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[Note to the reader: This is a courtesy translation to English of a publication by Mexico's National Hydrocarbons Commission (CNH) in the Federal Register (Diario Oficial de la Federación) on January 7, 2016 (as amended on March 10, 2020),¹ and is intended for reference purposes only. Campa y Mendoza, S.C. disclaims any liability or responsibility for any reliance on, or use of, this translation by a third party. This translation does not constitute legal advice. If you have any questions about the content of this regulatory instrument issued by the CNH, please contact us at: contacto@campaymendoza.com. December 14, 2021.]

NATIONAL HYDROCARBONS COMMISSION

Technical PROVISIONS for the use of associated natural gas in the exploration and extraction of hydrocarbons.

(...)

TECHNICAL PROVISIONS FOR THE USE OF ASSOCIATED NATURAL GAS IN THE EXPLORATION AND EXTRACTION OF HYDROCARBONS

Title I Sole Chapter Of the General Provisions

Article 1. Purpose of the Technical Provisions. The purpose of these Technical Provisions is to:

1 https://sidof.segob.gob.mx/notas/5422286



- I. Establish the technical and operative elements that will define the Goal, based on which the Programs for the Use of Associated Natural Gas will be structured. The foregoing, within the process of approval of the Exploration and Development for the Extraction of Hydrocarbons Plans;
- II. Establish the procedures, requirements and criteria for the evaluation of the compliance with the Goal and the Programs for the Use of Associated Natural Gas, and
- III. Establish the administrative procedures for the supervision of the compliance with the Goals and Programs for the Use of Associated Natural Gas, within the development of the Exploration and Extraction activities.

Article 2. Scope of application. These Technical Provisions are of general observance and of a mandatory nature for the Petroleum Operators that carry out Hydrocarbons Exploration and Extraction activities, that involve the extraction and Use of Associated Natural Gas.

The Commission shall be responsible for the interpretation and application of these Technical Provisions, as well as, as the case may be, the performance of the actions and procedures related to their compliance.

Article 3. Definitions. For the purposes of the interpretation of these Technical Provisions, the following definitions are established, together with those contemplated in Article 4 of the Hydrocarbons Law; same that shall be applied in a harmonic and congruent manner, in the singular or plural, in the following terms:

- I. **Agency:** National Agency for Industrial Safety and Environmental Protection of the Hydrocarbons Sector.
- II. Use: Conservation or efficient use of the Associated Natural Gas produced in an Entitlement or Contract Area, ensuring the handling capacity, availability and reliability of the Gathering system, processing and distribution thereof, under technically and economically feasible conditions.
- III. **Technical-Economic Analysis:** Economic evaluation that according to the cost-benefit analysis methodology, the Petroleum Operator shall compare the Economic Value of the hydrocarbons in their integrity -Crude Oil and Associated Natural Gas-, with respect to the net present value of different





investment projects. The foregoing, in order to maximize the value of the hydrocarbons in their entirety, in the short, medium and long term and under similar terms and conditions, under technical feasibility criteria.

- IV. **Pneumatic Pumping:** Artificial production system used to facilitate the flow of fluids from a well by injecting gas through the annular space of the production pipe and the casing.
- V. **Commission:** The National Hydrocarbons Commission.
- VI. **Conservation:** Refers to the non-extraction of the Associated Natural Gas or the recovery of the same, extracted for its reinjection to the original reservoir or to other reservoirs or storages, being capable of a subsequent extraction for its use and exploitation.
- VII. **Destruction:** The uncontrolled Flaring of Associated Natural Gas that is carried out outside the Program for the Use of Associated Natural Gas approved by the Commission.
- VIII. **Controlled Destruction:** The Flaring or Incineration of Associated Natural Gas that cannot be conserved or used, for technical or economic reasons and that is carried out in accordance with the provisions of these Technical Provisions and other applicable provisions.
- IX. **Technical Provisions:** These Technical Provisions for the Use of Associated Natural Gas in the Exploration and Extraction of Hydrocarbons.
- X. **Operational Efficiency:** The adoption of practices, standards or actions for the design and operation of the facilities or in the performance of the activities dedicated to the Exploration and Extraction of Hydrocarbons, which improve the performance or results of a process above the increase in costs or consumption of resources.
- XI. **Leakage:** The escape of volatile organic or inorganic compounds, including Natural Gas, in a fortuitous manner, from a presumably closed system.
- XII. **Natural Gas:** The mixture of gases that is produced or obtained from Extraction or industrial processing and that is mainly constituted by methane. Usually this mixture contains ethane, propane, butanes and pentanes. It may





- also contain carbon dioxide, nitrogen and hydrogen sulfide, among others. It may be Associated Natural Gas or Non-associated Natural Gas.
- XIII. **Associated Natural Gas:** Natural Gas dissolved or found together with the Crude Oil of a reservoir, both conventional and unconventional, under the original pressure and temperature conditions. It may be classified as cap gas free- or gas in solution -dissolved-.
- XIV. **Unused Natural Gas:** Natural Gas subject to Destruction or Controlled Destruction.
- XV. **Incineration:** Gas combustion process that chemically destroys the bitter gas molecules.
- XVI. **Guidelines for the approval and supervision of Plans.** Guidelines that regulate the procedure for the submission, approval and supervision of compliance with the Exploration and Development for the Extraction of Hydrocarbons Plans, as well as their modifications.
- XVII. **Handling of Associated Natural Gas:** Are the activities and processes related to the Use of Natural Gas on the surface, either for Pneumatic Pumping, for its conservation, transfer or for its Self-consumption. The foregoing, so that it can be Used or, as the case may be, destined for its Destruction during the activities of Exploration and Extraction of Hydrocarbons.
- XVIII. **Best Practices:** Means the regulations, methods, standards and procedures published and generally accepted by the industry in matters of Exploration and Extraction of Hydrocarbons, which, in the exercise of reasonable criteria and in light of the facts known at the time of making a decision, would be considered to obtain the planned results and increase the economic benefits in the Exploration and Extraction of Hydrocarbons within the Contract Area or the Entitlement.
- XIX. **Goal:** The Associated Natural Gas Use that must be reached by the Petroleum Operator in the Hydrocarbons' Exploration and Extraction activities, in terms of the Technical Provisions.





