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Environmental, Social, and Health Impact Assessment (ESHIA) for Vista Onshore Operations

Legal Framework

5 June 2019

Project No.: 0510093

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Document details	
Document title	Environmental, Social, and Health Impact Assessment (ESHIA) for Vista Onshore Operations
Document subtitle	Legal Framework
Project No.	0510093
Date	5 June 2019
Version	1.0
Author	Luisa Perez
Client Name	Vista Oil & Gas

Document history

				ERM approval to issue		
Version	Revision	Author	Reviewed by	Name	Date	Comments
Draft	00	Luisa Perez	Andrea Fernandez	Alfrido Wagner	04/06/2019	Borrador a Vista
Final	01	Luisa Perez	Andrea Fernandez	Alfrido Wagner	05/06/2019	

Signature Page

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4. LEGAL FRAMEWORK

4.1 Overview of the Legal and Institutional Organization

Argentina is subdivided into 23 provinces and the Autonomous City of Buenos Aires, each of which has their own constitution, but exist under a federal system.

Argentine law derives from the National Constitution originally ratified in 1853, establishing a federal and republican system of government. The National Constitution represents the supreme source of legal order, along with certain international human rights treaties that were accorded constitutional status as a result of the 1994 constitutional amendments, followed by other treaties, conventions, or agreements entered into by the federal government. Next, in descending order, are federal laws, executive decrees, resolutions, and other administrative acts of the executive branch. Subordinate to the federal sources of law are the provincial constitutions, provincial laws, and provincial administrative rules or acts. Last in hierarchical authority are municipal laws and regulations.

Two discrete rulemaking systems coexist, federal and provincial, interrelated only with respect to those matters in which the provinces have expressly delegated their powers to the federal government. Therefore, the provinces retain all the power not expressly delegated to the federal government in the National Constitution (Article 121).

The National Constitution, as amended in 1994, establishes that the provinces have primary domain over the natural resources in their territory (Article 124). The National Constitution directs the federal government to issue rules containing minimum environmental protection standards and mandates the provinces to enact legislation complementary to these federal regulations (Article 41). The regulations establishing minimum environmental protection standards are applicable throughout the entire national territory.

4.2 National vs Provincial Regulatory Framework

As described above, when adopting a federal system of government, the provinces retained the power that was not expressly delegated to the federal government.

According to the national mining code, which applies to oil and gas resources, these resources are the domain of the provinces or national government, depending on the territory where they are located. However, subsequent amendments to this code authorized the federal government to exploit some of these resources, including oil and gas reservoirs.

Furthermore, the federal hydrocarbons law, National Law N° 17.319[1], established that hydrocarbon deposits were the property of the federal government and that the authority to grant the permits and licenses required for the exploration and exploitation of oil and gas resources was in hands of the federal authorities.

With the amendment of the National Constitution in 1994, the domain of the provinces over the natural resources present in their territories was recognized. Before that, National Law N° 24.145, enacted in 1992, transferred the domain of the oil and gas deposits from the federal government to the provinces, but subject to the modification of the federal hydrocarbons law. It was not until National Law N° 17.319 was amended in December 2006 by National Law N° 26.197, that the domain over the oil and gas resources and the authority to grant the permits and licenses was returned to the provinces.

4.2.1 Environmental and Health and Safety Regulations

Regulations applicable in the provincial territories may be of both federal and provincial nature depending on the aspects regulated. As mentioned previously, the provinces have primary domain over the natural resources in their territories, and are therefore empowered to issue and enforce

[1] And its precedent, National Law N° 14.773.

environmental regulations to protect these resources. Health and safety regulations, on the other hand, are primarily issued by the federal government.

Federal environmental regulations usually do not apply in the provincial territories, unless they are expressly adopted by internal provincial regulations. However, federal regulations establishing minimum environmental protection standards are directly applicable to the Argentinian provinces according to the National Constitution, and the provincial governments are commissioned to complement them or establish more stringent requirements/standards.

Until the enactment of National Law Nº 26.197 in December 2006, the federal government was in charge of granting the permits required to explore and exploit oil and gas resources in the provincial territories. Consequently, environmental regulations aimed to regulate oil and gas activity were mainly issued by the federal government. Since the provincial governments assumed their power to issue permits for the oil and gas industry, several regulations on environmental protection targeting the oil and gas industry have been enacted at the provincial level, either adhering to or adopting federal regulations or establishing new standards and requirements. Oil and gas companies must deal directly with the provinces in attaining licenses to operate.

4.3 Authorities

In the federal sphere, environmental regulations are enforced primarily by the Secretariat of Environment and Sustainable Development (“Secretaría de Ambiente y Desarrollo Sustentable – SAyDS”). Other significant federal agencies bearing on the environmental issues include:

- The Ministry of Energy and Mining (“Ministerio de Energía y Minería”);
- The Secretariat of Hydrocarbons (“Secretaría de Hidrocarburos”);
- The Under-Secretariat of Exploration and Production (“Subsecretaría de Exploración y Producción”);
- The Under-Secretariat of Refining and Commercialization (“Subsecretaría de Refinación y Comercialización”);
- The Secretariat of Mining (“Secretaría de Minería—SM”);
- The Electricity Supervisory Federal Agency (“Ente Nacional Regulador de Electricidad—ENRE”);
- The Ministry of Transportation (“Ministerio de Transporte”);
- The Nuclear Regulatory Authority (“Autoridad Regulatoria Nuclear—ARN”); and
- The National Commission on Atomic Energy (“Comisión Nacional de Energía Atómica—CNEA”).

The National Constitution establishes that among the powers delegated to the federal government is the issuance of the Labor and Social Security Code to apply within the entire national territory (Article 75). Labor regulations are primarily enforced by the Ministry of Work, Employment and Social Security (“Ministerio de Trabajo, Empleo y Seguridad Social”), and secondly by the Superintendence of Labor Risks, created to administer the system for the prevention of labor risks (H&S). Local offices of these agencies are present in the Provinces and interact with provincial agencies with authority over labor issues.

In Neuquén Province, the Under-Secretariat of Environment (“Subsecretaría de Ambiente”) is the main enforcement authority for environmental regulations. However, other agencies, such as the Under-Secretariat of Energy, Mining and Hydrocarbons (“Subsecretaría de Energía, Minería e Hidrocarburos”) and the Under-Secretariat of Water Resources (“Subsecretaría de Recursos Hídricos”) also have the authority to issue and enforce some environmental regulations within their areas of competence. The Under-Secretariat of Environment depends on the Ministry of Safety, Labor and Environment (“Ministerio de Seguridad, Trabajo y Ambiente”), while the Under-Secretariat of Energy, Mining and Hydrocarbons and the Under-Secretariat of Hydric Resources depend on the Ministry of Energy and Natural Resources (“Ministerio de Energía y Recursos Naturales”).

In Río Negro Province, the Environmental and Sustainable Development Secretariat ("Secretaría de Ambiente y Desarrollo Sustentable") is the main enforcement authority for environmental regulations. However, other agencies, such as the State Energy Secretariat ("Secretaría de Estado de Energía") and the Water Provincial Department ("Departamento Provincial de Aguas") also have the authority to issue and enforce some environmental regulations within their areas of competence. The Environmental and Sustainable Development Secretariat and the State Energy Secretariat depends on the General Secretary of the Government ("Secretaría General de Gobernación"), while the Water Provincial Department depends on the Public Services and Works Ministry ("Ministerio de Obras y Servicios Públicos").

