOTAL DEPTH: ______ FT.

GEOLOGIC UNIT: ______ LOCATION: ______

(ATTACH ADDITIONAL LISTS IF NEEDED)

ADJACENT LANDOWNERS

LANDOWNER(S): ______________________ CONTACT NAME: ______________________

ADDRESS: ______________________

CITY: ______________ STATE: ______________ ZIP CODE: ______________

LOCATION RELATIVE TO PROJECT: ______________________

LANDOWNER(S): ______________________ CONTACT NAME: ______________________

ADDRESS: ______________________

CITY: ______________ STATE: ______________ ZIP CODE: ______________

LOCATION RELATIVE TO PROJECT: ______________________

LANDOWNER(S): ______________________ CONTACT NAME: ______________________

ADDRESS: ______________________

CITY: ______________ STATE: ______________ ZIP CODE: ______________

LOCATION RELATIVE TO PROJECT: ______________________

LANDOWNER(S): ______________________ CONTACT NAME: ______________________

ADDRESS: ______________________

CITY: ______________ STATE: ______________ ZIP CODE: ______________

LOCATION RELATIVE TO PROJECT: ______________________

LANDOWNER(S): ______________________ CONTACT NAME: ______________________

ADDRESS: ______________________

CITY: ______________ STATE: ______________ ZIP CODE: ______________

LOCATION RELATIVE TO PROJECT: ______________________

LANDOWNER(S): ______________________ CONTACT NAME: ______________________

ADDRESS: ______________________

CITY: ______________ STATE: ______________ ZIP CODE: ______________

LOCATION RELATIVE TO PROJECT: ______________________

LANDOWNER(S): ______________________ CONTACT NAME: ______________________

ADDRESS: ______________________

CITY: ______________ STATE: ______________ ZIP CODE: ______________

LOCATION RELATIVE TO PROJECT: ______________________

(ATTACH ADDITIONAL LISTS IF NEEDED)

CONSTITUTIONAL CONSIDERATIONS: "IT DECISION" QUESTIONS

Louisiana Constitutional Article IX, §1, of the Louisiana Constitution imposes a duty of environmental protection on all State agencies and officials which require a balancing process in which environmental costs and benefits must be given careful consideration along with economic, social and other factors. The balancing process was required of State agencies by Save Ourselves, Inc., et al. vs, the Louisiana Environmental Control Commission, et al. 452 So.2d 1152 (La. 1984), hereafter "IT Decision".

The "IT Decision" involved a hazardous waste permit under the State's Hazardous Waste Management Plan consistent with the federal Resource Conservation and Recovery Act (RCRA). To meet its obligation under the "IT Decision", the Louisiana Department of Environmental Quality (LDEQ) prepared a list of questions which addresses what LDEQ deemed necessary to make permit decisions. The main questions touch upon certain issues and considerations which would be applicable to Office of Conservation waste permit decisions, although we are not administering a RCRA authorized program.

In order to satisfy the constitutional requirements, the Office of Conservation must conduct the 'balancing process' utilizing the information and data which will form part of the record supporting the decision on your application to permit your proposed activity. As the applicant for an injection well permit, it is necessary for you to provide such information as will be required to evaluate your application considering the "IT Decision". We suggest your staff review the court case to determine what information you believe must be provided.

You must furnish this Office with such information in adequate detail together with sufficient justification and supporting data to allow us to fulfill our constitutional obligation. Your furnishing of this information is above and beyond the requirements of Statewide Order No. 29-N-1 (LAC 43:XVII, Subpart 1). As such, your permit application prepared pursuant to that Statewide Order is not considered deficient because of these overriding constitutional requirements. Your prompt response to the "IT Decision" questions is in your best interest. If we cannot satisfactorily address our constitutional obligations we may be unable to grant your application.

The following list of questions are those prepared by the LDEQ and should be used as guidance when preparing a response to the "IT Decision". Although the questions focus on waste issues, the intent of the questions was to have the applicant consider the potential impacts of the proposed project on human health and the environment. When considering each of the questions, please formulate a response relative to the proposed project. Please, restate the questions before providing your response. The five questions in bold-faced type labeled **A, B, C, D, E** are the primary questions for which you must provide a response. The sub-questions within each group of primary question are provided as a guide to assist you in formulating a response to those primary questions. You do not have to provide a specific answer to the sub-questions.

A. Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible?
(This question requires the permittee to identify adverse environmental effects, both potential and real.)

1. What are the potential environmental impacts of the permittee's proposed facility?

    a. What wastes will be handled?
        i. Classes of chemicals
        ii. Quantities (hazardous and non hazardous)
        iii. Physical and chemical characteristics
        iv. Hazardous waste classification (listed, characteristic, etc.)

    b. How will they be handled?
        i. Treatment
        ii. Storage
        iii. Disposal

    c. Sources of waste
        i. On-site generation (type and percentage of total handled)
        ii. Off-site generation (type and percentage of total handled)

    d. Where will the wastes be shipped if not handled at this site?

    e. What wastes will remain on-site permanently?

2. By which of the following potential pathways could releases of hazardous materials from the proposed facility endanger local residents or other living organisms?

    a. Air
    b. Water
    c. Soil
    d. Food

3. What is the likelihood or risk potential of such releases?

4. What are the real adverse environmental impacts of the permittee's proposed facility?

    a. Short term effects
        i. land area taken out of system

    b. Long term effects

B. Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?
(This question requires the permittee to perform a cost-benefit analysis, or at least a quantitative indication of the economic benefits and a qualitative description of the negative impacts expected from the permittee's operation. The later should come from the answer to question No. I above.)

1. How was it determined that this facility was needed?

    a. Local or regional survey
        i. On-site or off-site needs
        ii. Regional solid waste management benefit
        iii. Generic survey of solid waste needs (compatibility with master plan)

2. What will be the positive economic effects on the local community?

    a. How many permanent jobs will be created?
    b. What is the expected annual payroll?
    c. What is the expected economic multiplier from item B2?
    d. What is the expected tax base and who will receive benefits?

3. What will be the potential negative economic effects on the local community?

    a. What are the possible effects on property values?

    b. Will public costs rise for:
        i. Police protection
        ii. Fire protection
        iii. Medical facilities
        iv. Schools
        v. Roads (also see below)

    c. Does the prospective site have the potential for precluding economic development of the area by business or industry because of risk associated with establishing such operations adjacent to the proposed facility?

4. Was transportation a factor in choosing the proposed site?

    a. What mode(s) of transportation will be used for the site?
        i. Truck
        ii. Rail
        iii. Barge
        iv. Other

    b. What geographical area will it serve?

    c. By how much will local road traffic volume increase?
        i. Can local roads handle the traffic volume expected?
        ii. Can local roads handle the weight of trucks?

    d. What are the long-term expectations of the proposed site?
        i. Longevity of the facility
        ii. Who owns the facility?
        iii. Are the owners financially backed by others?
        iv. When is closure anticipated?
        v. Who is responsible for the site after closure?
        vi. What assurances will there be that the site will be closed in accordance with the plan?
        vii. What financial assurances will be established to demonstrate the ability to handle problems after closure?
        viii. Who certifies that the site is properly closed?
        ix. How are people protected from unwittingly buying land after closure?
            (a) Is the closed facility recorded in the deed?
            (b) What future uses are possible?

C. Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing nonenvironmental benefits?
(This question requires the permittee to demonstrate having considered alternate technologies.)

1. Why was this technology chosen (e.g., incineration over landfilling?)

    a. Are other technologies available?
    b. Describe the engineering design and operating techniques used to compensate for any site deficiencies.

2. Is the proposed technology an improvement over that presently available?

3. Describe the reliability of technology chosen.

    a. Past experiences
    b. Environmental Impacts

4. Describe the sequence of technology used from arrival of wastes to the end process at the facility (flow chart).

    a. Analysis of waste
    b. Unloading
    c. Storage
    d. Treatment
    e. Monitoring
    f. Closure
    g. Post-closure
    h. Disposal
    i. Any residuals requiring further handling

5. Will this facility replace an outmoded/worse polluting one?

6. What consumer products are generating the waste to be disposed? Are there alternative products that would entail less hazardous waste generation?

D. Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing nonenvironmental benefits?
(This is the questions that deal directly with citing criteria.)

1. Why was this site chosen?

    a. Specific advantages of the site.
    b. Were other sites considered and rejected?
    c. Is the location of the site irrevocable; i.e., would denial of permit based on site preclude the project?

2. Is the chosen site in or near environmentally sensitive areas?

    a. Wetlands
    b. Estuaries
    c. Critical habitat
    d. Historic or culturally significant area
        i. Indian mounds
        ii. Antebellum houses
        iii. Tourist attractions or facilities (e.g., bed and breakfast inns)
        iv. Campgrounds or parks

3. What is the zoning and existing land use of the prospective site and nearby area?

    a. Is the site located near existing heavy industrial, chemical process or refinery operations?
    b. Is there a precedent for chemical contamination near the site or is the soil and water pristine?
    c. Is the area particularly noted for its esthetic beauty?

4. Is the site flood prone?

    a. Is the site in a flood plain?
        i. How current are the maps used to make flood plain determinations?
        ii. What is the elevation of the site?
        iii. Is diking required or desired to provide flood protection?
            (a) What is the design height of the dike?
            (b) How is the dike protected from erosion?
            (c) What frequency and design storm was used?
            (d) Is the access to the site over or through dikes?

    b. Is the site hurricane vulnerable?

        i. Is the site in an area subject to storm surge?
        ii. What are the design storm specifications?
        iii. Should damage from wave action be considered?
        iv. For what levels of wind speed is the facility designed?

5. Is groundwater protected?

    a. Are aquifers or recharge area underlying the site used for drinking water?
    b. What is the relationship of the site to the water table?
    c. What wells exist in the area?
    d. What is the flow rate and direction of the groundwater flow?
    e. What is the groundwater quality in the underlying aquifers?
    f. Is there a hydraulic connection between the aquifers?

6. Does prospective site pose potential health risks as defined by proximity to:

    a. Prime agricultural area (crop or pasture land)
    b. Residential area
    c. Schools or day care centers
    d. Hospitals or prisons
    e. Public buildings or entertainment facilities
    f. Food storage area
    g. Existing community health problems that may be aggravated by operation of additional hazardous waste disposal capacity

7. Is air quality protected?

    a. Is the site within an ozone or non-attainment area?
    b. What contaminants are likely to be generated at the site?
    c. What protection is afforded from each contaminant generated by the site?
    d. What is the potential for unregulated emissions?
    f. What plans are implemented to provide for odor control?
    g. Who will be affected by emissions?
        i. What is the direction of the prevailing winds?
        ii. Describe the expected frequency of “bad air” conditions.
    h. Describe the control of vapors at various stages of process.

8. Have physical site characteristics been studied; what has been done in terms of a geotechnical investigation?

    a. Site geology
    b. Hydrology
    c. Topography
    d. Soil properties
    e. Aquifer location
    f. Subsidence problems
    g. Climatic conditions

E. Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing nonenvironmental benefits?
(This question requires the permittee to demonstrate having considered the most stringent techniques for reducing or more efficiently handling waste.)

1. Is this facility part of a master plan to provide waste management? Whose plan?

    a. How does it fit into the plan?
    b. What geographical area is served by the plan?

2. Does this facility fit into an integrated waste management system? (Reduction, recovery, recycling, sales tax, exchange, storage, treatment, disposal).

    a. On-site
    b Regional

3. Can waste be disposed by some other means?

    a. Technology limitations
    b. Cost factors
    c. Other reasons

4. What quality assurance control will be utilized to protect the environment?
    a. Plans for lab work
    b. How are out-of-spec wastes handled?
    c. What happens to rejected wastes?
    d. Treatment stabilization
    e. Segregation of noncompatible wastes
    f. Handling of containerized wastes

5. Innovative techniques used to control release of waste or waste constituents into the environment.

    a. Surface impoundment
    b. Land application treatment
    c. Landfill (burial)
    d. Incinerator
    e. Container storage
    f. Tanks