- XX. **Petroleum Operator:** Refers to the Entitlement Holders and Contractors that carry out Hydrocarbons' Exploration and Extraction activities in Mexico.
- XXI. **Exploration Plan:** Document approved by the Commission, in which the Petroleum Operator describes in a sequential manner, the exploratory activities and programs associated with them, by reason of an Entitlement or Contract held by its. The foregoing, in accordance with section XIV of article 4, 43 and 44 of the Hydrocarbons Law, as well as in terms of the Guidelines for the approval and supervision of Plans, issued by the Commission.
- XXII. **Development for Extraction Plan:** Document pursuant to which the sequential description of the activities related to the Extraction of Hydrocarbons process and programs associated to these are detailed, by reason of an Entitlement or Contract held by it. The foregoing, in accordance with section XV of article 4, 43 and 44 of the Hydrocarbons Law, as well as in terms of the Guidelines for the approval and supervision of Plans, issued by the Commission.
- XXIII. **Program or Use Program.** Document that is part of the Exploration Plan and the Development for Extraction Plan in which the Petroleum Operator details the planning and the manner in which the Associated Natural Gas to be produced in the Exploration and Extraction of Hydrocarbons will be used.
- XXIV. **Flaring:** The incomplete, controlled or uncontrolled, combustion of Associated Natural Gas that may also contain other components.
- XXV. **Transfer:** The delivery of Associated Natural Gas produced in an Entitlement or Contract Area to another Entitlement or Contract Area or to a third party or through a commercial transaction. The foregoing, in accordance with the applicable regulations issued for such purpose.
- XXVI. **Venting:** Action that allows the release of Associated Natural Gas into the atmosphere.
- XXVII. **Economic Value:** Market price, or reference price, according to which the Technical-Economic Analysis of the alternatives for the Use of the Associated Natural Gas to be produced is carried out.





Article 4. The obligation of the Petroleum Operator to use and conserve the Associated Natural Gas. The Associated Natural Gas is the property of the Nation and its production is subject to the terms established in the Hydrocarbons Law, in the Entitlements and Contracts set forth in said Law and its use is regulated through the Technical Provisions.

The Petroleum Operators shall carry out the planning and the necessary actions and investments to have the technical and operational capability that will allow them to obtain the maximum Use and Conservation of the volumes of Associated Natural Gas, derived from the activities of Exploration and Extraction of Hydrocarbons.

In order to comply with the above, the Petroleum Operators shall comply with the following bases:

I. From the preparation and projection of the Exploration Plans and Development for Extraction of Hydrocarbons Plans, the Petroleum Operators shall carry out a planning that allows projecting the installed capacity that will be required throughout the life cycle of the reservoirs, for the Handling of Associated Natural Gas;

Based on such capacity to Handle Associated Natural Gas, the Petroleum Operator shall determine the Goal and the actions and investments to be developed, in order to maintain a policy of continuous improvement in the optimization of the Use and reduction of the volumes of Unused Natural Gas;

- II. Based on the established Goal, the Petroleum Operators shall submit to the Commission their proposed Programs for the Use of Associated Natural Gas referred to in article 10 of the Technical Provisions. Such proposals must be aligned with the Exploration Plans and the Development for the Extraction of Hydrocarbons Plans, regarding the evaluation of the alternatives to carry out the Use, Conservation or Transfer of Associated Natural Gas;
- III. Make the necessary investments over time to increase or maintain the Use of Associated Natural Gas throughout the life cycle of the reservoir, as well as to avoid or reduce the Destruction of this Hydrocarbons. The foregoing, according to the Use Program approved by the Commission in the corresponding Plans and defined based on the proposal made by the Petroleum Operator;





- IV. Promote the efforts to develop projects that increase the Use of Associated Natural Gas, until reaching and maintaining the levels of the Best Practices during the activities of Exploration and Extraction of Hydrocarbons. The foregoing, in accordance with the Technical Provisions, and
- V. To privilege Incineration over Flaring and only for safety reasons, will Venting be allowed. The foregoing, in accordance with the provisions established by the Agency.

Article 5. Forms of Use of the Associated Natural Gas. The Petroleum Operator may use the Associated Natural Gas for:

- I. Self-consumption for the operation within the same Entitlement or Contract Area:
 - a) As fuel for turbines, compressors, engines, among others;
 - b) Pneumatic devices, and
 - c) Any use that entails a benefit for the Petroleum Operator, such as the generation or cogeneration of electric energy.
- II. Pneumatic pumping or other artificial lift systems, which require the injection of gas;
- III. Conservation, through its re-injection to the same reservoir or others, for its later Use, and
- IV. Transfer.