Although not frequent, some interventions by the National (federal) authorities on provincial matters do occur. For example, in the oil and gas activity this occurs through IEASA, which is a state-owned company with presence in both onshore and offshore areas; and ENARGAS, which is the national gas regulator that complies with the functions of regulation, control, and resolution of disputes, which are inherent in relation to the public service of transport and distribution of gas in the Argentine Republic. Both National and Provincial oil and gas companies (IEASA and "Gas y Petróleo del Neuquén - G&P S.A.", respectively) have been created in the last years. These companies do not have the capabilities to actually operate, but they participate as strategic partners of private (national and international) companies. They also hold concessions and permits for oil and gas exploration and production.

4.4 Federal Regulations

This section provides a summary of the most relevant federal environmental and health and safety regulations that apply to the oil and gas industry. A brief description of additional federal EHS regulations is included in Annex 4.1.

4.4.1 National Constitution

The National Constitution, amended in 1994, includes rights and protections related to the environment. The Constitution guarantees all residents the right to a healthy, balanced environment, suitable for human development, and imposes an affirmative duty on each resident to conserve the environment for future use (Article 41). As amended, the Constitution requires the redress of environmental harm to begin with the obligation to restore the environment to its prior status (Article 41). The amendments also grant standing to individuals, including environmental civic associations, and the Federal Ombudsman, to sue the government and individuals to enforce an environmental right specified in the Constitution, international treaty, or Federal Law (Article 43).

As mentioned, the National Constitution also mandates the federal government to issue regulations containing minimum environmental protection standards and the provinces to issue regulations complementary to these, ensuring their applicability throughout the national territory (Article 41).

4.4.2 Human Rights

The Constitution of 1853 remained in force under a number of military regimes that seized power over the course of the 20th century, the only exception being the Peronist Constitution in force between 1949 and 1956.

The Constitution of 1853 and the 1860 amendments were modeled upon the U.S. Constitution, and contain sparsely worded protections of key civil and political rights. Following the U.S. model, a federal system and a tripartite federal government were established. As indicated in the relevant entries, amendments to the constitution (1957 and 1994) introduced a greater emphasis on economic and social rights.

From the mid-1970s to early 1980s, the Argentine military committed widespread violations of human rights in a campaign to destroy support for leftist political views. Domestic prosecution of military leaders and officers was mostly unsuccessful in the face of ongoing obstruction from the military. In

late 1993, President Menem and former President Alfonsin, who led the first civilian government after the end of military rule in 1982, completed secretive negotiations to support a convention for broad amendment of the constitution. The major changes were adopted in August 1994, upon completion of the convention's deliberations.

Among the 1994 amendments was a provision to incorporate a number of ratified human rights treaties and other human rights instruments into the Argentine Constitution. This provision, in Article 75(22), specified ten instruments and a procedure for elevation of other instruments to constitutional status. These are:

- American Declaration of the Rights and Duties of Man;
- Universal Declaration of Human Rights;
- American Convention on Human Rights;
- International Covenant on Economic, Social and Cultural Rights;
- International Covenant on Civil and Political Rights and its Optional Protocol;
- Convention on the Prevention and Punishment of the Crime of Genocide;
- International Convention on the Elimination of all Forms of Racial Discrimination;
- Convention on the Elimination of all Forms of Discrimination against Woman;
- Convention Against Torture and other Cruel, Inhuman or Degrading Treatment or Punishment;
- Convention on the Rights of the Child.

In addition, the Inter-American Convention on Forced Disappearance of Persons attained constitutional status in 1997 as a result of Congressional action pursuant to the procedures specified in Article 75(22).

4.4.3 Environmental Framework Law

National Law N° 25,675 —known as the Environmental Framework Law— establishes the “minimum environmental protection standards for the adequate and sustainable management of the environment, the preservation and protection of biological diversity and the implementation of sustainable development”.

This regulation provides a framework for environmental regulations throughout the national territory. Among other topics, it defines minimum standard of environmental protection, introduced in the National Constitution, as “any rule providing for uniform or common environmental protection for all the Argentine territory, intended to set the necessary conditions to guarantee the protection of the environment”. It also defines the objectives of the federal environmental policy and the set of principles that will regulate the environmental policy: consistency, prevention, precaution, intergenerational equity, progressiveness, liability, subsidiarity, sustainability, joint and several liability and cooperation.

The main aspects regulated by this Law include:

- **Environmental impact assessment** process: establishes that any work or activity, in the Argentine territory, which is likely to significantly deface the environment, any component thereof or affect the people’s quality of life, is subject to an environmental impact assessment process, prior to its execution. The environmental impact assessment process is primarily regulated at provincial level and subject to approval by provincial authorities, with some sector-specific exceptions (for example, off-shore activities in national waters, electrical energy generation and transportation).
- **Environmental damage**: defines environmental damage and, in alignment with the National Constitution, the responsibility to restore the environment to its prior status. It also states that if two or more people are involved in causing a collective environmental damage or if the extent of

the damage caused by each of them cannot be accurately established, all parties shall be jointly and severally liable, without detriment, if applicable, to the right of contribution among them.

- **Environmental insurance**: establishes that individuals performing activities that may create a risk to the environment have to obtain an **insurance policy** to guarantee the funding of the restoration activities. These risky activities are defined according to the Environmental Complexity Level (NCA – Nivel de Complejidad Ambiental), which is calculated by a formula established in Resolution N° 177/2007 (and amendments) of the Secretariat of Environment and Sustainable Development (SAyDS – Secretaría de Ambiente y Desarrollo Sostenible). In certain cases, local authorities request that industrial facilities located in such province provide evidence of having purchased environmental insurance in order to obtain permits issued by the local environmental authority.

4.4.4 Other Relevant Environmental Regulations

Other environmental regulations significant for the Vista Project include:

- **Environmental considerations for the oil and gas exploration and exploitation activities:** National Resolution SE Nº 105/92 governs environmental considerations related to hydrocarbon exploration and exploitation throughout the different stages. Requirements include, among others to submit Works and Tasks Monitoring (Monitoreo de Obras y Tareas - MOT) during well-drilling activities, and subsequently on an annual basis; submit a Prior Environmental Survey before starting on any exploratory well drilling and within 3 months following the finding of an area for exploitation. This regulation includes requirements for the drilling stage including requirements for the management of drilling and completion fluids and produced water. ***Note:*** *It is important to mention that national environmental O&G regulations applied directly when the oil and gas permits and authorizations were granted by the Federal Authority. Nowadays they need to be complemented with local regulations, which prevail in case of discrepancy. As consulted in the O&G provincial authorities, there are specific provincial regulations for certain environmental O&G aspects, (e.g. well abandonment), while in other cases, the province adheres to the national regulation (e.g. O&G transport through pipelines). The main provincial environmental law generally covers almost all aspects of the national resolutions.*
- **Hazardous waste:** The Hazardous Waste Law, Law Nº 24,051, codified by Decree Nº 831/93, regulates the “cradle to grave” system of generation, transport, treatment, storage, and disposal of hazardous waste. The Law defines “hazardous waste” as waste that poses direct or indirect harm to human beings or may pollute the soil, water, atmosphere or the environment in general. The Hazardous Waste Law, modeled in part on the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, applies only to waste produced or disposed of in federal territory, waste that may affect people or the environment beyond the boundaries of a single province, or **waste that involves the transport across provincial boundaries**. It establishes the obligation of generators, operators and transporters of hazardous wastes to register in the National Register of Generators and Operators of Hazardous Wastes; and obtain the Annual Environmental Certificate, which will have to be renewed annually and validates how hazardous wastes are handled, transported, treated and disposed of by the registered generator, operator or transporter. In addition, an Annual Environmental Fee (Tasa Ambiental Annual) is due.
- **Fuel tanks:** Law Nº 13,660 and its Regulatory Decree Nº 10,877/60, establish the safety conditions and requirements for the production, transformation and storage of solid, liquid or gaseous fuels. Resolution Nº 1,102/2004 of the Secretariat of Energy created the Register of Fuel Tanks (“Registro de Bocas de Expendio de Combustibles Líquidos, Consumo propio, Almacenadores, Distribuidores y Comercializadores de Combustibles e Hidrocarburos a Granel y de Gas Natural Comprimido”), in which the owners of fuel tanks for private consumption, among others, have to register all tanks. National Resolution Nº 419/93 (Consolidated Text by National Resolution N° 404/94) of the Secretariat of Energy and subsequent amendments sets forth the

