Cielos de Tarapacá

Chapter 12

Summary form

EIA Cielos DE TARAPACÁ

November 2014

Chapter 12

Summary tab

EIA Photovoltaic Park Cielos de TARAPACA

In accordance with article 18, letter N), of D. S N º 40/2012 regulation of the Environmental Impact Assessment System (RSEIA), and with the purpose of facilitating the control referred to in article 64 of Law n º 19,300 of 1994 amended by law 20,417 of 2010 , the following are the tabs in which the contents are summarized:

- Description of the project or activity.
- Prediction and evaluation of the environmental impact of the project.
- Antecedents justifying the effects, characteristics or circumstances of article 11 of the law which give rise to the need to develop an EIA.
- Mitigation, reparation and compensation measures Plan.
- Contingency and emergency prevention Plan.
- Follow-up Plan.
- Compliance Plan for applicable environmental legislation.
- Voluntary environmental commitments.

File A. Project description

A. 1 Identification of the holder and his parent company, if any, as well as his legal representative, if applicable, indicating his domicile.

Social Reason	Cielos de TARAPACÁ Spa
R.U.T.	76.365.279-3
Business Spin	Generation in other NCP stations
Home	Av. Presidente Errázuriz 3943, Las condes
City	Santiago
Region	Metropolitan
Phone	+ 56 (2) 26538400
Legal representative	Juan Andrés Camus Valdés
R.U.T.	15.382.153-4
Home	President Errázuriz 3943. Las Condes
City	Santiago
Region	Metropolitan
Phono	+ 56 (2) 6538400
Email	Jcamus@valhallaenergia.com

A. 2 General background

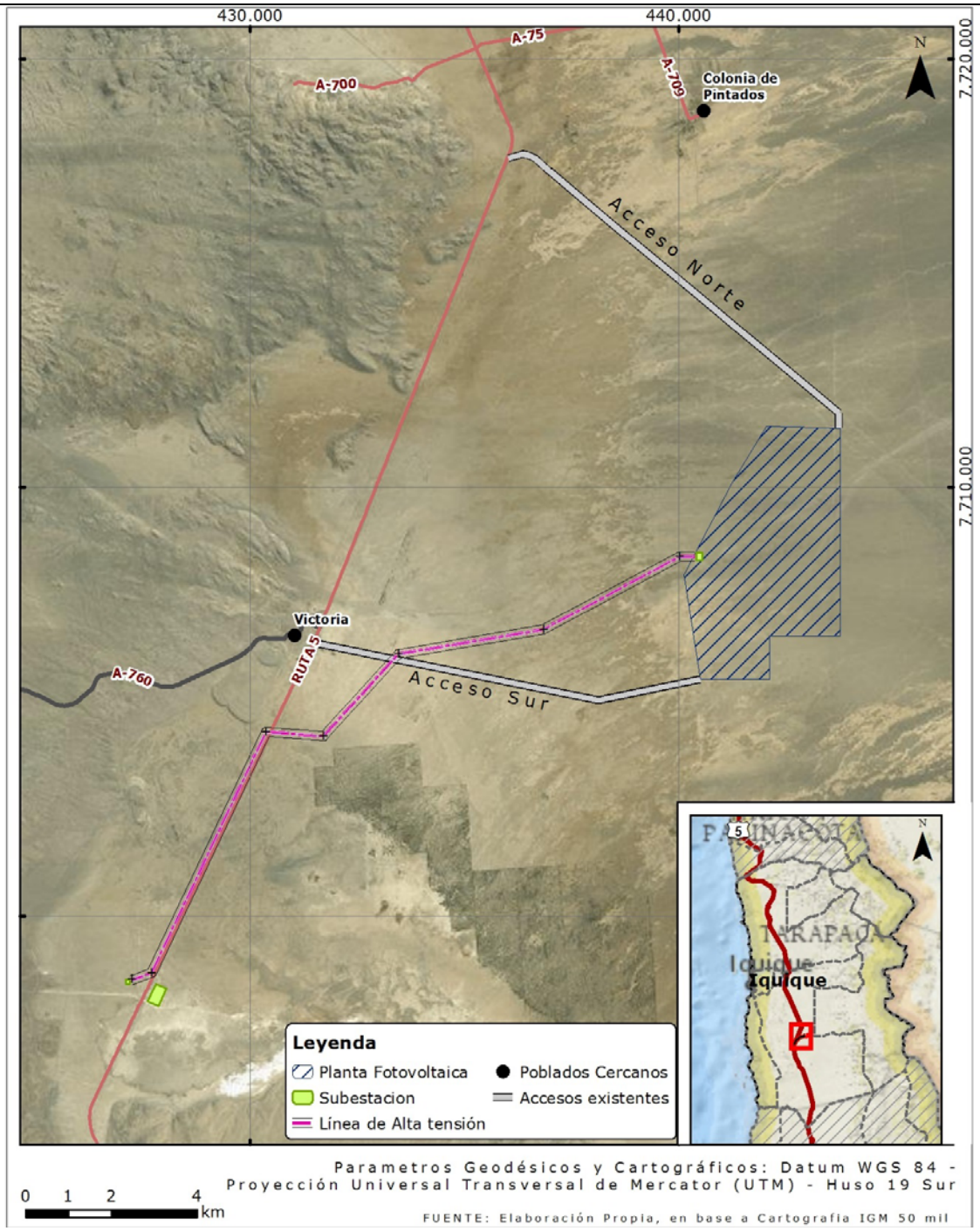
Project name	"***Photovoltaic Park Heavens Of Tarapacá"***
Brief description	The project consists in the construction and operation of a photovoltaic park (PFV) With An approximate installed power of 600 MWac, to provide electric power to the hydro-electric pumping plant project with seawater *"Mirror of Tarapacá"* And to the large North interconnected system (SING)
General purpose of the project	Contribute to the expansion of the energy matrix based on Ncre, through the construction and operation of a solar park.
Typology of the project, as well as of its parts in accordance with article 3 of the Regulation	Electrical transmission lines and substations.
	Power generating plants greater than 3 MW.
	Execution of works, programs or activities in national parks, national reserves, natural monuments, reserves of Virgin areas, nature sanctuaries, marine parks, marine reserves or in any other area placed under official protection, in Cases where the relevant legislation allows it to be.
Estimated amount of investment	1,000 Millions of dollars used, roughly.
Project Lifetime	The useful life of the project is indefinite, this means that while there is a strategic and economic justification for the renovation of equipment, the photovoltaic park can continue to operate with the corresponding maintenance.