Article 6. Controlled Destruction of Associated Natural Gas. The Petroleum Operator may carry out the Controlled Destruction of Natural Gas, as a consequence of the activities of Exploration and Extraction of Hydrocarbons, in the following cases:

I. When in accordance with the Technical-Economic Analysis referred to in Article 11 of these Technical Provisions and after evaluating the alternatives referred to in Article 5 above to avoid extracting the Associated Natural Gas, or to take advantage of it, the Commission concludes that the only alternative is the Controlled Destruction of the same;





- II. When there are circumstances of fortuitous event or force majeure that imply a risk for the safe operation of the facilities and personnel. The foregoing, in accordance with the provisions issued by the Agency for such purpose;
- III. During well tests carried out by the Petroleum Operator. The foregoing, provided that such tests are included within the Exploration and Development for the Extraction of Hydrocarbons Plans approved by the Commission, and

The Petroleum Operator shall consider the volumes of Natural Gas that will be subject to Controlled Destruction under the present assumption, within the definition of its Goals. The foregoing, in accordance with the accuracy allowed by the exploratory or development stage of the field in which it is located and the knowledge of the corresponding reservoir or reservoirs.

Article 7. Contingent financial resources or reserves derived from the Destruction of Associated Natural Gas. The Destruction of Associated Natural Gas outside the approved Natural Gas Development Program shall result in the loss or detriment of the property of the Nation, since it is a non-renewable resource that has an Economic Value.

The Petroleum Operator shall have the necessary economic resources or contingent financial provisions, without detriment to the provisions of the guarantee set forth in the corresponding contract or entitlement, to cover the damages or losses caused to the Nation, due to causes attributable to the Petroleum Operator.

The foregoing, in addition to the penalties provided for such purpose by any other legal system on the matter.

Article 8. Regulation on Industrial Safety and environmental matters, for the Flaring and Venting of Associated Natural Gas. During the development of the petroleum activities, the Petroleum Operator must comply with the standards, conditions, provisions on industrial safety, operational and environmental protection in relation to the Destruction or Controlled Destruction of the Associated Natural Gas extracted from the subsoil. The foregoing, in accordance with the provisions of the regulation issued by the Agency for such purpose.

Article 9. Means of communication between the Petroleum Operator and the Commission. The Petroleum Operator shall deliver the information or documentation referred to in the Technical Provisions, in writing or through electronic means. The





foregoing, in terms of the formats, units of measurement and means established by the Commission for such purpose.

The Commission may define improvement actions in the process of implementation of the Technical Provisions, such as automated mechanisms for documentation and follow-up of Programs, development of systems and databases or any other method that improves the efficiency in the reporting and compliance with the obligations set forth in the Technical Provisions.

Title II

Of the Use of Associated Natural Gas

Chapter I

Of the principles and technical elements that define the Program for the Use of Associated Natural Gas.

Article 10. Program for the Use of Associated Natural Gas. The Petroleum Operator shall submit to the Commission for its consideration a Use Program corresponding to the Exploration and Development for Extraction of Hydrocarbons Plans, for each Entitlement and Contract held by it.

Said Program shall indicate the Goal defined in accordance with the provisions of articles 14 and 15 of the Technical Provisions.

For the approval of such Programs, the Petroleum Operators shall observe the terms and procedures for the preparation and submission of such plans to the Commission. The foregoing, in accordance with the Guidelines for the approval and supervision of such plans.

Article 11. Technical-Economic Analysis to prepare the Program for the Use of Associated Natural Gas and its modifications. Based on the initially projected Goal, the Petroleum Operator shall prepare a Technical-Economic Analysis regarding the alternatives for the Use of Associated Natural Gas, in accordance with the premises established in Articles 4 and 5 of the Technical Provisions.

From the results of such analysis, the Petroleum Operator shall structure its Associated Natural Gas Use Program.





Likewise, the modifications that the Petroleum Operators propose to their Programs for the Use of Associated Natural Gas shall be accompanied by the update to the referred Technical-Economic analysis, in order to justify the actions, alternatives and, if applicable, the new Goals to be adopted.

Article 12. Alternatives for the Use of Associated Natural Gas. In order to evaluate the alternatives for the Use of Associated Natural Gas in the Technical-Economic Analysis, the Petroleum Operators shall take into account the following considerations:

- I. Composition of the Associated Natural Gas;
- II. Volume of Associated Natural Gas to be produced when extracting the Crude Oil;
- III. Proximity between the extraction point and the Associated Natural Gas processing facilities;
- IV. Location of the infrastructure that allows the transportation and storage of the Associated Natural Gas;
- V. Economic Value of the Associated Natural Gas, at the time of evaluating the alternatives for use. The foregoing, according to the economic premises indicated in the Exploration and Development for Extraction Plan, and
- VI. Amount of the investments to process, transport or store or develop and maintain the operational continuity of the infrastructure necessary to carry out the Use of the Associated Natural Gas during the Exploration or Development for Extraction of Hydrocarbons activities.

Article 13. On the maximum gas-oil ratio at which the wells may produce. Within the Associated Natural Gas Use Program for the Extraction stage, the Petroleum Operators shall propose to the Commission the maximum gas-oil ratio within which a well may produce.

For its part, the Commission will review and, if applicable, approve such ratio within the process of opinion and approval of the Development for Extraction Plan.





Pursuant to such limit, the Petroleum Operator shall have a program to follow up and comply with this ratio, including among other actions, major workovers, as well as the choking and shut in of the wells that exceed this maximum gas-oil ratio.

This maximum gas-oil ratio will have to be defined ensuring the maximization of the Hydrocarbons recovery factor and its evaluation and supervision of compliance will be carried out by the Commission, through the follow-up of the Associated Natural Gas Use Programs. The foregoing, in accordance with the provisions of articles 25 and 27 of the Technical Provisions.