creation of auditing procedures in order to perform an efficient and accurate control of the security conditions of refineries, gas stations, storage facilities and any other points of sale of fuels within the Argentinean territory. According to Resolution Nº 226/2008 of the Secretariat of Energy, only the national universities registered in a specific register ("Registro de Universidades Nacionales para la Realización de Auditorías Técnicas, Ambientales y de Seguridad") shall conduct the safety audits of the fuel storage facilities. Finally, in 2005, the former Secretariat of Energy, by means of Resolution Nº 785/2005, created the National Program to Control Leaks of above ground hydrocarbon and by-products storage tanks. Among other aspects, it establishes the need to present an environmental impact assessment prior to the installation of any aboveground storage tank (AST), the registration of all ASTs and the need to perform periodic internal and external controls and audits to verify the operation of the tanks. It also establishes requirements for the closure and decommissioning of tanks.

- **Protected areas:** National Law Nº 22.351 (modified by National Law Nº 26.389) establishes the legal system for the protection of national parks, reservations and natural monuments. It defines the three categories for protected areas: National Parks, National Monuments and National Reserves.
- **Indigenous communities:** National Law N° 23.302 (modified by National Law N° 25.799) and its Regulatory Decree N° 155/89 declares of national interest the attention and support to indigenous communities present in the country, and their protection and development towards their full participation in the national socio-economical and cultural process, respecting their own values and methods. This Law acknowledges legal status to the indigenous communities established in the country, and creates the National Register of Indigenous Communities. Finally, it creates the National Institute of Indigenous Affairs, and appoints it as the authority for this regulation ILO Convention 107 (not in force; denounced by Argentina in 2001) and other complementary regulations. In addition, National Resolution N° 328/10 of the National Institute of Indigenous Affairs creates the National Register of Indigenous People Organizations.

4.4.5 Health and Safety Regulations

As mentioned, health and safety regulations are primarily issued by the federal government.

General health and safety conditions at work in Argentina are regulated by National Law Nº 19,587, Regulatory Decree Nº 351/79, and National Decree Nº 1,338/96, including the need for facilities to have a medical and health and safety service through licensed professionals registered against the Ministry of Production and Labor (Ministerio de Producción yTrabajo). In addition, National Law Nº 24,557, its Regulatory Decree Nº 170/96 and complementary regulations, establish the legal framework for the prevention of labor risks, including labor accidents and occupational diseases. According to these regulations, labor accidents and occupational diseases are required to be declared to the Labor Risks Superintendency (Superintendencia de Riesgos del Trabajo, SRT) and to contract a labor risk insurance company (Aseguradora de Riesgos del Trabajo - ART).

Since the late 1990s, with the enforcement of the ART law, the oil and gas industry has been working to improve its health and safety performance in Argentina. Nowadays, it is becoming a common practice within the industry to implement and certify, different types of systems for managing health and safety risks, including OHSAS 18001, IRAM 8800 or BS 8800 requirements.

A brief description of the main health and safety regulations is included in Annex 4.1.

4.5 Neuquén Province Regulations

The following section provides a brief overview of the main environmental regulations that apply to the oil and gas industry in Neuquén Province. A brief description of additional provincial environmental regulations is included in Annex 4.1.

4.5.1 Oil and Gas Regulations

Under the scenario created by the reform of the National Hydrocarbons Law, the exploitation of oil and gas resources is under the jurisdiction of the provinces where the resources are located. As such, Neuquén Province issued its own Hydrocarbons Law, Provincial Law N° 2.453, which, together with Regulatory Decree N° 3.124/04, established the framework for oil and gas activity, including the exploration, exploitation, industrialization, transportation, and marketing of hydrocarbons and their by-products.

Oil and gas activity in Neuquén Province is subject to obtaining the corresponding exploration, production/exploitation, and transportation permits and concessions from the corresponding provincial authorities.

The above mentioned regulations establish that the Provincial Executive Power has the authority to grant the concessions and permits for the oil and gas sector, authority that is currently held by the Under-Secretariat of Energy, Mining and Hydrocarbons, dependent upon the Provincial Ministry of Energy and Natural Resources.

Regulatory Decree N° 3.124/04 (as amended by Decree Nº 1.703/10) defines as areas of “high exploratory risk” those for which very little geophysical and geological information is available and those considered as such by the Authority based on geologic-economic risk. The regulation includes in the latter group the tight gas, tight oil, shale gas, shale oil, and gas fields associated with carbon seams. Specific terms and conditions will be implemented for each category.

In addition, other relevant provincial regulations for the oil and gas activity in Neuquén Province include:

- Law Nº 1.926 and its Regulatory Decree Nº 2.247/96 established that the Provincial Secretariat of Energy and Mining (currently Under-Secretariat of Energy, Mining and Hydrocarbons) is the permitting and enforcement authority for oil and gas activities, and that every oil and gas activity to be initiated, developed, completed, or finalized, must obtain the corresponding authorization from the permitting authority. Decree N° 2.656/99 of the General Environmental Law, clarifies that the permitting authority is in charge of supervising/inspecting the operational aspects of the oil and gas activities, while the environmental authority (nowadays the Under-Secretariat of Environment) enforces the environmental aspects of the activity.
- Law N° 2.183, which establishes that the concessionaires and permit holders must compensate landowners and pay for the corresponding easements.
- Law N° 2.454 and its Regulatory Decree N° 3.128/04 establish regulations for the payment of royalties to the provincial government for the exploitation of oil and gas resources.
- Law N° 2.615 and its Regulatory Decree N° 2.124/08 regulate the renegotiation of oil and gas concessions and establishes, among other issues, that companies shall prioritize contracting workers, professionals, and service companies in Neuquén Province, and commit themselves to remediating existing environmental liabilities.
- Decree Nº 1.342/15 creates the Provincial Register of Oil and Gas Companies held by the Under-Secretariat of Energy, Mining and Hydrocarbons.

4.5.2 Environmental Impact Assessment and Environmental License

The **Environmental Impact Assessment** process in the Neuquén Province is regulated by Law Nº 1.875 (Consolidated Text by Law Nº 2.267) and Regulatory Decree Nº 2.656/99 (amended by Decree Nº 422/2013).

According to these regulations, oil and gas operators are required to obtain an **Environmental Impact Declaration (“Declaración de Impacto Ambiental – DIA”)** and the approval of the **Environmental Management Plan (“Plan de Gestión Ambiental – PGA”)** from the Environmental Authority prior to commencing any project or related activity.

