



JOHN BEL EDWARDS
GOVERNOR

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION

THOMAS F. HARRIS
SECRETARY

RICHARD P. IEYOUB
COMMISSIONER OF CONSERVATION

INJECTION AND MINING DIVISION

INTRA-OFFICE POLICY STATEMENT

POLICY NO.: IMD-GS-11

EFFECTIVE DATE: September 1, 2017

SUBJECT: Maximum Allowable Formation Pressure (MAFP) in Class II Salt Water Disposal (SWD) Wells And Enhanced Oil Recovery (EOR) Wells Injecting Produced Water or Brine

BACKGROUND:

The Injection and Mining Division (IMD) of the Louisiana Office of Conservation has historically regulated formation pressures in Class II injection zones by assigning a Maximum Allowable Surface Injection Pressure (MASIP) for each well. This MASIP provided an absolute upper limit of the formation pressure for a given zone. The regulatory provision at LAC 43:XIX.405.B.4 for establishing the MASIP in Class II injection zones specifies that

the pressure in the well at the depth of injection shall not exceed 75 percent of the pressure needed to fracture the formation;

This provision was subsequently supplemented by Policy No. IMD 1999-03, effective March 1, 1999 which provides that

[t]he Maximum Allowable Surface Injection Pressure (MASIP) for a Class II Disposal Well shall not exceed 90 percent of the calculated fracture pressure of the injection zone...

Then, Policy No. IMD-GS-09, effective March 24, 2009, amended February 15, 2017, provides that

[a]pplicants who provide geomechanical data of the confining zone and comply with the control measures listed below to assure protection of the lowermost USDW may request a MASIP calculated by applying the provisions of LAC 43:XIX.405.B.4 to the confining zone.

Application of the provisions of LAC 43:XIX.405.B.4 to the confining zone will result in a MASIP greater than the fracture pressure of the injection zone, and injection at this elevated pressure may over time lead to overpressuring, or artificially geopressuring, of the zone. Overpressuring, or artificially geopressuring, of injection zones is known to result in endangerment to the Underground Sources of Drinking Water (USDW),

damage to oil and gas drilling and production, adverse effects on other injection operations, loss of confinement of injected fluids to the approved interval, or pose a risk to the health, safety, and welfare of the public.

POLICY

In order to ensure that Class II SWD and EOR operations injecting produced water or brine will not pose a risk to the USDW, oil and gas drilling and production, other injection operations, or the health, safety and welfare of the public, the MAFP shall be no greater than the equivalent MASIP calculated for the interval pursuant to Policy No. IMD 1999-03, effective March 1, 1999.

Any request for a MAFP greater than the equivalent MASIP calculated for the interval pursuant to Policy No. IMD 1999-03, effective March 1, 1999 shall be denied.

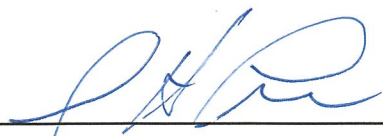
The MAFP shall be calculated based upon the top of the injection interval in hydraulic communication with the shallowest perforations. Evidence of isolation of the injection zone will be based upon the IMD criteria for establishing cement isolation.

Compliance with the MAFP shall be demonstrated on a schedule prescribed by the Commissioner, by a shut-in pressure test of no greater than 24 hours, and witnessed by a representative of the Office of Conservation. If the shut-in tubing pressure at the end of the shut-in pressure test is greater than the MAFP, the operator must either perform remedial action or change the injection interval.

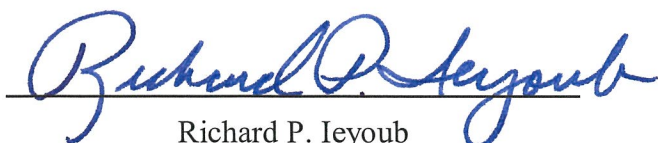
Failure to demonstrate compliance with the MAFP assigned by the Commissioner shall result in the revocation or reduction of the injection well's MASIP to a pressure calculated pursuant to Policy No. IMD 1999-03, effective March 1, 1999.

Should any Operator dispute the revocation or reduction of a MASIP pursuant to this policy, they may submit a written request for a public hearing, to be held in the parish where the injection well is located, pursuant to LSA-R.S. 30:6 *et seq.* Such a hearing shall be held in order to show cause why continued operation at a MASIP greater than the MAFP should continue and will not pose a risk to the USDW, oil and gas drilling and production, other injection operations, or the health, safety and welfare of the public. The public hearing request must be submitted to the Director of the Injection and Mining Division and be accompanied by a check or money order in the non-refundable amount of \$755 as provided by Statewide Order 29-R-16/17 (LAC 43:XIX.Chapter 7) or successor document.

APPROVED BY:



Stephen H. Lee, Director
Injection & Mining Division



Richard P. Ieyoub
Commissioner of Conservation