The Petroleum Operators shall submit the follow-up reports of such programs when they observe modifications that exceed the maximum gas-oil ratio, by means of the PAGNA Form and its instructions. The reports shall be submitted within the term referred to in the second paragraph of article 24 of these Technical Provisions. DOF-10-03-2020

Article 14. Establishment of the Goal for the Use of Associated Natural Gas. The Goal on the basis of which the Petroleum Operators shall structure their proposed Use Program, for each Entitlement or Contract Area, shall be defined in accordance with the following criteria and bases:

- I. In the case of Exploration activities, the Goal shall be defined in accordance with the following bases:
 - a) The Petroleum Operator shall propose to the Commission in its Use Program, the performance of actions and projects that allow the conservation or Use of Associated Natural Gas during the entire exploratory stage;
 - b) The actions and projects for the Use of Associated Natural Gas proposed by the Operator during the exploratory stage, will take into account for their determination the existing technology, techniques and infrastructure, as well as the knowledge of the reservoirs to be explored and the stage in the exploratory process in which it is;
 - c) Based on such actions and projects, the Petroleum Operator will indicate the volumes of Associated Natural Gas that may be exploited, which will serve as a basis to define the proposed Goal, during the execution of the Exploration Plans, and





- d) The Commission will review the corresponding Program, in order to establish the Goal during the entire exploration stage.
- II. In the case of Extraction activities, the Goal shall be defined according to the following bases:
 - a) The Operator shall reach and maintain in a sustained manner a 98% annual Use level;

Said Goal will be reached in the case of conventional reservoirs, preferably within the following three years after the beginning of the activities. The foregoing, based on the Best Practices identified by the Petroleum Operators and according to the evaluation carried out by the Commission for such purpose, within the procedure established in the Guidelines for the approval and supervision of Plans;

- b) The Petroleum Operator shall detail in the Programs for the Use of Associated Natural Gas, the actions and investments to reach and maintain the Goal on an annual basis and the manner in which it will sustain it during the term of the Entitlement or Contract;
- c) In order to determine the actions to reach the Goal that the Petroleum Operator will comply with in each Entitlement or Contract Area, the stage of development of the Extraction activities in which it is, as well as the concepts referred to in article 5 of the Technical Provisions, will be taken into account;
- d) For the calculation of the proposed Goal, the Petroleum Operator shall use the production forecast of Associated Natural Gas, the estimate of the additional Natural Gas not produced in the Entitlement or Contract Area that is required for the operation of the systems and, if applicable, the gas for injection to the reservoir, as well as the projection of the distribution of the referred Associated Natural Gas, in accordance with the concepts of article 5 of the Technical Provisions, and
- e) The Commission, on its part, will review the Goal proposal, together with the respective Program, in order to calculate and, if applicable, modify and definitively establish the referred Goal, during the entire Extraction stage;





III. The calculation and report that the Operators shall make of the Goal for the Use of Associated Natural Gas -or MAG, for its acronym in Spanish- and its follow-up, will be estimated based on the following formula, whose mathematical expression regarding the calculation of the same, is the following:

$$MAG_t = \left[\frac{A + B + C + T}{G_P + G_A}\right] *100$$

Where:

MAG = Annual Use Goal t = Year of calculation

A = Self-consumption (volume/year)

B = Pneumatic Pumping Use (volume/year)

C = Conservation (volume/year)
T = Transfer (volume/year)

GP = Produced Associated Natural Gas (volume/year)

GA = Additional Associated Natural Gas not produced in the Entitlement

or Contract Area (volume/year)

Unused Natural Gas considers the Associated Natural Gas that is produced and that must be reported jointly as Unused Gas (UNG), and

IV. For the calculation and estimation of any new Goal, the Petroleum Operator shall observe the premise of continuous improvement and alignment to the Exploration Plan or the Development for Extraction Plan. The foregoing, up to a technically and economically feasible limit.

Article 15. Adjustment of the Associated Natural Gas Use Goal. In the event that due to the conditions of the fields or reservoirs, both conventional and unconventional or for the Exploration and Extraction stages, it is not economically feasible to reach the Goal referred to in the preceding article, within the following three years, the Petroleum Operator may propose to the Commission a longer adjustment period as referred to in item a) of section II of article 14, or a different percentage of Use of Associated Natural Gas for the Contract Area or Entitlement .





For such purpose, the Petroleum Operator shall submit the PAGNA Form and its instructions, attaching the information described in the preceding paragraph and in accordance with article 15 of the Federal Law of Administrative Procedure. DOF-10-03-2020

The Goal proposed by the Petroleum Operator may be adjusted by the Commission as a result of its review process. The foregoing, based on obtaining the maximum volume of crude oil and Natural Gas in the long term, under economically feasible conditions and maximizing the recovery factor of the reservoir in the long term.

Such evaluation shall be carried out by the Commission within the process of approval or modification of the Exploration and Development for the Extraction of Hydrocarbons Plans.

Article 16. On the standards to be observed for the measurement of the volumes of Use of Associated Natural Gas. For the measurement and reporting of the volumes of used Associated Natural Gas, the Petroleum Operator shall observe the conditions of pressure and temperature, as well as the standards set forth in the current Measurement Guidelines issued by the Commission.

Article 17. Modifications to the Programs for the Use of Associated Natural Gas. Whether at the request of a party or ex officio, the Petroleum Operators and the Commission may initiate the procedure for the modification of the Programs of Use, only when the following circumstances arise:

- I. When the initially projected Goals, must be adjusted due to changes in the economic, technological or operational conditions originally contemplated. The foregoing, based on the adjustments that shall also be made to the Exploration and Development for Extraction Plan and in accordance with the procedure established for the modification of the Plans referred to in article 11 of the Technical Provisions:
- II. When due to operational issues the actions or investments contained in the Use Programs must be adjusted. Said modifications shall be made based on the procedure established in article 27 of the Technical Provisions, and
- III. When due to safety issues, acts of God or force majeure occurring in a year, the actions, investments or Goals contained in the Use Program must be adjusted.