A. 3 Location

<table>
<tr><td>Administrative political division at Regional, Provincial and communal level</td><td>The project is located in the region of Tarapacá, El Tamarugal province, in Pozo Almonte, 53 km from the urban area of Pozo Almonte and 88 km from Iquique.</td></tr>
<tr><td>Cartographic representation in Datum WGS84</td><td>See Figure 1.</td></tr>
<tr><td>Total area comprised of the project</td><td>The total surface is 1.705 Has
<table>
<tr><th>ID</th><th>work</th><th>Surface (ha)</th></tr>
<tr><td>1</td><td>Photovoltaic park[1]</td><td>1.615</td></tr>
<tr><td>2</td><td>Transmission line (18 km) and security strip(50 m)</td><td>90</td></tr>
<tr><td>3</td><td>Elevadora substation</td><td>2,51</td></tr>
<tr><td>4</td><td>Seccionadora substation[2]</td><td>4,24</td></tr>
<tr><td>5</td><td>Exterior road[3]</td><td>14,80</td></tr>
<tr><td colspan="2">Surface</td><td>1.726,55</td></tr>
</table></td></tr>
<tr><td>Access roads to the project</td><td>North Access: Via Route 5, from an existing detour located 2.7 kilometers south of route A-75.
South Access: You arrive on a road from the former Victoria office, located at 300 meters approximately south of the junction with route A-760, heading east</td></tr>
<tr><td>Justification of the project</td><td>Favorable results of solar radiation corroborated by monitoring of the National Energy Commission and the German Technical cooperation (GTZ), within the framework of the project "Non-conventional renewable energies". These solar radiation values are within the highest in the world, which justifies the installation of a solar park in this area.</td></tr>
</table>

	It is close to the energy demand centers. Topographical conditions make the site ideal for the emplacement of photovoltaic modules.

Figure 1. Project Location



A. 4 Description of the parts and physical works that compose the project

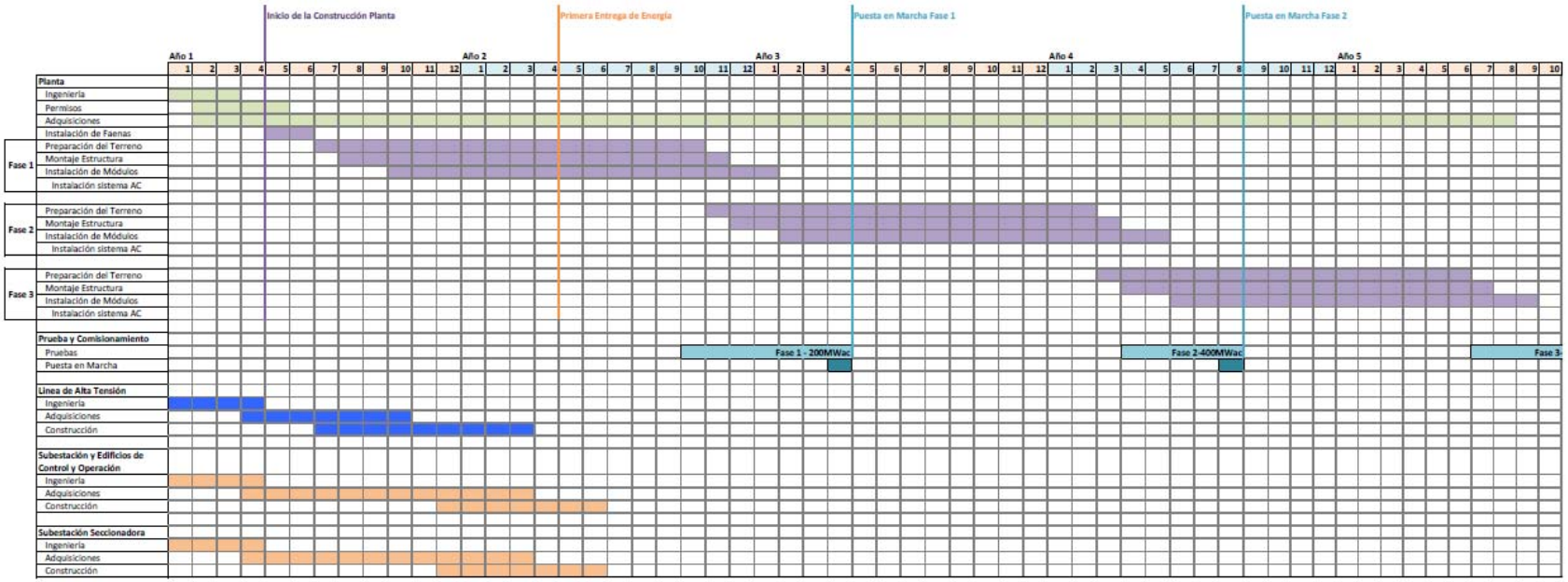
Main works	Photovoltaic Park
	Elevator substation (SEE).
	High Voltage electrical transmission line (LAT).
	Disconnecting substation (connection to the project *"Mirror of Tarapacá"*).
	Roads.
Permanent complementary works	Monitoring Towers (2)
	Wineries
	Wastewater Treatment Plant
Temporary complementary works	Installation of tasks
	Temporary waste collection Area
	Area of temporary collection of materials or supplies

A. 5 Construction phase Description

Identification of the parts, works and actions associated with this phase	Phase I (200MW)	• Land preparation and Access roads • Installation of slaughter and camp • Network Enabling Connection paths • Installation of the perimeter fence of the photovoltaic park • Enabling of Material download and storage areas • Structural and electrical installation (panels and assembly of structures) • Construction LAT • Construction substations • Construction Control Room and operations • Connection tests
	Phase II (200MW)	• Land preparation and Access roads • Network Enabling Connection paths • Structural and electrical Installation • Connection and start-up
	Phase III (200MW)	• Land preparation and Access roads • Network Enabling Connection paths • Structural and electrical Installation • Connection and start-up • Closing of the construction phase
The estimated date and indication of the part, work or action established by the Start and end of the phase	Commencement of construction phase activities: November 2015 Start work: Installation of Operations	August 2020 The construction phase will be terminated.
Schedule of the main		

works and actions associated with this phase	See attached Gantt chart

Table 1. Schedule of activities (Gantt Chart)