The regulations establish two discrete processes for projects/activities depending on their complexity. Annexes 4 and 5 of Regulatory Decree Nº 2.656/99 (as amended), establish a non-restrictive list of projects and activities subject to the **Environmental Impact Report** and the **Environmental Impact Study**, respectively:

- An **Environmental Impact Study** is required for more complex activities including, as related to the oil and gas sector: main oil and gas pipelines for which a transportation concession is required, reservoirs and treatment facilities for sludge from the oil and gas activity, exploration wells located outside development areas, seismic prospection outside development areas, gas compression plants, treatment facilities, refineries, and industries associated with oil and gas activities. The process for the approval of the Environmental Impact Study is subject to public hearing.
- An **Environmental Impact Report** is required for less complex and individual facilities and operations, such as production wells, conventional and unconventional exploration wells inside development areas, early production facilities, injection wells, interconnecting oil and gas pipelines, access roads, oil storage facilities, etc. The approval process for these reports is not subject to public hearings, unless the Authority deems it is necessary based on the specific characteristics and potential social impact of the project.

It is important to mention that, after the amendments introduced by Decree Nº 422/2013, individual facilities/infrastructures/operations (conventional and unconventional exploration wells, early production facilities, injection wells, access roads, oil storage facilities, etc.) within an oilfield are required to present an Environmental Impact Report, and, thus, are not subject to public hearing.

Annex 2 of Regulatory Decree N° 2.656/99 regulates the approval processes and timeframes for both documents. This process includes a review of formal requirements, technical reviews from the Environmental Authority and other potential authorities they deem necessary to involve, public hearing (for the Environmental Impact Study) or publication and establishing a timeframe to receive observations or comments (for the Environmental Impact Report), and a review from the technical and legal areas of the Authority.

Furthermore, Annex 7 of Regulatory Decree N° 2.656/99, which pertains specifically to the oil and gas activity, establishes that oil and gas projects can be considered tacitly approved if the Authority does not make additional comments within a specific timeframe after the public hearing or the review period, respectively.[2]

According to information provided by the Authority, the usual timeframe for obtaining the Environmental Impact Declaration, or Environmental License, is 3 to 6 months, depending on the political context, the complexity of the project, the level of information provided to the Authority, etc.

Nevertheless, and as mentioned above, operators are required to present an Environmental Baseline for the entire concession area.

4.5.3 Other Environmental Regulations

Other provincial environmental regulations relevant for the Vista Project include:

- **Environmental Aptitude Certificate for Oil and Gas Activity:** In addition to the Environmental License or Environmental Impact Declaration, Provincial Law Nº 2,600 (modified by Provincial Law N° 2,735) and its Regulatory Decree N° 1.905/2009, establish the need for companies that

[2] The presentations will be considered “approved” (tacit approval) if the Authority does not provide any comments on the Environmental Impact Study within 20 days of the public hearing. For the Environmental Impact Report, the tacit approval is considered granted if no comments are made within 15 days of the expiration of the term set to receive comments from the public.

conduct reconnaissance, exploration, drilling, production, storage, and/or transportation of liquid or gaseous hydrocarbons to obtain the “Environmental Aptitude Certificate for Oil and Gas Activity” ("Certificado de Aptitud Ambiental de la Actividad Hidrocarburífera – CAAAH”) for the Concession Area, including associated operational bases within the area.[3] Companies intending to develop such activities are required to apply for the Certificate, as well as submit a very detailed **Environmental and Social Baseline** for the area, and an Annual Environmental Management Plan for the activities. Provincial Disposition Nº 112/11 of the former Under-Secretariat of Environment, approves the Terms of Reference to develop these Environmental and Social Baseline Studies, which include describing current facilities (wells, plants, pipelines, etc.), evaluating current impacts and risks, developing a detailed Environmental Management Plan and Emergency Response Plan for managing the impacts and risks identified, and reporting actions related to social benefits for local communities, among other requirements. ***Note:*** *According to information provided by the Authority, few certificates have been issued since companies do not usually comply with all the requirements established in Law N° 2.600 and Regulatory Decree N° 1.905/09. Nonetheless, the Environmental and Social Baseline Studies are required for oil and gas projects. The Authority recommends that the studies be specific to the area where activities will be performed, and to avoid including general information regarding the Neuquén Province or Argentina as a whole. As mentioned, oil and gas companies usually do not comply with all the environmental requirements established in the regulations, especially those that are material for their operations. In some cases, companies lobby the authorities to be flexible when enforcing these requirements.*

- **Protection of the environment during oil and gas exploration and production:** Annex VII of Regulatory Decree N° 2,656/99 establishes regulations and procedures for the protection of the environment during oil and gas exploration and development operations including provisions on well casing programs; drilling and completion of mud pits; management of wastes; management of produced water; quality of any discharges, etc.
- **Unconventional resources:** Provincial Decree Nº 1.483/12 approves the **Regulations and Procedures for the Exploration and Exploitation of Unconventional Resources** in Neuquén Province aimed at preventing, mitigating, and minimizing environmental impacts potentially arising from unconventional drilling in shale gas and shale and shale oil reservoirs. This regulation is mainly focused on preserving provincial water resources and establishes a number of restrictions and requirements, including, for example, the prohibition of using groundwater suitable for the public supply and/or irrigation, and the prohibition of discharging waste water into surface water bodies or drainage courses, among other requirements.
- **Dry wellsite:** Provincial Law Nº 2,666 establishes that all oil & gas wells must be drilled with "dry" wellsite techniques (“locación seca”) controlling solids and treating sludge and cuttings in treatment plants suitable for this task. In addition, it requires companies performing oil and gas well drilling, completion or repairs to implement any precautions required to avoid the release or spillage of sludge used in the abovementioned operations, as well as any substances capable of having a direct or indirect impact on the environment and any biological communities, requiring absolute integrity of any equipment, vessels or containers of any type.
- **Waste management:** Annex 8, 9 and 10 of Provincial Decree N° 2.656/99, establish provisions for the management of hazardous, pathogenic and solid wastes, respectively. The regulation creates the **Provincial Register of Generators and Operator of Hazardous Wastes**, administered by the applicable authority, in which all individuals and legal entities responsible for generating, handling, transporting, treating and disposing hazardous wastes in the Province shall

[3] Companies in operation at the time these regulations were issued were required to submit the Annual Environmental Monitoring Report (“Informe de Monitoreo Ambiental Anual – IMAA”), according to National Resolution Nº 25/04, and the Annual Environmental Management Plan (“Plan de Gestión Ambiental Anual – PGAA”) implemented for each concession area, in order to obtain the Certificate.

be registered. The **Annual Environmental Certificate**, which must be renewed annually, is granted under this registration, and validates how hazardous wastes are handled, transported, treated and disposed of by the registered generator, operator or transporter. It also regulates the management of non-hazardous solid wastes, including the generation, storage, collection, transportation, treatment and final disposal of all solid wastes, and the transformation operations necessary for their re-use or recycling.

- **Water:** The Provincial Water Code (Provincial Law Nº 899) and its Regulatory Decree Nº 790/99 establish the system for the exploitation and preservation of water resources in the public domain. This code includes the requirement for obtaining permits for drilling of groundwater wells (**Groundwater Well Drilling Permit** or "Permiso de Perforación", in Spanish) and the use of water (**Water Exploitation Permit** or "Permiso de Explotación", in Spanish), which are granted by the Under-Secretariat of Hydric Resources.
- **Wastewater:** Provincial Disposition DMAyDS Nº 312/2005 and Provincial Resolution N° 709/2011, establishes requirements for the treatment of sanitary wastewater generated in camps, proper septic systems to be installed at camps (e.g. mobile WWTP); requirements for the implementation of a mobile WWTP as well as the Authority's approval of same. In addition, as mentioned above, Regulatory Decree N° 2,656/99 establishes provisions for the management of produced water. Finally, the Provincial Water Code (Provincial Law Nº 899) and EPAS Resolution N° 181/2000 regulate **Wastewater Discharge Permits,** which also under the jurisdiction of the Under-Secretariat of Hydric Resources and the Provincial Entity of Water and Sanitary Services (EPAS).
- **Protected areas:** Provincial Law Nº 2.594 and its Regulatory Decree Nº 1.186/11 create the Provincial System of Protected Natural Areas, with a number of categories for protected natural areas. However, there is no express prohibition with respect to the development of oil and gas exploration or exploitation activities in the protected areas.

