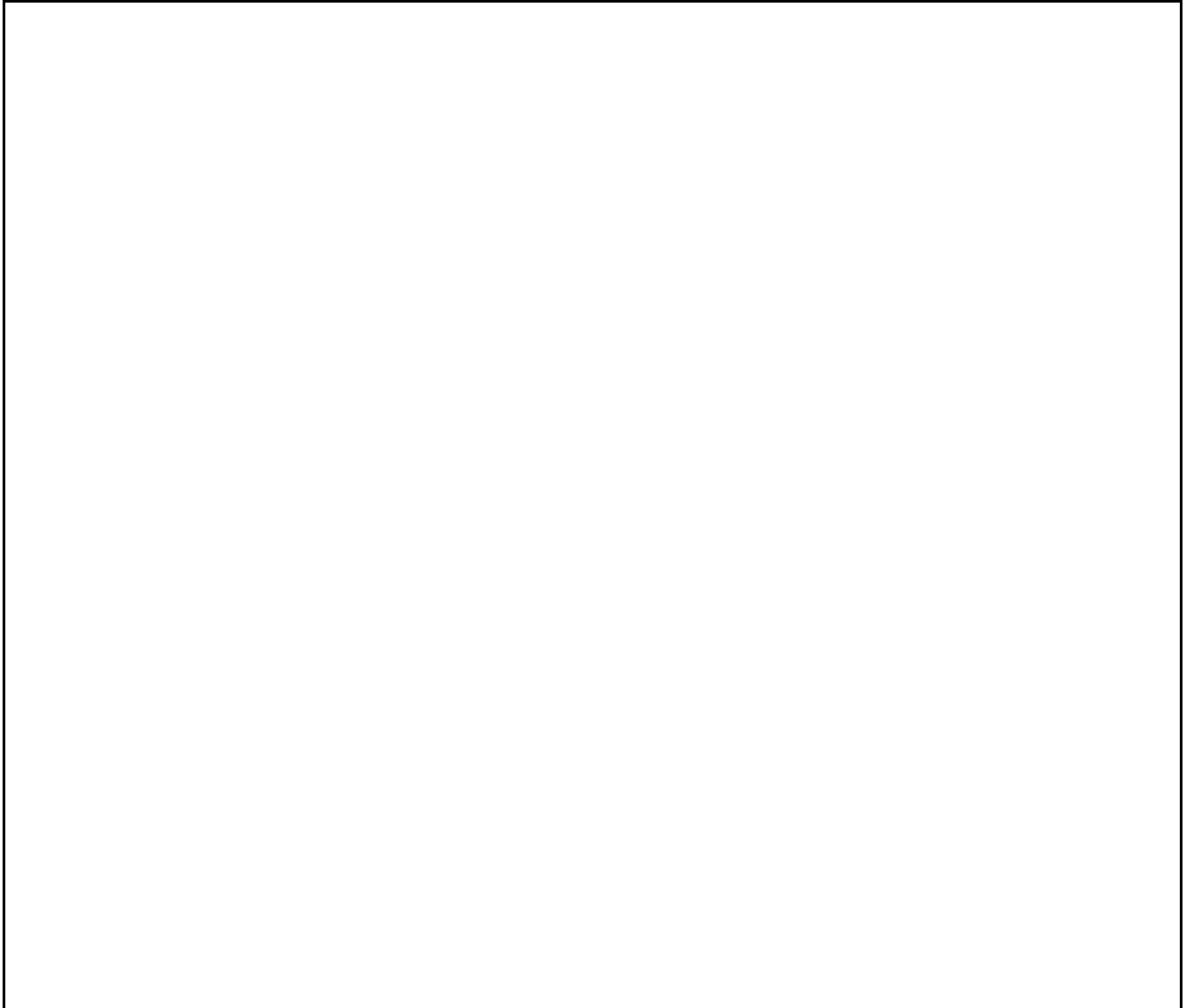


Schematic Diagram of Well: (indicate location and depths of casing strings, cement plugs, NORM solids and/or tubing equipment, etc.)



1. Application to plug and abandon any well under the jurisdiction of the Office of Conservation which is to utilized for downhole disposal of NORM solids and/or NORM contaminated tubing/equipment, shall be made on Form UIC-30, Work Permit to Plug and Abandon a Well Utilized for NORM Disposal. Form UIC-30 is to be submitted to the Injection and Mining Division, P.O. Box 94275, Baton Rouge, Louisiana 70804-9275 for review. Call 504/342-5515 if you have any questions about completion of Form UIC-30.
2. This work shall be done according to the recommended practices in the LRPD Implementation Manual of Management of NORM in Louisiana and DNR/OC Statewide Order No. 29-B, LAC 43:XIX.137.
3. This application will be returned if not properly completed and signed.
4. The Department of Environmental Quality (DEQ), Office of Air Quality and Radiation, Radiation Protection Division, will be sent a copy of Form UIC-30 upon approval. If approved, a copy of Form UIC-30 must be attached to the application to DEQ to perform jobsite (NORM disposal) activities.