Labor required	A maximum staff of 600 people.	
Description of how basic supplies such as energy, water, hygienic services, food, transportation, or others will be provided at this stage.	Energy	Two (2) 100 Diesel Generator Sets Kva, one (1) 20 Generator set Kva (tasks) and one (1) Generator set 5 KW (for working front)
	Drinking water	By means of tank trucks purchased from the sanitary company for showers and sinks.
		Purified water dispensers will be available for use by workers.
	Toilets	Hygienic services (sinks, bathrooms and showers) will be enabled.
	Power	A casino will be available
	Accommodation	The project considers housing modules within the installation of operations consisting of containers duly adapted for the accommodation of workers during construction.
	Transport	By buses and vans
	Fuels	will be supplied by the distributor companies of the Regional market.
In case of corresponding, the location and quantity of renewable natural resources to be extracted or exploited by the project or activity to meet their needs.	The extraction or exploitation of renewable natural resources is not envisaged.	does not apply
The emissions	Atmospheric	

<table>
<tr><td>of the project or activity and the forms of abatement and control contemplated</td><td></td><td>
<table>
<tr><th colspan="8">Tabla 2.Estimación de emisiones fase de construcción del proyecto</th></tr>
<tr><td colspan="8">EMISIONES CONSTRUCCIÓN</td></tr>
<tr><td rowspan="2">Período</td><td colspan="5">Emisiones (Ton/año)</td><td></td><td></td></tr>
<tr><td>PTS</td><td>MP10</td><td>MP2.5</td><td>CO</td><td>HC</td><td>NO_x</td><td>SO_x</td></tr>
<tr><td>Fase 1 - Año 1</td><td>43,27</td><td>19,85</td><td>7,52</td><td>19,66</td><td>7,64</td><td>73,91</td><td>0,90</td></tr>
<tr><td>Fase 1 - Año 2</td><td>12,81</td><td>5,19</td><td>1,46</td><td>3,39</td><td>1,25</td><td>12,86</td><td>0,20</td></tr>
<tr><td>Fase 2 - Año 3</td><td>43,25</td><td>20,08</td><td>7,70</td><td>20,31</td><td>7,53</td><td>77,17</td><td>1,17</td></tr>
<tr><td>Fase 2 – Año 4</td><td>12,84</td><td>5,20</td><td>1,46</td><td>3,39</td><td>1,25</td><td>12,86</td><td>0,20</td></tr>
<tr><td>Fase 3 - Año 5</td><td>42,99</td><td>20,00</td><td>7,69</td><td>20,31</td><td>7,53</td><td>77,16</td><td>1,17</td></tr>
<tr><td>Fase 3 - Año 6</td><td>12,75</td><td>5,17</td><td>1,46</td><td>3,39</td><td>1,25</td><td>12,86</td><td>0,20</td></tr>
</table>
</td></tr>
<tr><td></td><td>Acoustic</td><td>
<table>
<tr><th colspan="4">Tabla 3: Evaluación según D.S. N°38 del MMA. Etapa de construcción (Periodo diurno)</th></tr>
<tr><td>Punto</td><td>Nivel proyectado Aporte exclusivo [dB(A)].</td><td>NPC máximo permitido Periodo diurno [dB(A)].</td><td>Evaluación según D.S. N° 38 del MMA.</td></tr>
<tr><td>1</td><td>35</td><td>55</td><td>Cumple</td></tr>
<tr><td>2</td><td>0</td><td>64</td><td>Cumple</td></tr>
<tr><td>4</td><td>47</td><td>61</td><td>Cumple</td></tr>
<tr><td>F1</td><td>69</td><td>85</td><td>Cumple</td></tr>
<tr><td>F2</td><td>43</td><td>85</td><td>Cumple</td></tr>
</table>
<table>
<tr><th colspan="4">Tabla 4: Evaluación según D.S. N°38 del MMA. Etapa de construcción (Periodo nocturno).</th></tr>
<tr><td>Punto</td><td>Nivel proyectado Aporte exclusivo [dB(A)].</td><td>NPC máximo permitido Periodo diurno [dB(A)].</td><td>Evaluación según D.S. N° 38 del MMA.</td></tr>
<tr><td>1</td><td>35</td><td>50</td><td>Cumple</td></tr>
<tr><td>2</td><td>0</td><td>47</td><td>Cumple</td></tr>
<tr><td>4</td><td>47</td><td>50</td><td>Cumple</td></tr>
<tr><td>F1</td><td>69</td><td>85</td><td>Cumple</td></tr>
<tr><td>F2</td><td>43</td><td>85</td><td>Cumple</td></tr>
</table>
</td></tr>
<tr><td></td><td>Energy and radiation</td><td>does not apply</td></tr>
<tr><td>The quantity and management</td><td>Household Solid Waste</td><td>18 Monthly tons that will be stored in a Area Temporary collection in containers Duly signposted. These wastes will be removed periodically by</td></tr>
</table>

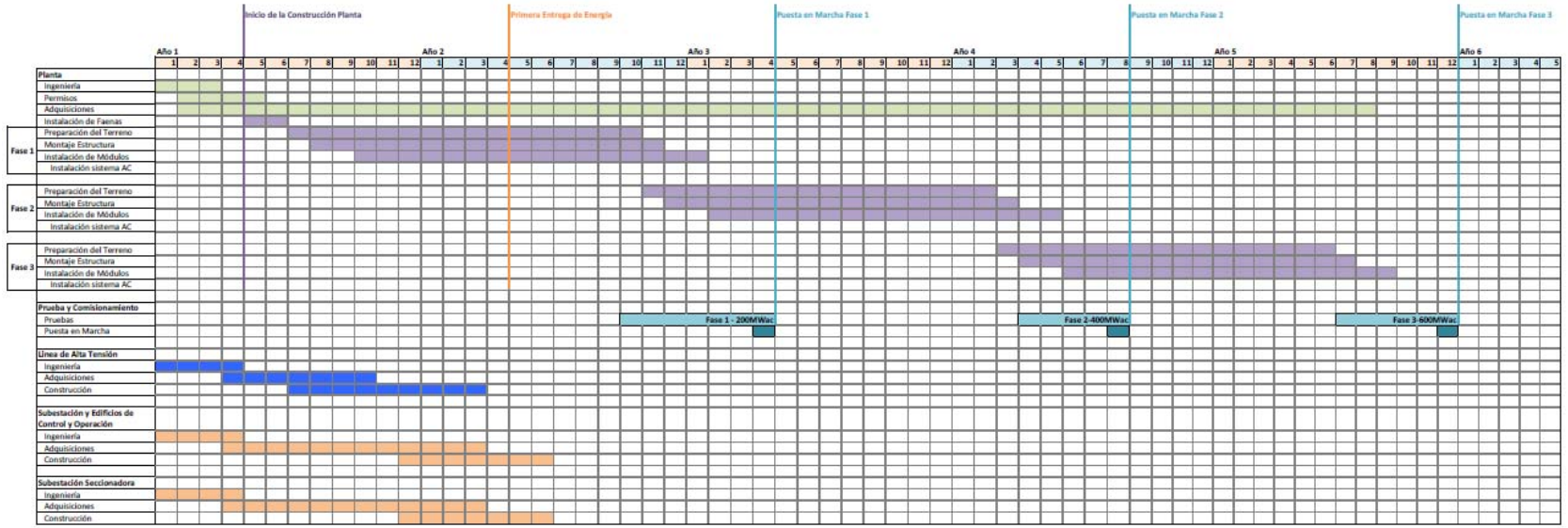
of waste, chemicals and Other substances that may affect the environment.		specialized companies.
	Non-hazardous industrial waste	A temporary collection area or salvage patio is envisaged; The transport and final disposition of these wastes will be carried out through an authorized company
	Hazardous industrial waste	SE projects a temporary collection area whose characteristics are aligned with the specifications set out in the Sanitary regulations on hazardous waste management, D. S No. 148/04.
	Water served	Liquid effluents, of sanitary services, will have a plant of treatment of the modular type.