4.6 Río Negro Province Regulations

The following section includes a brief overview of the main environmental regulations that apply to the oil and gas industry in Río Negro Province. A brief description of additional provincial environmental regulations is included in Annex 4.1.

4.6.1 Oil and Gas Regulations

As mentioned previously, after the reform of the National Hydrocarbons Law, the exploitation of oil and gas resources is the jurisdiction of the provinces where the resources are located. In Río Negro Province, the framework for oil and gas activity, including exploration, exploitation, industrialization, transportation, and marketing of hydrocarbons and their by-products, is established in Provincial Laws N° 4.296 and 4.818.

According to this framework, the oil and gas activity is subject to obtaining the corresponding concessions and exploration, production/exploitation, and transportation permits from the corresponding provincial authorities.

The abovementioned regulations establish that the Provincial Executive Power has the authority to grant the concessions and permits for the oil and gas sector, authority that is currently in hands of the State Energy Secretariat, dependent upon the General Secretary of the Government.

Relevant provincial regulations for the oil and gas activity in Río Negro include:

- Provincial Law N° 4.296, which reaffirms that Río Negro Province has full administrative control over the hydrocarbon deposits that are located in the province including near shore coastal grounds, within the framework of Laws N° 17.319 and N° 26.197. It also mandates the provincial Executive Power, to determine the areas of the province in which it is important to promote the activities governed by this law;

- Provincial Law N° 4.818, which approves the Terms and Conditions for the public bidding process for hydrocarbon exploitation concessions granted by the National Government (before the reform of the National Hydrocarbons Law) and requires the registration in the Provincial Register of Renegotiation of Exploitation Concessions for Rio Negro Hydrocarbon Areas. Unconventional deposits are excluded from this Law; and
- Provincial Law Nº 2.627 and its Regulatory Decree N° 24/2003, which created the Hydrocarbon Police Force, which under the provincial Executive Power has controlling authority over liquid and gaseous hydrocarbons.

4.6.2 Environmental Impact Assessment and Environmental License

The **Environmental Impact Assessment** process in Río Negro Province is regulated by Law Nº 3.266 and Regulatory Decree Nº 656/2004.

According to these regulations, oil and gas operators are required to obtain an **Environmental Resolution ("Resolución Ambiental")** from the Environmental Authority (Council of Ecology and Environment of the Province of Río Negro (CODEMA)), designated as such by Decree No. 663/2003.

In order to obtain the Environmental Resolution, the proponent of the works or projects must previously submit before the Enforcement Authority a sworn affidavit that states whether the proposed work or activity will degrade the environment or affect the quality of life of people, and containing the information required under the regulations.

When applicable, the Enforcement Authority will call a public hearing, inviting the public at large, governmental agencies, and any other entities potentially affected by the execution of the project including non-governmental organizations interested in preserving the environmental values that this law protects.

Furthermore, Decree Nº 452/2005 regulates Law N° 3.266 specifically in relation to the oil and gas activity. It establishes that projects and/or activities related to the oil and gas development, under the terms of Article 3 paragraph b) of Law N° 3.266, will be presumed to be high-risk activities. Annex I contains the administrative procedures and recommendations that should be implemented for the exploration stage, while Annex II contains the administrative procedures and recommendations that should be implemented for the exploitation, development and production stages.

The CODEMA will communicate to the companies the approval of and/or objections regarding the information presented in the EIA process, within 30 days of the presentation of the documentation.

Finally, Decree Nº 452/2005 creates the Environmental Control Register for Hydrocarbon Activity where all companies involved in activities of exploration, drilling, exploitation, storage and/or transportation of crude oil must register.

4.6.3 Other Environmental Regulations

Other provincial environmental regulations applicable to the Vista Project include:

- **Environmental Remediation Plan for the exploration and exploitation of hydrocarbons**: Provincial Law N° 4.682 creates the "Environmental Remediation Plan" for areas affected by the exploration and exploitation of hydrocarbons and related activities, within the province. The plan must quantify the damages and liabilities generated, determining potential remediation costs for:

  a) General cleaning of oilfield surfaces;

  b) Remediation of the subsoil contaminated by oil spills;

  c) Vegetable and forestry revegetation of the disturbed areas with native species, acquired exclusively from public and private nurseries existing in the province. In this regard, the presentation of the certificate of origin indicating such acquisition is a necessary condition;

  d) Capping of oil pools and soil quarries;

e) Construction of enclosures to store waste from the activity;

f) Remediation and preservation of natural sources of drinking water (subject to specific regulations);

g) Recovery of decommissioned subsurface oil and gas pipelines; and

h) Decommissioning and restoration of abandoned access roads to wells, batteries and hydrocarbon plants.

The "Environmental Remediation Plan" must be financed by the operators of the oil and gas fields in the province.

- **Detection service for buried utilities**: Resolution N° 383/2011 requires hydrocarbon exploitation concessionaires that plan to carry out excavations and/or drilling of any kind to hire a detection service for buried utilities to avoid potential impacts. Annex I contains the basic characteristics that this mentioned service must contain.
- **Dry wellsite:** Provincial Law Nº 3.462 establishes that all oil and gas wells must be drilled with "dry" wellsite techniques (“locación seca”) which requires containing and managing liquids, sludge and cuttings in appropriate facilities. Prior to commencing drilling and exploitation works, concession and permit holders must present to the Application Authority a detailed work plan containing the drilling program for each well. Separate facilities are required for truck and vehicle washing. Said zones must be located outside the areas defined for the drilling and their location must be illustrated in the drilling program that the concessionaires submits to the Authority.
- **Abandonment of oil and gas wells:** Provincial Resolution N° 339/2018 establishes regulations for the abandonment of oil and gas production wells, based on National Resolution SE Nº 5/96.
- **Waste management:**

  - *Special Wastes*: Provincial Law Nº 2.472 (modified by Law N° 4.361) created the **Provincial Register of Special Waste Generators, Haulers and Operators**, administered by the Provincial Environmental Authority (Environmental and Sustainable Development Secretariat), in which all individuals and companies responsible for generating, handling, transporting, treating and disposing special wastes in the province shall be registered. The **Annual Environmental Certificate**, which must be renewed annually, is granted under this regulation, which defines how hazardous wastes are to be handled, transported, treated and disposed. When the generator is authorized by the Environmental Authority to dispose of special wastes at its plant or site, it will be considered as an operator, and must register. In addition, the regulation prohibits the installation of reservoirs, repositories, deposits, garbage dumps, permanent or transitory, for the storage of radioactive materials, supplies or wastes, as well as biological or inert waste, in the the province and/or the 200 miles of its jurisdictional sea. Finally, Law N° 4.818 which approves the Terms and Conditions for the Public Bid for companies holding hydrocarbon exploitation concessions granted by the National Government (before the reform of the National Hydrocarbons Law), establishes in its Annex I item 4.1.6.2.3 that special and hydrocarbon associated wastes must be treated within the Province of Rio Negro, except when the Environmental Authority indicates that it is not possible to do it based on technical or operative reasons.