The Petroleum Operators will not require authorization to implement improvements or increase the capacity to Handle Associated Natural Gas or the Goal initially approved by the Commission. They shall only give a notice in the terms set forth in article 28 of the Technical Provisions.

Chapter II

Of the Program for the Use of Associated Natural Gas in the Exploration Plans and in the Development for the Extraction Plan in Hydrocarbons Fields.

Article 18. On the Use of Associated Natural Gas in the Exploration Plan and in the Development for the Extraction of Hydrocarbons Plan. The Use Program submitted by the Petroleum Operators for approval shall be structured according to the bases set forth in the preceding Chapter and projected for the entire productive cycle of the Hydrocarbons' reservoirs, within the Entitlement or Contract Area.

Article 19. Evaluation of the Gas Use Program in the Exploration Plans and in the Development for the Extraction of Hydrocarbons Plans. The Commission shall evaluate within the opinion referred to in article 44 of the Hydrocarbons Law, that the actions and investments projected are in accordance with and sufficient to maintain the annual Goal of Use of Associated Natural Gas presented by the Petroleum Operator.

By virtue of the foregoing, the Commission may request adjustments to the Program through the procedure established for the approval of Exploration Plans or Development for the Extraction of Hydrocarbons Plans.

Article 20. Content of the Program for the Use of Associated Natural Gas in the Exploration Plans. The Program for the Use of Associated Natural Gas in the Exploration Plans shall be submitted through the PAGNA Form and its instructions, which shall contain, at least, the following information: DOF-10-03-2020

- I. The Technical-Economic Analysis referred to in article 11 of the Technical Provisions;
- II. The volume of Associated Natural Gas that will be exploited and will be used to define the annual Goal, within the Exploration stage;





- III. The description of the actions and investments for the Use, Conservation, Transfer, or when necessary, the Controlled Destruction, in terms of article 6 of the Technical Provisions, which at least includes:
 - a) The general description of facilities and equipment dedicated to the Controlled Destruction of Associated Natural Gas, or its Use, identifying their location through a map and descriptive sketch of these. The foregoing, including the available measurement systems, and
 - b) The program for the maintenance of the facility and the commencement of its operation; and
- IV. The schedule of well tests to be performed.
- V. Definition of the operation performance indicators, detailing the name and formula of the indicator, measurement frequency, measurement goals or parameters and the result thereof.

Article 21. Of the notices of well tests. The Petroleum Operator shall give notice to the Commission when it has carried out well tests and Controlled Destruction. Such notice shall be sent within 48 hours after the end of the test, indicating at least the following:

- I. Identification of the well and Entitlement or Contract Area;
- II. Tested intervals;
- III. Date of beginning and end of the test;
- IV. Duration of the Controlled Destruction;
- V. Estimate of the volume of Natural Gas produced and the volume of Unused Natural Gas, and
- VI. Signature of the official responsible for the facilities of the Entitlement or Contract Area designated by the Petroleum Operator to oversee compliance with the Goals.





Article 22. Content of the Program for the Use of Associated Natural Gas in the Development for Extraction Plan. The Use Program in the Development for Extraction Plan shall be submitted through the PAGNA Form and its instructions, which shall contain, at least, the following information: DOF-10-03-2020

- I. The Technical-Economic Analysis referred to in article 11 of the Technical Provisions;
- II. Composition of the Associated Natural Gas to be produced;
- III. The proposal of the annual Goal of Use of Associated Natural Gas;
- IV. The monthly forecast for the first 3 years and annual for the rest of the effective term of the Entitlement or Extraction Contract and the way in which the Associated Natural Gas will be used according to the concepts of article 5 of the Technical Provisions. This forecast must also include the Goal, defined in accordance with article 14 of the Technical Provisions established for each Entitlement or Contract Area;
- V. The actions and investments contemplated according to the Use Program and investments referred in the previous sections, per year. The foregoing, in accordance with the annual Use Goal and the proposed Development for Extraction Plan;
- VI. The description of the actions and investments for the Use, Conservation, Transfer or Controlled Destruction, which at least includes;
 - a) Calculation of the capability to Handle Associated Natural Gas per year, according to the projections of Natural Gas to be produced and in consideration of the actions, projects and investments in infrastructure to be developed;
 - b) The schedule for the start of operation of the facilities and the annual maintenance programs;
 - c) Operational contingency plan that allows the Petroleum Operators, in cases of emergency, acts of God or force majeure, to maintain or return to the operational continuity the activities of the Use of Associated Natural Gas:





- d) The program of scheduled shutdowns, releases and maintenance to critical equipment for the Use;
- VII. Updated inventory of the facilities for the Use and Flaring, including the available measurement systems; and
- VIII. Definition of the operation's performance indicators, detailing the name and formula of the indicator, measurement frequency, goals or measurement parameters and the result thereof.

Title III

Of the Monitoring, Supervision of Compliance and Sanctions

Chapter I

Follow-up of Associated Natural Gas Use Programs

Article 23. Follow-up of the Program for the Use of Associated Natural Gas in the Exploration Plan. The follow-up to the Use Programs shall be carried out through the submission of the PAGNA Form and its instructions, attaching a quarterly report containing, at least, the following aspects: DOF-10-03-2020

- I. Results of the Use of Associated Natural Gas indicating the volumes of Associated Natural Gas used;
- II. Compliance with the maintenance program for the installation and beginning of operation of the equipment dedicated to the Use and, if applicable, to the Controlled Destruction of Associated Natural Gas;
- III. Result of the Indicators set forth in article 20 above;
- IV. The acts of God or force majeure events that have or had as their purpose or effect, deviations or delays in the actions, investments or projects to be developed for the Use of Associated Natural Gas;
- V. The volume of Unused Natural Gas. The foregoing, derived from the events described in the preceding section, and





VI. If applicable, the actions and the corrective plan to be carried out by the Petroleum Operator to solve the deviations to the approved Use Programs.