Well Serial Number: _____

NORM CHECK LIST
Form UIC-30

- ____ 1. Is well information correct and is the signature original?
- ____ 2. Is there a before and after well sketch?
- ____ 3. If casing is to be removed, will it expose any open hole?
- ____ 4. Is the shoe of the surface casing at least 100-feet below the base of the lowermost underground source of drinking water (USDW)?
- ____ 5. Will each set of production perforations be plugged with a 100-foot cement plug (minimum)?
____ If a Cast Iron Bull Plug (CIBP) is to be used, will there be 10-feet of cement on top of the CIBP?
- ____ 6. Will the bottom plug be tagged and the casing and bottom plug be tested to 1000 PSIG for 30 minutes with less than 100 PSI loss?
- ____ 7. Will the top of the NORM plug and/or NORM tubing be deeper than 100-feet below the shoe of the surface casing?
- ____ 8. Will the CIBP above the NORM plug be placed at least 50-feet below the shoe of the surface casing?
- ____ 9. Will the middle cement plug in the production/surface casing annulus and inside the production casing be 100-feet or greater and be 50/50 with the surface casing shoe?
____ If cement can not be circulated, will the production casing/surface casing annulus be squeezed and a 100-foot cement plug be placed on top of the CIBP?
____ If the annulus can not be squeezed, will 200-feet of cement be placed on top of the CIBP?
- ____ 10. Will the middle plug be tested to 1000 PSIG for 30 minutes with less than 100 PSI loss?
- ____ 11. Will the fluid between the cement plugs be 9.0 PPG or greater?
- ____ 12. Will the top plug be 100-feet or greater?
- ____ 13. Will the casing be cut 2-feet below ground level or 10-feet below the mud line?

**Department of Natural Resources
Office of Conservation
Injection and Mining Division**

**NORM Disposal Guidelines
Plugging and Abandonment Procedures**

Application to plug and abandon any well under the jurisdiction of the Office of Conservation which is to be utilized for downhole disposal of NORM solids and/or NORM contaminated tubing, shall be made on Form UIC-30, **Work Permit to Perform a NORM Plug and Abandonment**. Form UIC-30 is to be submitted to the Injection and Mining Division, P. O. Box 94275, Baton Rouge, Louisiana 70804-9275 for review.

The Department of Environmental Quality (DEQ), Office of Air Quality and Radiation, Nuclear Energy Division, will be sent a copy of Form UIC-30 upon completion of the review. If approved, a copy of Form UIC-30 must be attached to the application to DEQ to perform jobsite (NORM disposal) activities.

The following procedures shall be utilized by oil and gas operators for the disposal of NORM contaminated tubing and/or NORM solids into a well that is to be plugged and abandoned:

- a. Cement plugs in addition to those specified in the following procedure shall be placed in the well to contain high pressure sands, freshwater sands and as may be required by the Office of Conservation.
- b. A bottom cement plug of at least one hundred (100) feet in length shall be placed immediately above the uppermost perforated interval in the well. In multiple completed wellbores, sufficient cement shall be used to adequately isolate each perforated pool, one from the other. A cast iron bridge plug with a minimum of ten (10) feet of cement on top is acceptable in lieu of the one hundred (100) foot cement plug.
- c. The bottom cement plug shall be tagged and both the cement plug and production casing pressure tested to one thousand (1000) PSIG for thirty (30) minutes for integrity. More than 100 psi pressure loss in thirty (30) minutes constitutes loss of integrity. If loss of integrity cannot be corrected, the well is not a candidate for disposal of NORM contaminated tubing and/or NORM solids.
- d. Once mechanical integrity of the bottom cement plug and production casing is established, NORM contaminated tubing and/or NORM solids may be placed in the well. NORM solids shall be placed by the circulation method and spotted beginning at the top of the bottom casing plug. NORM solids may be placed as per above with NORM contaminated tubing, which may then be left in the well. NORM contaminated tubing shall be placed in the well so as not to disturb the integrity of the cement plug.
- e. NORM contaminated tubing and/or NORM solids shall be placed inside the production casing at a depth deeper than one hundred (100) feet below the surface casing shoe. A cast iron bridge plug shall then be placed at least fifty (50) feet below the base of the surface casing shoe.

NORM Disposal Guidelines

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f. A cement plug of at least one hundred (100) feet in length shall be placed in the production/surface casing annulus and inside the production casing so that cement shall extend at least fifty (50) feet below the surface casing shoe. This cement shall be placed by pumping down the annulus using a calculated displacement. In the event that cement cannot be pumped down the annulus, the cement shall be placed by perforating the production casing at least fifty (50) feet below the surface casing shoe and circulating, if possible or if not, by squeezing the outer cement plug into the annulus. A cement plug of at least one hundred (100) feet in length shall then be placed in the production casing above the bridge plug. The production casing cement plug shall be tagged and pressure tested to one thousand (1000) PSIG for thirty (30) minutes. In the event that cement cannot be circulated or squeezed into the annulus, a cement plug of at least two hundred (200) feet in length shall be placed immediately above the cast iron bridge plug in the production casing. The production casing cement plug shall be tagged and pressure tested to one thousand (1000) PSIG for thirty (30) minutes for integrity (more than 100 psi pressure loss in thirty (30) minutes constitutes loss of integrity).

g. A top cement plug of at least one hundred (100) feet in length shall be placed at the top of the well in the production/surface casing annulus and inside the production casing.

h. General Requirements:

- i. Mud-laden fluid between cement plugs shall be of a density of at least nine (9.0) pounds per gallon.
- ii. NORM contaminated tubing and/or NORM solids shall not be placed in any well where production casing has been retrieved or in any open hole. NORM contaminated tubing and/or NORM solids shall not be disposed of in any wells where the bottom cement plug or casing fails the pressure integrity test. NORM contaminated tubing and/or solids shall not be placed in any well in which the surface casing is not set at least one hundred (100) feet below the base of the lowermost USDW.
- iii. Well casing(s) shall be cut a minimum of two (2) feet below plow depth on all land locations and a minimum of ten (10) feet below the mud line on all water locations. Explosives shall not be used to remove the casing(s)/wellhead.
- iv. NORM contaminated solids shall not be mixed with any cement slurry that is to be used as a plug.
- v. Except where otherwise provided in this procedure all cement plugs shall be placed by the circulation method and hydrostatically balanced. The well must be in a static condition at the time cement plugs are placed in the well.