  - *Pathological Wastes* are regulated by Provincial Law Nº 2.599 and Resolution N° 1.570/2003. Resolution N° 1.570/2003 of the Provincial Secretariat of Health approves the "Technical Provincial Norms on Management of Biopathological Wastes". These technical norms contain a series of provisions related to the handling, storage, transport, treatment and final disposal, which generators, transporters and operators of pathological waste must comply with. In addition, these companies must also be registered in the Register of Generators, Transporters and Operators of Biopathological Wastes managed by the Directorate of Environmental Health and renew the Certificate of Authorization obtained on the basis of said registration every 3 years.

- **Water:** Provincial Law Nº 2.952 and Regulatory Decree Nº 1.923/96 (modified by Decree N° 1.093/2010) is the Provincial Water Code. The Code establishes a system for the exploitation and preservation of the water resources of public domain. For the purpose of using public surface water; exploiting groundwater for private use; and discharging residential, urban, agricultural or industrial effluents; a concession, authorization or permit must be obtained from the Authority. In the case of groundwater, in addition to obtaining an administrative authorization (the **Water Use Application**), the Code also requires permits for the exploration and drilling of groundwater wells. The permit application must include the work plan to be carried out and must be approved by the Authority (**Groundwater Well Drilling Permit** for exploration and drilling within a concession. A **Groundwater Exploration Permit** is required for exploration outside of a concession lands. ***Note**: According to the information provided by the Provincial Water Department, the issuance of water use permits are evaluated case by case, depending on the water course to be exploited, the water basin where it is located, the flow to be abstracted, etc.*
- **Wastewater: T**he Provincial Water Code mentioned above also includes the "Regime of Protection and Conservation of Water Resources" which governs wastewater discharge. A wastewater **discharge authorization** must be obtained from the Provincial Water Department. In addition, everyone that discharges their wastewater into an authorized water body must register in the **Register of Users of Water Bodies**. Moreover, Provincial Law N° 2.391 and Regulatory Decree Nº 1.894/91 require facilities that discharge industrial wastewater to have a unique discharge point, a sampling and flow measurement chamber, and adopt a system to remove coarse solids, as well as to present a wastewater treatment plant program. Resolution Nº 378/92 complements the provisions of Decree N° 1.894/91, defining the parameters and discharge limits for industrial wastewater discharges. On the other hand, according to Provincial Resolutions N° 78/2007 and N° 79/2007, the gray and black waters from temporary installations of the oil and gas camps must be treated, prior to their discharge, by means of an efficient septic system (e.g. compact mobile plants for the treatment of effluents), which guarantees protection f the receiving environment. Finally, Resolution N° 886/2015 establishes provisions for wastewater discharges generated in the oil and gas activity, including the classification of the different activities, the presentation of affidavits to complete the registration in the Register of Users of Water Bodies (mentioned above), discharge parameters, requirements for wastewater treatment plants, etc.
- **Air quality:** Given that in the Province of Río Negro there are no specific regulations for air quality and air emissions from fixed sources, Resolution N° 12/2005 of the CODEMA, adheres to the guide levels for air quality established by National Decree N° 831/93, regulatory of Law N° 24.051.
- **Soil conservation**: The province of Río Negro has adhered to the provisions of National Law Nº 22.428 on soil conservation through Provincial Law Nº 1.556. According to this regulation, the Authority may declare as a Soil Conservation District any area where it is necessary or advisable to undertake soil conservation or recovery programs. Moreover, in the absence of provincial regulations that adopt guidance levels for soil quality, Resolution N° 12/2005 from the CODEMA applies the standards established by National Decree N° 831/93, regulatory of Law N° 24.051.

4.7 International Treaties and Agreements

The Argentine government has subscribed to a number of international convention, treaties and agreements with the aim of protecting the environment, the cultural heritage, workers, indigenous communities, etc.

Following is a brief list and description of the main treaties and agreements entered into by Argentina. The list includes the legal code for each treaty.

- National Law Nº 23.724; Vienna Convention for the Protection of the Ozone Layer;
- National Law Nº 23.778; Montreal Protocol on Substances That Deplete the Ozone Layer and subsequent amendments (approved by National Laws Nº 24.167, 24.418, 25.389 and 26.106);

- National Law Nº 24.295; United Nations Framework Convention on Climate Change;
- National Law Nº 25.438; Kyoto Protocol on Climate Change (UN);
- National Law N° 21.836; Convention concerning the Protection of the World Cultural and Natural Heritage;
- National Law N° 24.071; ILO Convention 169 on Indigenous and Tribal Peoples;
- National Law Nº 22.344 and subsequent amendments (approved by National Laws Nº 23.815 and 25.337);,Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- National Law Nº 23.918; Convention on the Conservation of Migratory Species of Wild Animals (CMS);
- National Law N° 23.919; Convention on Wetlands of International Importance, especially as Waterfowl Habitats and subsequent amendments (approved by National Law Nº 25.335);
- National Law Nº 24.375; United Nations Framework Convention on Biological Diversity;
- National Law Nº 24.701; United Nations Convention to Combat Desertification;
- National Law Nº 23.922; Basel Convention;
- National Law Nº 26.664; Amendment to the Basel Convention adopted in Genève in October 2004; and
- National Law Nº 21.663; ILO Convention 139 on the Prevention and Control of Occupational Hazards caused by Carcinogens.

4.8 International Requirements

The Project has been designed to meet Argentinian regulatory requirements and commonly accepted international environmental, social, and consultation standards. These latter standards are primarily standards and guidelines of the International Finance Corporation (IFC), a unit of the World Bank, which form the *de facto* standards applied to projects seeking international finance, whether from multilateral, bilateral and/and commercial financial institutions.

These guidelines and standards include:

- IFC's Performance Standards (PS) on Environmental and Social Sustainability (2012);
- the applicable World Bank Group Environmental, Health, and Safety Guidelines;
- IFC's Policy on Disclosure of Information;
- the World Bank's Anti-Corruption Strategy;
- the Voluntary Principles on Security and Human Rights.

The Project has also been designed to conform to the Equator Principles, which reference the IFC PS and World Bank Group EHS Guidelines. These standards and guidelines are discussed further below.

The Project is being developed with financing from the Overseas Private Investment Corporation (OPIC). As a result, this Supplementary Lender Information Package (SLIP) has been prepared to conform to the environmental, safety, social and human rights requirements of OPIC.

4.8.1 OPIC Requirements

The Overseas Private Investment Corporation (OPIC) was established as an agency of the U.S. government in 1971. According to its mission statement, OPIC "helps U.S. businesses invest overseas, fosters economic development in new and emerging markets, complements the private sector in managing risks associated with foreign direct investment, and supports U.S. foreign policy.

Because OPIC charges market-based fees for its products, it operates on a self-sustaining basis at no net cost to taxpayers".

OPIC further states that "financing and political risk insurance also help U.S. businesses of all sizes to compete in emerging markets and meet the challenges of investing overseas when private sector support is not available. OPIC promotes U.S. best practices by requiring projects to adhere to international standards on the environment and worker and human rights".

Vista has made an application to OPIC for financing for certain Onshore Operations Projects. As such, the Project will be required to conform to the requirements of OPIC with regards to environmental, health and safety, worker and human rights matters. OPIC published its latest "Environmental Handbook" in February 2004, which provides information to OPIC's clients, with respect to the general environmental and social guidelines, assessment and monitoring procedures that OPIC applies, in its discretion, to prospective and ongoing investment projects.