The Petroleum Operator shall deliver this report within 10 business days after the end of the quarter to be reported. For such purposes, the quarters will be counted as follows: i) first quarter, beginning on the first business day of January, to the last business day of March; ii) second quarter, beginning on the first business day of April, to the last business day of June; and, finally iii) third quarter, beginning on the first business day of July, to the last business day of September; fourth quarter beginning on the first business day of October, to the last business day of December.

Additionally, within the first quarter of each year, the Petroleum Operators shall deliver an update of the new actions and investments to be developed in order to comply with the projected Goal for that calendar year. For this purpose, the Petroleum Operators must submit the above information, through the PAGNA Form and its instructions. DOF-10-03-2020

On its part, the Commission shall review the quarterly reports and will make the corresponding observations, as well as, if necessary, propose the implementation of additional actions. The foregoing, in accordance with the procedure set forth in article 27 of the Technical Provisions.

Article 24. Follow-up of the Program for the Use in the Development for the Extraction of Hydrocarbons Plan. The follow-up to the Programs shall be made through a quarterly report using the corresponding documents, according to the level of detail indicated in the PAGNA Form and the RGA Follow-up Form and their respective instructions. Said report shall contain, at least, the following aspects: DOF-10-03-2020

- I. The volumes of used Associated Natural Gas;
- II. Follow-up of the actions and investments for the Use of Associated Natural Gas;
- III. Percentage of Use of Associated Natural Gas on a monthly basis, obtained according to the formula referred to in article 14 of the Technical Provisions;
- IV. Result of the Indicators referred to in article 22 above:





- V. The properties of the Associated Natural Gas and the compositional analysis of the streams involved in the actual Associated Natural Gas balance;
- VI. Compliance with the equipment maintenance program for the Use of Associated Natural Gas;
- VII. Deviations in the fulfillment of the Goals and in the implementation of the scheduled actions and investments:
- VIII. Justification of the variations with respect to the Program for the Use of Associated Natural Gas
- IX. In case there are deviations from the Program, the actions taken to correct the causes that generated them;
- X. Summary of non-scheduled events that generated the Destruction and Controlled Destruction of Associated Natural Gas, and
- XI. Report, if applicable, on the follow-up of the wells that have exceeded the maximum indicated gas-oil ratio. The above, through the PAGNA Form and its instructions. DOF-10-03-2020

The Petroleum Operator shall deliver this report within the following 10 business days after the end of the quarter to be reported. The foregoing, in accordance with the calendar indicated in the second paragraph of article 23 of the Technical Provisions.

Within the first quarter of each year, the Petroleum Operators shall deliver an update of the new actions and investments to be developed, in order to comply with the projected Goal for that calendar year. For such purpose, the Petroleum Operators shall submit the above information, through the PAGNA Form and its instructions. DOF-10-03-2020

On its part, the Commission will review such report and will make the corresponding observations, as well as, if necessary, order the performance of additional actions. The foregoing, in accordance with the procedure set forth in Article 27 of the Technical Provisions.

Article 25. Review by the Commission of the quarterly report on the follow-up of the Program for the Use of Natural Gas in the Exploration Plans and in the Development for Extraction of Hydrocarbons Plans. Once the quarterly reports referred





to in articles 23 and 24 above have been delivered, the Commission may issue observations and, if applicable, request additional information from the Petroleum Operator to that submitted in the quarterly reports, including additional documents, that allow it to follow up on the results and measure compliance with the Technical Provisions. The foregoing, within 15 business days after the delivery of these reports.

The Petroleum Operator will have 15 business days from the date of receipt of the Commission's observations to address them and, if necessary, make clarifications and propose adjustments to its Program and the actions to be taken. The above, to remedy delays or deviations to the corresponding Goal or Program for the Use of Associated Natural Gas.

In case of not addressing or not responding to any of the observations made by the Commission, the Petroleum Operator must communicate in writing the respective justification, within the first 5 business days of the term granted to respond to the Commission, after the above term, the Petroleum Operator may request a hearing, or the Commission may summon the Petroleum Operators to appear, in order to provide further explanation on the follow-up of the results and compliance with the Technical Provisions.

At the end of the remaining 10 business days for the Petroleum Operators to make the corresponding clarifications, the Commission may choose to initiate an administrative procedure to evaluate compliance with the Technical Provisions, as well as initiate ex officio the procedure to modify the respective Use Programs. The foregoing, in accordance with article 26 of the Technical Provisions.

Article 26. Monthly follow-up of the figures of the Associated Natural Gas Balance. The Petroleum Operator shall submit a monthly report with the figures of the Associated Natural Gas balance. The foregoing, in accordance with the provisions of the Measurement Guidelines issued by the Commission.

For the purposes of the Technical Provisions, the Petroleum Operator shall report the volumes of Associated Natural Gas without including the fractions of nitrogen and carbon dioxide present in the Associated Natural Gas extracted or handled in the Exploration and Extraction of Hydrocarbons.

Article 27. Procedure to modify the Programs without entailing changes to the Goal for the Use of Associated Natural Gas. When due to operational issues there are delays or deviations in the execution of the Programs for the Use of Associated Natural Gas, without such modifications jeopardizing the compliance with the Goal established for the





following three calendar years, the Petroleum Operators or the Commission may initiate the procedure to carry out the adjustment thereof.