A. 6 Description of the operation phase

Identification of the parts, works and actions associated with this phase	Photovoltaic plant	The Cielos de Tarapacá Photovoltaic Park will begin to operate when the infrastructure for the connection of the project, i.e. the high voltage line and the substations, is installed and operating.
	Substation operation	You will not have your own permanent staff. This will be monitored and remotely commanded from the Office of Operations, through telecommunications links via optical fiber and microwaves and by the park's maintenance staff.
	Operation Lat	Annual terrestrial routes for the visual inspection of the conductors, the structures and the suspension and anchorage assemblies of the structures, these will be carried out once a year, for a period of 2 months, or any notice of third parties.
	Maintenance	Throughout the project's useful life, operation and maintenance personnel and external personnel, if necessary, will carry out preventive and non-scheduled maintenance activities; Which will be planned in advance according to the manufacturer's specifications. They are also considered within the Activities emergency repairs which by their nature are not programmed.
The estimated date	It is estimated that in November 2016 The first energy	

and indication of the part, work or action that establishes the beginning and end of the phase	delivery is done. The project has an indefinite duration.
Schedule of the main works and actions associated with this phase	See attached Gantt chart

Table 5. Schedule of activities (Gantt Chart)



Labor required	For the activities of operation and preventive maintenance of the project will require full-time staff of 10 people on average, being able to reach a maximum of 20 people, formed by plant operators, maintenance technicians and managers of Site Security	
Maintenance and conservation activities indicating those aspects considered for the general activities	Throughout the project's useful life, operation and maintenance personnel and external personnel, if necessary, will carry out preventive and non-scheduled maintenance activities; Which will be planned in advance according to the manufacturer's specifications. Emergency repairs are also considered within the activities which by their nature are not programmed. Preventative Maintenance: The maintenance only consists of punctual works that go from a few hours or a few days in a given month, and includes topics such as: maintenance of areas, maintenance of electrical and power equipment. Corrective Maintenance: Corrective Maintenance is a response to unscheduled events that require special support, such as anomalies detected in preventive maintenance, repairs against failures that compromise the continuity of the service, these are handled case by Case with appropriate resources. The interventions performed can be with or without service cut.	
Description of how basic supplies such as energy, water, services will be provided at this stage Hygiene, food, transportation, or other similar	Energy	The required electrical power will be self-supplied during the day. At night, it will be provided by extracting the energy through the plant substation.
	Drinking water	Drinking water intended for consumption shall be provided by dispensing machines with a bottles of 20 litres, service to be provided by an undertaking with the respective permits.
	Health service	In this phase, there will be permanent facilities for health services, Intended for the use of operation and maintenance personnel. These facilities shall be composed

		of bath, sink and shower and shall be located inside the operation and maintenance building and its quantity shall be that established in article 23 of the DS N º 594/99.
	Power	A dining room/kitchen will be available in the O&M building which will be isolated from any source of contamination. It will also be equipped with potable water.
	Transport	It is estimated that the trips in the operation of the project, will consist mainly the transfer of personnel for maintenance of the photovoltaic park and the substations, in addition to the transfer of inputs, when it is necessary.
	Fuels	The project does not envisage fuel requirements in the park during the operation phase.
	Other inputs	For the process of washing panels (cleaning the modules), it has been considered that this process is carried out four times a year, for this is considered a requirement of 9,826 m3 of low mineral water for annual maintenance, in case it is not feasible to implement L A dry cleaning. Water will be purchased through suppliers with extraction permits.
In case of corresponding, the location and quantity of natural resources Renewable to be extracted or exploited by the project or	During the operation phase the need for extra or exploiting natural resources is not anticipated	

<table>
<tr><td>activity to meet your needs.</td><td colspan="2"></td></tr>
<tr><td rowspan="2">The emissions of the project or activity and the forms of abatement and control contemplated</td><td>Atmospheric</td><td>
<table>
<tr><th colspan="8">Tabla 6.Estimación de emisiones fase de operación del proyecto</th></tr>
<tr><th colspan="8">EMISIONES OPERACIÓN</th></tr>
<tr><th rowspan="2">TIPO DE FUENTE</th><th colspan="5">Emisiones (Ton/año)</th><th></th><th></th></tr>
<tr><th>PTS</th><th>MP10</th><th>MP2.5</th><th>CO</th><th>HC</th><th>NO_x</th><th>SO_x</th></tr>
<tr><td>Total emisiones</td><td>8,24</td><td>3,11</td><td>0,31</td><td>0,03</td><td>0,01</td><td>0,12</td><td>0,00</td></tr>
</table>
</td></tr>
<tr><td>Acoustic</td><td>
<table>
<tr><th colspan="4">Tabla 7: Evaluación según D.S. N°38 del MMA. Fase de operación (Periodo diurno).</th></tr>
<tr><th>Punto</th><th>Nivel proyectado Aporte exclusivo [dB(A)].</th><th>NPC máximo permitido Periodo diurno [dB(A)].</th><th>Evaluación según D.S. N° 38 del MMA.</th></tr>
<tr><td>1</td><td>15</td><td>55</td><td>Cumple</td></tr>
<tr><td>2</td><td>0</td><td>64</td><td>Cumple</td></tr>
<tr><td>4</td><td>21</td><td>61</td><td>Cumple</td></tr>
<tr><td>F1</td><td>61</td><td>85</td><td>Cumple</td></tr>
<tr><td>F2</td><td>25</td><td>85</td><td>Cumple</td></tr>
</table>
<table>
<tr><th colspan="4">Tabla 8: Evaluación según D.S. N°38 del MMA. Fase de operación (Periodo nocturno).</th></tr>
<tr><th>Punto</th><th>Nivel proyectado Aporte exclusivo [dB(A)].</th><th>NPC máximo permitido Periodo diurno [dB(A)].</th><th>Evaluación según D.S. N° 38 del MMA.</th></tr>
<tr><td>1</td><td>50</td><td>55</td><td>Cumple</td></tr>
<tr><td>2</td><td>47</td><td>64</td><td>Cumple</td></tr>
<tr><td>4</td><td>50</td><td>61</td><td>Cumple</td></tr>
<tr><td>F1</td><td>61</td><td>85</td><td>Cumple</td></tr>
<tr><td>F2</td><td>25</td><td>85</td><td>Cumple</td></tr>
</table>
</td></tr>
<tr><td rowspan="2">The quantity and management of waste, chemicals and other substances that may affect the environment.</td><td>Household Solid Waste</td><td>For The operation phase An estimated generation of 600 Kg/month. The handling of these wastes will be similar to that described for the construction phase.</td></tr>
<tr><td>Industrial waste</td><td>The industrial solid waste generated during this phase of the project will be Caused by spare parts, cables, among others, in very low quantities.
These wastes will be arranged temporarily in</td></tr>
</table>