For projects that are classified as Category A, OPIC requires the applicant to submit an "Environmental and Social Impact Assessment" (ESIA) in a form that can be public disclosed without compromising business confidential information.

An ESIA is a comprehensive assessment of the diverse impacts of a project on the natural and human environment. It includes a detailed description of pre-existing conditions ("baseline assessment"), all project activities having a potential environmental impact (from pre-construction through decommissioning and site reclamation), and the net impacts of the project, taking into account alternative mitigative measures. It also considers the cumulative impacts of the project activities. The content and format for an ESIA will vary depending on the industry sector, the site and other project-specific factors. A generic format for an ESIA is provided in the OPIC "Environmental Handbook"; and, this SLIP document follows that format.

An Environmental Management and Monitoring Plan (EMMP), sometimes called an Environmental Action Plan (EAP), is designed to specify in detail the actions, both technical and managerial, that the applicant or sponsor must also undertake in order to mitigate anticipated adverse impacts of the project on the environment, health and safety, and project affected people. It also describes the technology and methodology used to monitor the actual impacts of the projects on the environment and the standards and procedures to be used for developing mitigative measures as necessary to maintain impacts within an acceptable range. The SLIP process for the Vista Onshore Projects has also included the development of a "Environmental and Social Management and Monitoring Plan" (SEMMP) in fulfillment of this OPIC requirement.

With the consent of the applicant, the country and industry sector involved in a Category A project (but not the name of the applicant) are listed on OPIC's Internet Web Site and the ESIA is made publicly available on request for a designated comment period of 60 days prior to any final OPIC commitment to a project. No application for a Category A project can be processed without this public disclosure and review process.

Concurrent with this public notification process, OPIC conducts an internal assessment of the project based on the ESIA and other available information, including any comments it receives from the public. During this review process, OPIC environmental and social specialists assess the impacts of the project and the standards and mitigative conditions required for OPIC support. These conditions are discussed with the applicant and included as representations, warranties and covenants in the loan agreement or political risk insurance contract. OPIC monitors project compliance with contractual conditions throughout the term of the OPIC loan or insurance contract. Category A projects are also required to conduct at least one independent environmental audit during the first three years of OPIC support.

In determining whether a project will pose an unreasonable or major environmental, social, and/or health and safety hazard, or will result in significant degradation of national parks or similar protected areas, OPIC relies on the standards and guidelines developed by multilateral development banks, the primary source being the IFC of the World Bank Group. OPIC applies the applicable IFC

Performance Standards (2012) as well as the applicable World Bank Group/IFC EHS Guidelines which provide metrics for emissions, effluents and related matters. The applicable Performance Standards and EHS Guidelines are discussed in detail below.

Where there are gaps in EHS Guidelines on a given environmental or natural resource issue, OPIC incorporates relevant and applicable U.S. federal standards, World Health Organization (WHO) standards, and standards set by other international authorities in its environmental and social due diligence and decision making process. Examples of such standards are included in the Handbook, as well as the exclusion list, which prohibits certain types of projects from financing by OPIC.

In addition to the World Bank/IFC EHS Guidelines referenced above, all projects must comply with host country environmental regulations. Therefore, whenever possible, applicants must provide OPIC with summaries or copies of applicable host country regulations as part of their ESIA for Category A projects.

OPIC does not prescribe to its potential borrowers the choice of technologies or processes they use to meet the applicable guidelines. However, standards of best practice developed by governments, industry and nongovernmental organizations can be useful in providing guidance to OPIC and its users in assessing alternatives and their feasibility. For this purpose, OPIC makes use of international best practice guidelines for sectors of particular importance to OPIC's environmental mandate. Consistent with this approach, OPIC takes into account an applicant's track record of material compliance with US domestic and foreign environmental and occupational health and safety laws and regulations in its environmental and social due diligence process. While evidence of material noncompliance is not in itself grounds for declining support, such information helps to identify environmental and occupational health and safety issues that merit particular attention during the due diligence process, contract conditions and monitoring.

4.8.2 IFC Guidelines, Standards and Policies

4.8.2.1 IFC Performance Standards

IFC updated its environmental and social sustainability policies and standards for private sector operations in its "Performance Standards on Environmental and Social Sustainability" (Performance Standards) in 2012. Meeting the requirements of the Performance Standards is generally viewed as meeting good international practice in the context of private sector operations. The eight Performance Standards comprise the following:

- Performance Standard 1: Assessment and Management of Environmental and Social Risk and Impacts;
- Performance Standard 2: Labor and Working Conditions;
- Performance Standard 3: Resource Efficiency and Pollution Prevention;
- Performance Standard 4: Community Health, Safety and Security;
- Performance Standard 5: Land Acquisition and Involuntary Resettlement;
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- Performance Standard 7: Indigenous Peoples; and
- Performance Standard 8: Cultural Heritage.

4.8.2.2 IFC EHS General Guidelines

The World Bank Group/IFC EHS General Guidelines, dated April 2007, contain the performance levels and measures that IFC has determined are generally considered to be achievable at reasonable costs by existing technology. The application of these guidelines should be tailored to the

hazards and risks established for each project on the basis of the results of the ESIA, in which site-specific variables, such as the host country context, assimilative capacity of the environment, and other project-specific factors, are taken into account. For example, the ESIA process may provide justification for alternative project-specific standards or requirements, such as project location, processes, or mitigation measures.

The EHS General Guidelines is a technical reference document with general and industry-specific examples of Good International Industry Practice (GIIP). The EHS General Guidelines are designed to be utilized in conjunction with relevant industry-sector EHS guidelines. The General EHS Guidelines are organized as follows:

- Environmental
  - Air Emissions and Ambient Air Quality
  - Energy Conservation
  - Wastewater and Ambient Water Quality
  - Water Conservation
  - Hazardous Materials Management
  - Waste Management
  - Noise
  - Contaminated Land
- Occupational Health and Safety
  - General Facility Design and Operation
  - Communication and Training
  - Physical Hazards
  - Chemical Hazards
  - Biological Hazards
  - Radiological Hazards
  - Personal Protective Equipment
  - Special Hazard Environments
  - Monitoring
- Community Health and Safety
  - Water Quality and Availability
  - Structural Safety and Project Infrastructure
  - Life and Fire Safety
  - Traffic Safety
  - Transport of Hazardous Materials
  - Disease Prevention
  - Emergency Preparedness and Response
- Construction and Decommissioning
  - Environment
  - Occupational Health and Safety

- Community Health and Safety

4.8.2.3 IFC EHS Guidelines for Onshore Oil and Gas Development

The IFC EHS Guidelines for Onshore Oil and Gas Development dated April 2007 include information relevant to seismic exploration; exploration and production drilling; development and production activities; transportation activities including pipelines; other facilities including pump stations, metering stations, pigging stations, compressor stations and storage facilities; ancillary and support operations; and decommissioning.

The EHS Guidelines for Onshore Oil and Gas Development include the following specific topics:

- Industry-Specific Impacts
  - Environment
    - Air Emissions (exhaust gases, venting and flaring, fugitive emissions, well testing);
    - Wastewaters (produced water, hydrostatic testing water, cooling and heating systems, other waste waters, surface storage or disposal pits);
    - Waste Management (drilling fluids and drilled cuttings, produced sand, completion and well work-over fluids, naturally occurring radioactive materials);
    - Hazardous Materials Management;
    - Noise;
    - Terrestrial Impacts and Project Footprint;
    - Spills; and
    - Decommissioning.
  - Occupational Health and Safety
    - Fire and Explosion;
    - Air Quality;
    - Hazardous Materials;
    - Well Blowouts;
    - Transportation; and
    - Emergency Preparedness and Response.
  - Community Health and Safety
    - Physical Hazards;
    - Hydrogen Sulfide; and
    - Security.
- Performance Indicators and Monitoring
  - Environment
    - Emissions and effluent guidelines; and
    - Environmental monitoring.
  - Occupational Health and Safety Performance
    - Occupational health and safety guidelines;
    - Accident and fatality rates; and

- Occupational health and safety monitoring.