When it is the Petroleum Operators who request such adjustments, they must submit the following information to the Commission:

- I. Comparison of the approved Use Program and the proposed modifications;
- II. Prepared Technical-Economic Analysis by which the effects derived from the modification of the Use Program in technical, economic, operative and any other identified terms are estimated quantitatively or, if applicable, qualitatively;
- III. Documentary support of the modifications;
- IV. If applicable, the program for choking and shut in of wells that exceed the maximum gas-oil ratio;
- V. The new version of the Use Program, and
- VI. The other documentation and evidence that the Petroleum Operator considers necessary for the Commission to issue the relevant resolution;

On the other hand, when the Commission notifies the Petroleum Operators of the need to make adjustments to the approved Use Programs, as a consequence of deviations observed in their compliance, it shall request that they submit the following information within 10 business days after the notification of such official notice:

- I. Explanation of the causes for which such deviations occurred;
- II. A new Technical-Economic Analysis, which serves as support for a corrective program or, as the case may be, for the new Use Program;
- III. Based on the referred Technical-Economic Analysis, it will present a proposal for a corrective plan to solve the deviations presented to the initially approved Use Program;
- IV. If applicable, the choking program and shut-in of wells that exceed the maximum gas-oil ratio, and





V. The other documentation and evidence that the Petroleum Operator considers necessary for the Commission to issue the relevant resolution.

In the event that the complete information is not delivered, or there are inconsistencies in the same, the Commission shall warn the Petroleum Operators so that within a term not to exceed 10 business days they correct such deficiencies.

The Commission will have 10 business days after receiving the information requested by official document, or the request for modification of the Use Programs made by the Petroleum Operators, to carry out such warning.

Once the corresponding warning has been answered, the Commission will begin its technical review, for which it will have 20 business days after receiving the information in its entirety.

At the end of such term, the Commission will issue its resolution establishing the changes or modifications to be made to the corresponding Use Program.

As from the notification of the referred resolution, the Petroleum Operators must report the progress of compliance with such modified Programs, as from the following Quarterly report.

Article 28. Notice of implementation of unscheduled actions for the Use of Associated Natural Gas. In the event that the Petroleum Operator adopts or carries out actions that are not scheduled or additional to those registered in the Program and that have the purpose or effect of modifying the Goals, it must send a notice to the Commission, within a term not to exceed 10 business days after the commencement of operations date. Said notice must be accompanied by the new updated Use Program.

The above will be done by the Petroleum Operator through the corresponding form, where it will indicate the date of execution of these actions, as well as the volume of Associated Natural Gas that is expected to be used as a result of such actions. For its part, the Commission shall register the new Use Program in the Public Registry.

Article 29. Notices in case of the possibility of non-compliance with the Use Programs and Goals. The Petroleum Operator shall give notice to the Commission of any circumstance that may jeopardize the compliance with the approved Goals and Use Programs, within the following 10 business days of the occurrence of the event. The





foregoing, through the PAGNA Form and its instructions established by the Commission for such purpose. DOF-10-03-2020

Article 30. Information that the Commission shall communicate to the Agency. The Commission may maintain communication with the Agency with respect to the following concepts subject matter of the Technical Provisions, under the terms of the authority of said entity:

- I. The submission of the Use Program;
- II. The approved Use Program;
- III. The requests for modification to the Use Program and its respective approval;
- IV. The figures of the Natural Gas balance reported by the Petroleum Operators on a monthly basis and the performance indicators;
- V. The notices of implementation of actions for the Use of Associated Natural Gas and, if applicable, the notifications of the possibility of non-compliance with the programs and goals; as well as, and
- VI. Any other matter that is requested by the Agency, or that the Commission considers pertinent, in the exercise of its respective authorities.

Additionally, the Agency and the Commission, within the scope of their respective authorities, may coordinate in order to analyze and evaluate the Use Programs and any of their modifications.

Chapter II

Of the Supervision

Article 31. Supervision of compliance with the Technical Provisions. For the supervision of compliance with the Technical Provisions, the Commission shall establish, substantiate and resolve the corresponding administrative procedures.

The foregoing, under the terms set forth in this Chapter, and pursuant to the provisions of article 43 of the Hydrocarbons Law, the Federal Law of Administrative Procedure and other applicable provisions.





Article 32. Regarding compliance supervision actions. The Commission, in exercise of its supervisory powers and pursuant to the Federal Law of Administrative Procedure and other applicable provisions, may carry out the necessary actions to verify compliance with the Technical Provisions. Such actions may be, among others, the following:

- I. Request information related to the activities of Use, Conservation and Destruction of the Associated Natural Gas in the activities of Exploration and Extraction of Hydrocarbons;
- II. Authorize Third Parties to carry out the supervision, inspection and verification activities, as well as audits referred to in the Technical Provisions; The foregoing, with the exception of the provisions set forth in section V and in accordance with the provisions issued by the Commission from time to time:
- III. Request access to the databases, documentation and systems that safeguard the information related to the Use, Destruction or Venting of Associated Natural Gas;
- IV. Carry out scheduled or unscheduled verification visits to carry out on-site supervision of the facilities dedicated to the Handling of Associated Natural Gas;
- V. To request the appearance of the Operator or its legal representative, with which the resolutions of clarifications related to the fulfillment of the Goals may be substantiated;
- VI. To initiate an administrative procedure for the evaluation of the compliance with the Goals and Use Programs; and
- VII. To initiate an ex officio procedure by which the Commission will impose modifications to the Programs for the Use of Associated Natural Gas and, as the case may be, to the Goals and to the Exploration and Development for the Extraction of Hydrocarbons Plans. The foregoing, with the purpose of reaching the maximum level of Use of Associated Natural Gas, in the long term.





Article 33. Information that shall be available. The Operator shall maintain at all times at the disposal of the Commission, any information and documentation related to the Use of Associated Natural Gas that the Commission may request, including that related to the equipment and instruments used for such purpose. The foregoing during the five years following the effective term of the corresponding Entitlement or Contract.

