

GEOTECHNICAL EXPLORATION AUDIT PROGRAM

The following applicable laws serve as a reference document for licensed Louisiana water well contractors, affiliated professionals, and regulators in the planning, construction, documentation, and plugging and-abandonment of subsurface penetrations for environmental projects in Louisiana:

1. **LAC Title 33 Part IX (DEQ).**
2. **LAC Title 43 Natural Resources**
3. **LAC Title 46 Part LXXXIX Professional and Occupational Standard Water Well Contractors (Drillers)**
4. **LAC Title 56 (PUBLIC WORK/DNR)**
5. **LA-RS 38:3098 Chapter 13B Subsurface Water Well Drillers.**

The purpose of the regulations pertaining to the geotechnical exploration construction is to reduce the potential for contaminating the state's groundwater resources via improperly constructed wells and boreholes. Notably, two of the most critical tasks relating to well construction is plugging-and-abandonment (P&A) of boreholes and wells. Consistent with the mission of the state Ground Water Resources Program within DNR's Office of Conservation (DNR/OC), the Guidance Manual includes detailed discussions on the topics of sealing, grout materials, grout mixtures, grouting techniques, and P&A of environmental boreholes, monitoring wells, and related subsurface environmental systems. These boreholes, monitoring wells, and related subsurface environmental systems are intended to be completed in such a manner so as not to adversely impact the quality of groundwater, provide an avenue for contaminants to be introduced from the surface, nor allow such an avenue of contamination between aquifers. Consequently, best management practices (BMP) must be observed to maintain cleanliness and restrict potential contamination during the drilling of Geotechnical bore holes. The mission of DNR is to ensure and promote sustainable and responsible use of the natural resources of Louisiana so that they are available for the enjoyment and benefit of citizens now and in the future. Louisiana's groundwater is one such natural resource. The Office of Conservation, an agency within DNR, has the statutory authority through its Ground Water Resources Program, to ensure aquifer sustainability and groundwater resource conservation. DNR/OC also has the authority and responsibility under LAC 56 to regulate the construction of water wells in Louisiana. This authority includes environmental "monitoring wells" as defined in the code. Specifically, monitoring wells, **geotechnical boreholes and test holes must be drilled by a licensed contractor/driller**. Effective beginning in 2010, DNR/OC obtained authority for water well construction and water well driller licensure from DOTD. Other divisions of DNR/OC also maintain relevant authorities and responsibilities relating to environmental boreholes and subsurface injections, including the Injection and Mining Division (injection for environmental aquifer remediation) and the Environmental Division (Exploration & Production—Part 29B). The mission of DEQ is to provide comprehensive environmental protection to promote and protect the health, safety and welfare of the citizens of Louisiana (LAC Title 33). DEQ regulates and monitors the activities of operations that may pose a threat to the subsurface environment of the state of Louisiana. An important element of this regulatory activity is the monitoring of groundwater quality and consequential actions that would impact groundwater, such as remediation and restoration activities. DEQ requires boreholes, monitoring wells under multiple programs described in LAC Title

33 (hazardous waste landfills—Part V Subpart 1; solid waste landfills—Part VII; UST Trust Fund—Part XI; RECAP). The missions of DNR and DEQ overlap with respect to boreholes, water wells (monitoring and related environmental wells), and similar Geotechnical exploration bore hole.

DOTD's Geotechnical Exploration unit is tasked with the responsibility to audit all Geotechnical bore holes for the State of Louisiana that was done under DOTD. There are 9 district Labs and Construction units around the state. The Geotechnical Bore hole is performed under the Water well license under Section 22 Geotechnical Unit. Under LA Title 46 Administrative Code, Chapter 7 Record Keeping and Identification driller must:

1. Form A.1 shall be turn in to the Section 22 Geotechnical Unit. Information in the form will then be turned in to DNR.
2. It shall be the responsibility of the licensed contractor to ascertain that the rig(s) and service vehicle(s) used in his drilling operation are plainly and legibly marked with an identification number visible at all times. The identification number to be used shall be the license number of the contractor responsible for the drilling operations. The license number shall be printed on each side of every rig and service vehicle in numerals of not less than two inches high, in a color sufficiently different from the color of the vehicle so that the number is plainly legible.

DOTD water well license number is WWC-001.

Louisiana One Call

Utility Locate (Louisiana One Call) The location of any underground lines potentially present in the vicinity of any borehole or monitoring well must be identified prior to field activities through the use of the Louisiana One Call system. Important factors associated with utility locating and Louisiana One Call are as follows:

- Louisiana One Call may not identify all lines potentially present, especially underneath commercial and industrial facilities and in locations where the utility providers are not Louisiana One Call system members;
 - Contact with person(s) knowledgeable with the underground utility system in the vicinity of the borehole or monitoring well location is recommended (e.g., inside a chemical plant);
 - The Louisiana One Call system requires 48-hour notice prior to breaking ground; and,
 - The use of a T-handle probe at least five or six feet long to probe each boring/well location in a triangular pattern as a final check prior to the initiation of any drilling activities is a BMP. In some situations, additional utility locating measures (e.g., air-knife, pot-holing, or geophysical method) should be considered. Examples of these situations include: work within a plant; work near a roadway with fiber-optic lines; work in areas of high methane; and work in older developed areas where records are sparse.
- Combination(s) of the above. All equipment used in the construction of wells and boreholes performed for environmental purposes shall be free of contamination. Such equipment includes: drill rig, augers, drill stem, samplers, tools, water tank, recirculation tanks, pumps, and any other auxiliary equipment. All cleaning and decontamination should be performed in areas and in a

manner where fluids can be effectively managed. Before leaving the site, all construction equipment shall be decontaminated.

Refer to Guidance Manual for Environmental Boreholes and Monitoring System for technical information for drilling of the Geotechnical Sample

Link to the Manual and applicable regulations: [Guidance Manual 20200421.pdf \(louisiana.gov\)](#)
[Microsoft Word - 56.doc \(la.gov\)](#), [Microsoft Word - 46v45.doc \(la.gov\)](#), [Microsoft Word - 43v01-06.doc \(la.gov\)](#), [33v09-201605-Water-Quality.pdf \(louisiana.gov\)](#)

Information in the Audit Program are:

Project No

Dist.

Lab Engineer

Driller

Boring No

Latitude

Longitude

Method of Plugging

Elevation

Comments

After the audit, Geotechnical Exploration Unit will provide report of the findings. Deficiencies in the findings shall be corrected within 30 calendar days after received final audit report

Exhibit A

1. Materials's and Testing Geotechnical Bore Holes Log
2. Ground water resources program Notice October 10, 2014