		a site specially authorized to be then arranged in dumps approved or well recycled, depending on the nature of the waste.
	Water served	In the operation of the project, the wastewater generated will be the product of the operation and maintenance activities carried out to the photovoltaic park. Permanent health Service facilities for the use of staff shall be counted; These facilities will be composed by bathroom, sink and shower and will be located in the operation and maintenance building. For wastewater treatment, a modular aerobic digestion treatment plant will be used.
	Effluents Liquids Industrial	The only industrial liquid residue that can be generated during the operation phase can come from the cleaning of the modules, which will be carried out two to four times a year with demineralized water (without detergents). If soil and dust conditions permit, dry cleaning will be done to eliminate the need for water use during the cleaning of the modules.

A. 7 Closing Phase description

Dismantle or ensure the stability of the infrastructure used by the project or activity	The lifespan of the project is indefinite. This is achieved through the continuous renovation of the equipment according to the inspection and maintenance programs and the incorporation of technological innovations. In the event that a phase of abandonment of the project is considered or necessary, all the legal and environmental requirements in force will be fulfilled, the mechanical and other elements will be removed in disuse, they will be transferred for reuse, recycling or they will be available In accordance with the regulations in force at an authorized location.
Restore the Geoforma Or Morforlogía, vegetation and any other environmental component that has been affected during the execution of the project or activity	All constructions that are feasible to dismantle will be dismantled. The concrete works will be demolished and covered so that they are not seen in this way. All equipment and appliances that were used in the project operation will be removed. The cutting and handling of the small slopes will continue as far as possible the dominant topography and the material removed during the field preparation activities for the followers, roads and works referred to in the project, shall be arranged uniformly on the Surface of the terrain in order to give continuity to the existing topography. This will keep the Geoforma Or morphology of the terrain, therefore, no significant restoration activities will be required. As for the restoration of flora and fauna, the site of the project is eminently desert, which reduces the number of possibilities of use. The form of intervention of the project, characteristics of the vegetation, the soil and the topography will allow in this case that all the terrain Available as it is today.
Prevent future emissions	It is anticipated that in the eventual phase of closure

from the location of the project or activity, to avoid affectation of the ecosystem including water, air and soil	and abandonment, emissions of particulate matter and combustion gases will be of a low magnitude, as they are restricted to the dismantling tasks of the facilities. No emissions will be generated once the plant is closed.
The necessary maintenance and supervision	does not apply

A. 8 Possible risk or contingency situations identified, as set out in paragraph 2 of title VI of this regulation.

In the Chapter, the contingency and emergency Plan for the project is detailed, where the following situations have been elaborated:

- Natural
  - ✓ Mass movements
  - ✓ Earthquake
- Anthropic
  - ✓ Spills
  - ✓ Fire
  - ✓ Traffic accidents
  - ✓ Use of equipment and heavy machinery
  - ✓ Dismantling of equipment.

File B. Analysis of the necessary antecedents to justify the non-existence of the effects, characteristics or circumstances of article 11 of the law, which may give rise to an environmental impact study.