4.8.2.4 IFC's Disclosure of Information Policy

IFC adopted its current Policy on Disclosure of Information in January 2012. The policy stipulates public consultation and disclosure requirements (including timing) for projects requesting IFC funding. Vista has committed to following this policy for the Onshore Projects.

4.8.2.5 Performance Indicators and Monitoring

The table below shows performance indicators and monitoring noted in the IFC EHS Guidelines for Onshore Oil and Gas Development:

Table 4-1 *Emissions, Effluents and Waste Levels from Onshore Oil and Gas Development (Source: IFC EHS Guidelines for Onshore Oil and Gas Development, April 2007)*

PARAMETER	GUIDELINE VALUE
Drilling fluids and cuttings	Treatment and disposal as per guidance of Section 1.1 of the IFC EHS Guidelines for Onshore Oil and Gas Development
Produced sand	Treatment and disposal as per guidance of Section 1.1 of the IFC EHS Guidelines for Onshore Oil and Gas Development
Produced water	Treatment and disposal as per guidance of Section 1.1 of the IFC EHS Guidelines for Onshore Oil and Gas Development. For discharge to surface waters or to land: ■ Total hydrocarbon content: 10 mg/L ■ pH: 6 - 9 ■ BOD: 25 mg/L ■ COD: 125 mg/L ■ TSS: 35 mg/L ■ Phenols: 0.5 mg/L ■ Sulfides: 1 mg/L ■ Heavy metals (total)a: 5 mg/L ■ o Chlorides: 600 mg/l (average), 1200 mg/L (maximum) Heavy metals include: Arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, vanadium, and zinc.
Hydrotest water	Treatment and disposal as per guidance of Section 1.1 of the IFC EHS Guidelines for Onshore Oil and Gas Development. For discharge to surface waters or to land, see parameters for produced water in this table.
Completion and well workover fluids	Treatment and disposal as per guidance of Section 1.1 of the IFC EHS Guidelines for Onshore Oil and Gas Development. For discharge to surface waters or to land: :

	■ Total hydrocarbon content: 10 mg/L. ■ o pH: 6 – 9
Stormwater drainage	Stormwater runoff should be treated through an oil/water separation system able to achieve oil & grease concentration of 10 mg/L.
Cooling water	The effluent should result in a temperature increase of no more than 3° C at edge of the zone where initial mixing and dilution take place. Where the zone is not defined, use 100 m from point of discharge.
Sewage	Treatment as per guidance in the General EHS Guidelines, including discharge requirements.
Air emissions	Treatment as per guidance in Section 1.1 of this document. Emission concentrations as per General EHS Guidelines, and: ■ H2S: 5 mg/Nm3

Monitoring of direct and indirect indicators of emissions, effluents and resource use is project-specific. Monitoring should be conducted by trained individuals implementing appropriate monitoring procedures, utilizing properly calibrated and maintained equipment. The monitoring records should be frequently reviewed, updated and maintained; and should be compared with the applicable standards to ensure adequate measures are promptly performed when necessary to minimize adverse impacts to the environment and humans. These guidelines act as a powerful tool to avoid mistakes, reduce development cost and improve project sustainability.

These guidelines are intended to provide a standard against which the Project's performance is monitored. Compliance with the guidelines is the expected standard, in addition to compliance with applicable local, national and international laws.

4.8.3 Equator Principles

The Equator Principles are voluntary program for project finance adopted by the Equator Principles Financial Institutions (EPFI). These include many financial institutions involved in project finance in the extractive sector. The Equator Principles are intended to help borrowers manage environmental and social risks, which may be associated with international project financing. In general, the Equator Principles apply certain procedures derived from the IFC project due diligence process, particularly IFC's Performance Standards. Some of the conditions of the Equator Principles are as follows.

- The project risk has been categorized following the environmental and social screening criteria of IFC;
- An Environmental and Social Assessment has been completed for all Category A and Category B projects;
- The Environmental and Social Assessment report must address compliance with applicable host country laws, regulations, and permits required by the project and, at least, reference the World Bank Group/IFC EHS guidelines;
- Where appropriate, an Environmental and Social Management Plan must be prepared to provide mitigation/management and monitoring plans;
- Where appropriate, public consultation has been conducted and the Environmental and Social Assessment (or its summary) disclosed to the public for a reasonable period.

Therefore, banks that adopt the voluntary Equator Principles are making a commitment to promote environmental stewardship and socially responsible development. At the same time, the banks

believe that following the Equator Principles will help reduce the financial and reputational risks related to the projects they choose to finance.

4.8.4 Voluntary Principles on Security and Human Rights

The Voluntary Principles on Security and Human Rights were developed to "guide companies in monitoring the safety and security of their operations within an operating framework that ensures respect for human rights and fundamental freedoms." The voluntary principles were developed by the governments of the United States, the United Kingdom, Norway and the Netherlands, plus companies operating in the extractive and energy sectors and non-governmental organizations, all with an interest in human rights and corporate social responsibility. The criteria for participation were finalized in 2007.

Vista will maintain its own security staff to provide security for the Project sites, activities and workers. The potential sensitivities associated with the possible presence of informal artisanal O&G activities, presence of informal land users within the Project boundaries, and potential for land-use conflicts, indicate the need to consider and adhere to good international practices on security and human rights. This includes a commitment by Vista to follow the "Voluntary Principles on Security and Human Rights."

The Voluntary Principles recognize that governments have primary responsibility to promote and protect human rights and that all parties to a conflict are obliged to observe applicable international humanitarian law. Applicable international standards include the United Nations *Code of Conduct for Law Enforcement Officials* and the United Nations *Basic Principles on the Use of Force and Firearms by Law Enforcement Officials*.

The Voluntary Principles regarding security and human rights in the extractive sector fall into three categories: *risk assessment*, *relations with public security*, and *relations with private security*.

Accurate and effective *risk assessments* should consider the following factors: identification of security risks; potential for violence; human rights records; rule of law; conflict analysis; and equipment transfers.

In an effort to reduce the risk of abuses and to promote respect for human rights generally, the following Voluntary Principles can guide *relationships between companies and public security* regarding security provided to companies: security arrangements; deployment and conduct; consultation and advice; and responses to human rights abuses.

Where host governments are unable or unwilling to provide adequate security to protect a Company's personnel or assets, it may be necessary to engage *private security* providers as a complement to public security. In this context, private security may have to coordinate with state forces, (law enforcement, in particular) to carry weapons and to consider the defensive local use of force. Given the risks associated with such activities, the Voluntary Principles can guide private security conduct such as:

- private security should observe the policies of the contracting company regarding: ethical conduct and human rights;
- the law and professional standards of the country in which they operate;
- should maintain high levels of technical and professional proficiency;
- should act in a lawful manner; and
- should have policies regarding appropriate conduct and local use of force; etc.

Companies should consult and monitor private security providers to ensure they fulfill their obligation to provide security in a manner consistent with the principles outlined. Where appropriate, companies should seek to employ private security providers that are representative of the local population.