

Mexican Ministry of the Environment Publishes Guidelines for Protection and Conservation of Waters in Unconventional Blocks

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The Ministry of Energy has announced that before the end of the Peña Nieto Administration on December, 2018, the National Hydrocarbons Commission (CNH) will call the fifth bid of Round 2 (commonly known as Bid 2.5) for the award of exploration and production contracts for onshore blocks, which will include unconventional or shale blocks.¹ Because hydraulic fracturing (fracking) to tap hydrocarbons entails intense use of water, the Ministry of the Environment has begun to take regulatory action in preparation for Bid 2.5.

The Ministry of the Environment (“SEMARNAT”) published its Guidelines for the Protection and Conservation of National Waters in Hydrocarbon Exploration and Production Activities in Unconventional Blocks (the “Fracking Guidelines”), effective August 31, 2017. The Fracking Guidelines are directed at state productive companies and private companies performing exploration and production activities in unconventional fields (“Regulated Parties”), with the purpose of preserving national waters and inherent public property. Regulated Parties already performing fracking activities have 180 days to comply with the Fracking Guidelines.

The application processes referred to in the Fracking Guidelines must be followed and resolved by the central offices of the National Water Commission (“CONAGUA”). Regulated Parties may make corresponding filings before the Basin Agency (*Organismo de Cuenca*) or Local Bureau (*Dirección Local*) where the corresponding contract or entitlement (*asignación*) area is located.

A. Use and Exploitation of National Waters

The Fracking Guidelines consider two scenarios for the use and exploitation of national waters during fracking activities, namely: (i) when there is availability of water in aquifers or basins within the relevant contract or entitlement (*asignación*) area, and (ii) when there is no such availability of water. If there is water available in such area, a Regulated Party must apply for the corresponding water concession pursuant to the National Waters Law and include the following technical specifications and documents:

1. The polygon circumscribing the contract or entitlement (*asignación*) area, determined in accordance with geographical coordinates ITRF2008, 2010.0
2. Exploration or Development Plan approved by the CNH, as applicable
3. The number of exploratory wells the Regulated Party intends to drill and complete, and their respective designs
4. Construction program for the exploratory wells
5. Exploration report pursuant to the authorized Exploration Plan
6. Total required volume of water for the production of hydrocarbons, calculated from the total number of wells to be drilled and completed in the production area, and probable required

average volumes of water per well and percentage of water return

7. The georeferenced location of the planned hydraulic infrastructure for the transportation, distribution, and handling of water, fluids, and additives
8. The hydrocarbon-production program
9. The draft completion project for each production well
10. The design of Regional and Local Monitoring Networks
11. A list of additives to be used in the preparation of fracturing fluids, including their commercial name, chemical formula, CAS registration number, total volume to be used, and the percentage of such additive (in terms of mass) to be used in the fracturing fluid

If no water is available within the contract or entitlement area, a Regulated Party may apply to CONAGUA for (i) the assignment of rights contained in the water concession titles granted in the relevant aquifer or basin, (ii) a concession for interior saltwater or territorial waters for desalination purposes, or (iii) an authorization to use non-committed wastewater resulting from urban public use.

Upon the completion of hydrologic wells, Regulated Parties must submit to CONAGUA a file per well containing (i) a map with its georeferenced location, and (ii) cuttings and geophysical readings obtained within the well, and capacity data and results from their interpretations.

CONAGUA may use wells operated by Regulated Parties for the abstraction of national waters and built under a concession in order to monitor the levels and quality of national waters, as long as prior notice is sent to the corresponding Regulated Party.

B. Occupation of Federal Property and Permits for Hydraulic Infrastructure Works

Regulated Parties requiring the surface use of federal property under CONAGUA's jurisdiction must obtain a concession from CONAGUA, in accordance with the National Waters Law. To develop new hydraulic infrastructure located within the beds of bodies of water and federal property under CONAGUA's jurisdiction, Regulated Parties must obtain a hydraulic construction permit from CONAGUA, attaching the following documents (in addition to those required under the National Waters Law) to their applications:

1. Exploration or Development Plan approved by the CNH
2. The polygon circumscribing the contract or entitlement (*asignación*) area, determined in terms of geographical coordinates
3. A favorable resolution on the environmental impact from SEMARNAT
4. Sources of water supply

C. Disposal of Cuttings; Waste and Discharge Permits

The disposal of waste from exploration and production activities, including, cuttings, produced water, and return flow must comply with the General Law for the Prevention and Comprehensive Management of Waste, the National Waters Law, and Mexican Official Standard NOM-143-SEMARNAT-2003 (which provides environmental specifications for the handling of water associated with hydrocarbons).

D. Protection of National Waters and Inherent Public Property

The Fracking Guidelines require Regulated Parties performing fracking activities to prevent the infiltration of pollutants into the subsoil and aquifers by installing impermeable casing to isolate wells and storage sites for fluids and additives used in fracking. Such casing must be made of

synthetic material, and be impermeable and resistant to the sun, hydrocarbons, salts, and acidic and alkaline solutions.

To protect the quality of underground water in each production area, Regulated Parties must drill hydrologic exploration wells, with a depth to be determined by CONAGUA considering the results of exploration activities performed. The data obtained from such wells with respect to the thickness and lithology of the corresponding aquifers must be considered in the design of hydrologic abstraction wells. Each hydrologic abstraction well must meet the following specifications:

1. It must have been drilled with water-based fluids, whether bentonitic or biodegradable, or with air and foam
2. A macroscopic description of the lithology, with channel samples for each five meters correlated to the geophysical readings of the well
3. Geophysical readings, including, at least, natural potential, caliper, resistance, gamma rays, temperature, and porosity
4. Definition of aquifer horizons

Prior to commencing activities under the Development Plan approved by the CNH, Regulated Parties must deliver the data for each hydrologic exploration well to CONAGUA, including:

1. Its location
2. Construction characteristics (total depth, diameter, piping, and length of casing)
3. Design and construction materials to be used
4. Lithological cuttings
5. Geophysical readings

Prior to the implementation of the Development Plan approved by the CNH, Regulated Parties must drill wells that will comprise a Regional Monitoring Network for CONAGUA to determine the Water Baseline, and a Local Monitoring Network to be used by CONAGUA to monitor sources of national waters quantitatively and qualitatively during the development period and after completion. The design and distribution of such wells must be authorized by CONAGUA.

To preserve national waters during fracking activities in accordance with best international practices in the design and drilling of production wells, Regulated Parties must comply with the technical specifications set forth in the Fracking Guidelines.

E. Penalties

If a Regulated Party violates the provisions of the National Waters Law and its Regulations, it will be subject to administrative penalties. If its activities cause environmental damage, the Regulated Party must repair such damage, and if such repair is not possible, then environmental compensation must be paid as determined in the Federal Environmental Liability Law.

For more information in connection with the Fracking Guidelines, please contact one of the lawyers listed below.

¹ Ministry of Energy Five-Year Plan for Public Bids for the Exploration and Production of Hydrocarbons 2015-2019 (*Programa Quinquenal de Licitaciones para la Exploración y Extracción de Hidrocarburos 2015-2019*), as amended on July 13, 2017. Available [here](#).