B. 1 Determination and justification of the area of influence or activity, including an overview of it.

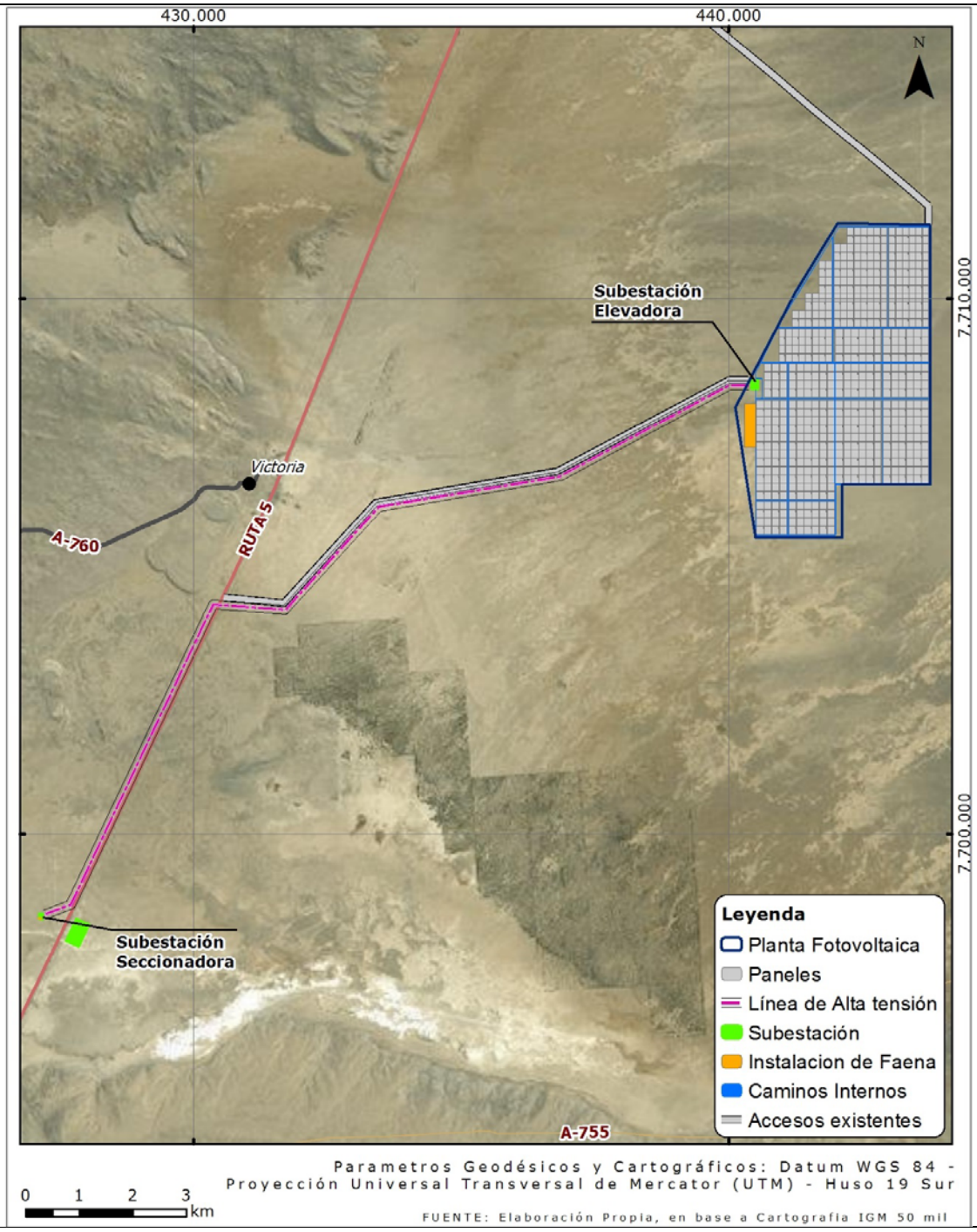
Component	General description
Heritage	The area of influence defined for the Cultural heritage component, corresponds to the surface of the site of the works and activities associated with the construction and execution of the project, where elements of a patrimonial nature are recorded..
Noise	The definition of area of influence (ADI) for the noise component is established according to the existence of human settlements or important ecosystems that may be affected by an increase in sound pressure levels due to construction, Operation and abandonment of the project. Because the stages under study may involve an acoustic impact on sensitive receivers near the project area, background noise measurements were performed within the project ADI, in six (6) points listed as sensitive receptors, where two (2) of which they were selected for being sectors of importance of fauna. For this we saw the realization of a campaign of measurements, which was carried out on the 23rd of October of 2014.
Air quality	Given the desert climate and the use of land in the sector, To analyze the area of influence focused on The main emissions associated with MP10 particulate matter, MP2, 5 and PTS. To be able to establish The ADI It is used as established in the primary air quality standards And The maximum and statistical concentration values for the MP10 and MP2 compounds, 5.
Fields Electromagnetics CEM	The definition of area of influence (ADI) for the component Cem It is established in terms of the existence of human settlements that could be affected by Electromagnetic radiation Because of the operation of the project. In Chile there is no regulation regulating the emissions of Electromagnetic fields, but in the current Chilean environmental regulation it is indicated that international references should be used to compare the permitted

	limits.
Landscape	In relation to the 'area of Influence For landscape, This is defined as all those portions of the territory that are part of the visual basins that allowed to characterize the landscape; And that will be modified or intervened directly by the works and/or activities of the project.
Human environment	According to the characteristics of the project, The area of influence has been defined As The potential significant alteration of the life and customs systems of human groups within the project's polygon and its immediate areas.
Terrestrial ecosystems	For terrestrial ecosystems The area of influence corresponds to those areas where the works and activities associated with the project could exert some kind of influence on the components flora and terrestrial vegetation and terrestrial fauna, both in the phases of Construction, operation and closure

B. 2 Location of the project or activity, and if it corresponds to its main parts, works or actions.

Project Location	Technical aspect	Favorable results of solar radiation corroborated by monitoring of the National Energy Commission and the German Technical cooperation (GTZ), within the framework of the project *"Non-conventional renewable energies"*. These solar radiation values are within the highest in the world, which justifies the installation of a solar park in this area.
	Constructive aspect	Topographical conditions make the site ideal for the emplacement of photovoltaic modules.
	Access to the mains	It is close to SING's electric transmission lines and high energy consumption centers.
Location Main Works	See Figure 2	
Location Complementary Works Permanent	See Figure 2	
Location temporary complementary works	See Figure 2	

Figure 2. Works of the project



B. 3 Location and quantification of renewable natural resources to be extracted or exploited by the project or activity to meet your needs.

The project will not extract and/or exploit renewable natural resources to meet your needs. This photovoltaic park will deliver energy, clean, renewable and free of emissions, to the interconnected system of the Norte Grande de Chile (SING), thus mitigating the problems of energy availability in this area, and helping to meet the objective of State to increase the percentage of electric energy from non-conventional renewable energies (NCRE).

B. 4 Project or activity emissions

Construction phase

Tabla 9.Estimación de emisiones fase de construcción del proyecto							
EMISIONES CONSTRUCCIÓN							
Período	Emisiones (Ton/año)						
	PTS	MP10	MP2.5	CO	HC	NO_x	SO_x
Fase 1 - Año 1	43,27	19,85	7,52	19,66	7,64	73,91	0,90
Fase 1 - Año 2	12,81	5,19	1,46	3,39	1,25	12,86	0,20
Fase 2 - Año 3	43,25	20,08	7,70	20,31	7,53	77,17	1,17
Fase 2 – Año 4	12,84	5,20	1,46	3,39	1,25	12,86	0,20
Fase 3 - Año 5	42,99	20,00	7,69	20,31	7,53	77,16	1,17
Fase 3 - Año 6	12,75	5,17	1,46	3,39	1,25	12,86	0,20

Tabla 10: Evaluación según D.S. N°38 del MMA. Etapa de construcción (Periodo diurno)			
Punto	Nivel proyectado Aporte exclusivo [dB(A)].	NPC máximo permitido Periodo diurno [dB(A)].	Evaluación según D.S. N° 38 del MMA.
1	35	55	Cumple
2	0	64	Cumple
4	47	61	Cumple
F1	69	85	Cumple
F2	43	85	Cumple

Tabla 11: Evaluación según D.S. N°38 del MMA. Etapa de construcción (Periodo nocturno).			
Punto	Nivel proyectado Aporte exclusivo [dB(A)].	NPC máximo permitido Periodo diurno [dB(A)].	Evaluación según D.S. N° 38 del MMA.
1	35	50	Cumple
2	0	47	Cumple
4	47	50	Cumple
F1	69	85	Cumple
F2	43	85	Cumple

Operation phase

Tabla 12.Estimación de emisiones fase de operación del proyecto			
EMISIONES OPERACIÓN			
TIPO DE FUENTE	Emisiones (Ton/año)		

	PTS	MP10	MP2.5	CO	HC	NO_x	SO_x
Total emisiones	**8,24**	**3,11**	**0,31**	**0,03**	**0,01**	**0,12**	**0,00**

Tabla 13: Evaluación según D.S. N°38 del MMA. Fase de operación (Periodo diurno).