Article 34. Measures that may be taken as a result of monitoring and supervision. As a result of the monitoring or supervision actions, the Commission may:

- I. Initiate a review procedure of the Associated Natural Gas Use Program with the objective of evaluating compliance with the approved Goals and Program. Based on such inquiries and technical evaluations, the Commission may:
 - a) Request additional information for the analysis of the situation;
 - b) Request the preparation of a corrective plan or even the submission of a new Program that adjusts to the fulfillment of the Goals. The above, depending on the technical and operational circumstances due to which the referred delays or deviations to the Program occurred;
 - c) To call for hearings to review and analyze, together with the Petroleum Operator, the corrective measures necessary to comply with the approved Goals and Use Programs;
 - d) Ruling on the actions proposed by the Petroleum Operator for the Use or, as the case may be, Destruction of Associated Natural Gas; and
 - e) Approve the necessary measures to increase the Use or Conservation of the Associated Natural Gas. The foregoing, in accordance with the Plans approved by the Commission and in terms of the corrected Programs, or
- II. Initiate an Administrative Sanction Procedure to determine if there was non-compliance with these Technical Provisions and, if applicable, impose the pertinent sanctions, in terms of Chapter I of Title Fourth of the Hydrocarbons Law.

Chapter III





Of the sanctions and principles that govern the actions of the Commission.

Article 35. On the penalties that may be imposed by the Commission. Violations to these Technical Provisions shall be sanctioned in accordance with the principles and bases set forth in the Hydrocarbons Law and the corresponding Entitlement or Contract for Exploration and Extraction.

The Commission will substantiate the corresponding administrative procedures pursuant to article 85 section II and III and 87 of the Hydrocarbons Law and in terms of article 99 of the Regulations to the Hydrocarbons Law, to supervise and, if applicable, impose the corresponding sanctions. The foregoing, taking into account the severity of the infraction and in accordance with the procedures established in the Federal Law of Administrative Procedure.

The application of sanctions will be in accordance with the provisions of the Federal Law of Administrative Procedure. For the purposes of this Chapter, the minimum wage shall be understood to be the general daily minimum wage in force in the Federal District at the time the infraction was committed.

Article 36. On the principles governing the actions of the Commission. All prior acts and those deriving from compliance with the Technical Provisions carried out under the protection of the same shall be subject to the rules applicable to the fight against corruption.

The actions of public officials in the exercise of their authority and powers carried out under the Technical Provisions shall be subject to the constitutional principles of legality, honesty, loyalty, impartiality and efficiency.

Transitory Provisions

FIRST. The Technical Provisions shall enter into force on the day following their publication in the Federal Register.

SECOND. Those provisions contained in Resolutions "CNH.06.001/09 by which the National Hydrocarbons Commission issues the Technical Provisions to avoid or reduce gas flaring and venting in the exploration and exploitation works of hydrocarbons"; and "CNH.07.002/10 by which the National Hydrocarbons Commission issues the interpretation and application criteria for the calculation of the national maximum limit in the matter of flaring and venting of natural gas, foreseen in article 5 of said Technical Provisions".





THIRD. As of the entry into force of these Technical Provisions, the Commission shall summon Petróleos Mexicanos, through appearances, to jointly review the Use Manifests or Programs submitted to the Commission.

Derived from such review, the Commission will establish a work plan so that in the course of 2016, Petróleos Mexicanos submits the Programs of Use of Associated Natural Gas, for each current Entitlement.

Such process will be carried out according to the calendar established by the Commission for such purpose, within 30 working days after the entry into force of these Technical Provisions. The foregoing, after hearing the opinion of Petróleos Mexicanos.

Without detriment to the foregoing, Petróleos Mexicanos may submit for consideration of the Commission, modifications to the Programs for the Use of Associated Natural Gas, as a consequence of the submission for approval or modification of the Development for Extraction Plan, in which case the evaluation of the referred Programs will be carried out simultaneously with the respective Technical Opinion.

Additionally, Petróleos Mexicanos will continue reporting the information that it delivers on a monthly and quarterly basis to the Commission, according to the Resolutions referred to in Transitory Second and based on the compliance with the corrective work plans or programs referred to in Transitory Fourth below.

FOURTH. The Resolutions issued or administrative proceedings initiated by the Commission to evaluate and, if applicable, sanction non-compliance with the foregoing Provisions will continue to run their course until the corresponding resolution.

The corrective work plans and programs adopted by Petróleos Mexicanos or those approved by the Commission to remedy non-compliances shall remain in force and in execution until the end of such plans and programs. The foregoing, notwithstanding the fact that such plans and programs must be adequate in order to comply with the Goals and levels of Use of Associated Natural Gas.

Only when adjustments or clarifications are required to make the progress and compliance reports of said programs, with respect to these Technical Provisions, the Commission will summon Petróleos Mexicanos, by means of a hearing, to review the additional information that it will submit, to complete said compliance reports.





FIFTH. Until the Commission does not officially notify and allow access to the regulatory compliance systems different or additional to those that Petróleos Mexicanos has enabled to evidence compliance with the above provisions, it may continue evidencing during 2015 and 2016 the compliance with these Technical Provisions, through the PEP-CNH portal.

SIXTH. Register these Technical Provisions in the Public Registry of the National Hydrocarbons Commission.

(...)

Transitory Provisions DOF-10-03-2020

First. This Order shall enter into force on the business day following its publication in the Federal Register.

Second. Proceedings initiated before the Commission prior to the entry into force of this Order shall be processed in accordance with the provisions in force at the beginning of the respective proceeding.

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