Punto	Nivel proyectado Aporte exclusivo [dB(A)].	NPC máximo permitido Periodo diurno [dB(A)].	Evaluación según D.S. N° 38 del MMA.
1	15	55	Cumple
2	0	64	Cumple
4	21	61	Cumple
F1	61	85	Cumple
F2	25	85	Cumple

Tabla 14: Evaluación según D.S. N°38 del MMA. Fase de operación (Periodo nocturno).

Punto	Nivel proyectado Aporte exclusivo [dB(A)].	NPC máximo permitido Periodo diurno [dB(A)].	Evaluación según D.S. N° 38 del MMA.
1	50	55	Cumple
2	47	64	Cumple
4	50	61	Cumple
F1	61	85	Cumple
F2	25	85	Cumple

B. 5 Quantity and management of waste, chemicals and other substances that may affect the environment.

Household Solid Waste

Tipo y cantidad de residuos asimilables a domiciliarios en fase de construcción

Tipo	Cantidad (kg/mes)
Restos de alimentos	4.511
Papeles y Cartones	4.843
Plásticos	6.694
Vidrios	1.952
Total	**18.000**

Tipo y cantidad de residuos asimilables a domiciliarios en fase de operación

Tipo	Cantidad (kg/mes)
Restos de alimentos	104
Papeles y Cartones	210
Plásticos	286
Total	**600**

Tipo y cantidad de residuos asimilables a domiciliarios en fase de abandono.

Tipo	Cantidad (Kg/mes)
Restos de alimentos	596
Papeles y Cartones	821
Plásticos	1.162
Vidrios	420
Total	**3.000**

Industrial waste Non-hazardous

Residuos no peligrosos generados en fase de Construcción

Tipo	Cantidad(kg/mes)		
	Fase 1	Fase 2	Fase 3
Textiles	359	116	175
Gomas	719	233	351
Cerámicas	1.078	351	526
Latas	539	175	262
Maderas	216.320	70.211	105.317

Restos de piezas	1.797	583	875
Escombros	12.943	4.204	6.308
Papeles y Cartones	45.428	14.759	22.138
Plástico	5.048	1.640	2.460
Total	**284.231**	**92.273**	**138.413**

Residuos no peligrosos generados en fase de operación	
Tipo	**Cantidad(kg/mes)**
Textiles	595
Gomas	397
Maderas	590
Latas	1.985
Restos de piezas metálicas	5.958
Aceite	47
Papeles y Cartones	114
Plástico	13
Total	**9.699**

Residuos no peligrosos generados en fase de cierre	
Tipo	**Cantidad(kg/mes)**
Textiles	829
Gomas	1.106
Cerámicas	1.382
Latas	553
Maderas	157.374
Equipos eléctricos y estructuras	10.753.519
Escombros producto de la demolición de las edificaciones	2.200.605

Papeles y cartones	34.945
Plástico	3.883
Total	**13.154.195**
Tipo	**Cantidad(Uds.)**
Módulos fotovoltaicos.	**6.600.000**

Hazardous industrial waste

Residuos Peligrosos de la fase de construcción

Tipo	**Cantidad(kg/mes)**		
	Fase 1	**Fase 2**	**Fase 3**
Tóner de impresoras	7	3	5
Aceites usados	627	301	452
Baldes de aceites y lubricantes	28	13	21
Filtro de aceite usados	77	37	55
Envases de pinturas, solventes y barnices	93	46	67
Envases de aerosoles usados	7	3	5
Arena, aserrín u otro material absorbente.	56	26	39
Baterías	66	31	47
Pilas	5	3	3
Paños contaminados	75	36	54
Total	**1.042**	**499**	**748**

Residuos peligrosos generados en fase de operación

Tipo	**Cantidad(kg/mes)**
Tóner de impresoras	3
Envases de aerosol usados	2
Baterías usadas	759

	Pilas usadas: 8 Envases de refrigerante usados: 5 Paños contaminados: 7 Tubos fluorescentes: 16 Filtros de aire: 16 Chatarra electrónica, computadores, etc.: 16 Pintura, solventes, ácidos: 2 **Total: 834**

Residuos Peligrosos generados en la fase de construcción	
Tipo	**Cantidad(kg/mes)**
Tóner de impresoras	3
Aceites usados	278
Baldes de aceites y lubricantes	13
Filtro de aceite usados	34
Envases de pinturas, solventes y barnices	42
Envases de aerosoles usados	3
Arena, aserrín u otro material absorbente.	24
Baterías	725
Pilas	3
Paños contaminados	33
Total	**1.159**

Water served	For the stage of Construction is contemplated 60 M^3/Day This will be installed Two Plants of modular water treatment. For the stage of operation is contemplated 2 m^3/day, for this purpose a reconditioned modular water treatment plant will be used for the construction phase. For the abandonment stage 10 m is contemplated^3/day, for this it

	is It will use a refurbished modular water treatment plant for the construction phase.
Industrial Liquid effluents	In the construction phase, liquid waste will be generated from the washing of machinery that is carried out in the yard maintenance of machinery. By means of a collector grille placed on the contour of the concrete floor and connected to a watertight chamber, the residual water will be collected. Once the watertight chamber reaches 80% of its capacity will be emptied by means of the suction of its contents, which will be stored in solid containers that will be transferred to the warehouse of hazardous wastes temporarily for its subsequent handling, transport and Disposition according to what ESTABLCE ds n ° 148/03. The only industrial liquid residue that can be generated during the operation phase can come from the cleaning of the modules, which will be carried out two to four times a year with demineralized water (without detergents). If soil and dust conditions permit, dry cleaning will be done to eliminate the need for water use during the cleaning of the modules.

B. 6 In the event that the project or activity is install in, or in the vicinity of indigenous lands, indigenous development areas or indigenous peoples, the environmental impact declaration shall contain the antecedents justifying the absence of susceptibility of Affecting these towns located in the area in which the project or activity will be developed.

does not apply

B. 7 Any other environmental information that the holder deems pertinent.

does not apply

C. Plan of compliance with applicable environmental legislation.

C. 1 General environmental regulations applicable to the project

Standard	Article	Application phase	Form of Compliance	Compliance indicator
DS N º 100/2005	19 N º 8	All phases	Submit Project to SEIA	Income and registration Al SEIA
Law n º 19.300/1994	All	All phases	SEIA project entry, by day	RCA Pro
D. S N º 40/2013	All	All phases	In particular, enter the SEIA as indicated in the letter b), C and P) of article 3 of this Decree	RCA Pro
DS N º 30/2013	All	All phases	The project will comply with the provisions relating to the Auto Report, in the unlikely event of incurring any infringement of the competence of the Superintendence of the MA, and opting for this way. Likewise, compliance with the provisions relating to compliance programmes and repair plans will be complied with in the unlikely event of a sanctioning procedure being initiated, and in the event of opting for one of these means of settlement.	Presentation of a Auto Report, compliance program, and/or repair Plan in case of proceeding
DS N º 31/2013	All	All phases	will be provided in a timely manner, the Background, information	Delivery of information as appropriate

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			and data required, being an RCA holder.	
R. E N º 1.518/2013	All	Obtained the RCA.	Providing timely, and in the form and manner established, the information required in its entirety	Sending the information to the SMA.
R.e. N º 844/2012	All	All phases	The required information will be provided with a periodicity and in the form established in the RCA, by writing in the Environmental Monitoring system	Sending the information to the SMA
R. E N º 276/2013	All	All phases	Facilities will be provided for environmental control activities, if any, and providing the required information.	Permit control activities and information delivery.
R.e. N º 277/2013	All	All phases	Facilities will be provided for environmental control activities, if any, and providing the required information	Permit control activities and information delivery.
Regulations of a specific environmental nature applicable to the activities of the project				
Air and atmospheric emissions				
D. S N º 144/1961	All	Construction and operation	1. Speed restriction to 50 km/h. 2. Moistening of roads. 3. Cover trucks containing excavation material with tarps. 4. Seal that certifies the fulfillment of the	1. A log will be maintained with the entry and exit times of the vehicles. Complies with the standard (or compliance will be verified) if at least 80% of the total measurements

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			emissions of the vehicles on site.	reach the speed of the 50 km/h 2. An inspection will be carried out SawShual of all vehicles that leave with load of the work and/or plant, by way of verifying that the material is moistened and covered with tarpaulin; A log will be kept with that information. 100% Compliance indicator. 3. A copy of the technical reviews and maintenance of the vehicles will be requested, to which they will be maintained in the work and/or plant. 100% Compliance indicator. 4. All vehicles that circulate through the work and/or plant shall be required to be registered in the National Motor Vehicle Registry. Indicator of Compliance of 100%.
DS N ° 138/2005	2 °	Construction	Present the project to the SEIA	The emissions declaration will be made annually from all those fixed sources. In this case a compliance indicator of 100% is established
D.F. L N º 1/2007	78 First subpara graph	Construction and operation	All motor vehicles participating in the project shall be required	A copy of the technical reviews and maintenance of the vehicles will be

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			to comply with the law indicated, which shall be verified by the certificate of Technical and gas inspection. In the case of machinery which does not require the above-mentioned certificate, permanent Maintenance will be required.	requested, which will be maintained in the work and/or plant. In this case a compliance indicator of 100% is established
D. S N º 75/87	2	Construction	The transport of materials will be carried out with the hopper or load section covered with tarps, in such a way as to prevent the dispersion of dust in the atmosphere and the Runoff of materials in the substrate.	A visual inspection will be carried out of all the vehicles that leave with load of the slaughter and/or plant, by way of verifying that the material is moistened and Covered with canvas; A log will be kept with that information. In this case a compliance indicator of 100% is established
D. S N º 211/91	4, 8, 11 and 11 bis	All phases	It will be verified that any motor vehicle registered in the National Motor Vehicle Registry, has the adhesive seal and the certificates that guarantee that they comply with the maximum limits established by the Regulation.	All vehicles that circulate through the slaughter and/or plant are required to be registered in the National Motor Vehicle Registry. In this case a compliance indicator of 100% is established
D. S N º	All	Construction	The technical review will	A copy of the technical

Standard	Article	Application phase	Form of Compliance	Compliance indicator
4/94		and operation	be kept up to date for all motor vehicles	revisions to the day of the vehicles will be requested, which will be maintained in the work and/or plant. In this case a compliance indicator of 100% is established
D. S N º 47/92	All	Construction	1. The speed of circulation of trucks between wind turbines will be restricted to 50 km/h. 2. The trucks carrying the construction material shall comply with the corresponding provisions of the DS N º 75/87 of the MINTRATEL that establishes conditions for the transport of loads, for whose effects the materials of construction will be duly moistened and covered, in order to control and to minimise the emissions of particulate material in the phase of Construction. 3. Vehicles shall have the technical revisions per day. The maintenance of the machinery will be carried out according to	1. A log will be maintained with the times of entry and exit of the vehicles, by way of verifying the time used to traverse a defined distance. In this case a compliance indicator of 80% is established. 2. A Visual inspection of all vehicles leaving with load of the work and/or plant, in order to verify that the material is moistened and covered with tarp; A log will be kept with that information. In this case a compliance indicator of 100% is established. 3. A copy of the technical reviews and maintenance of the vehicles will be requested, to which they will be maintained in the work and/or plant. In this case a compliance indicator of 100% is established.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			the manufacturer's specifications, in authorized mechanical workshops. 4. Any vehicle registered with the National Motor Vehicle Registry after September 1, 1994, will carry the seal proving compliance with the maximum limits of its Emissions and those who do not carry it will not be admitted to the Act. The inspection Technical works will be responsible for verifying and requiring the contractor to comply with this obligation	4. All vehicles that circulate through the work and/or plant are required to be registered in the National Motor Vehicle Registry. In this case a compliance indicator of 100% is established
DS N º 54/94	1, 3, 4, 6, 7, and 8	Construction and operation	The technical conditions and gas emissions of medium-sized motor vehicles shall be sought to comply with this emission standard. In the case of subcontracting transport services, it shall be expressly stated in the contracts which are subscribed to the obligation to comply with the provisions of this standard, through the certificate of	A copy of the technical reviews of the vehicles per day will be requested, which will be maintained in the work and/or plant. In this case a compliance indicator of 100% is established

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			technical review per day.	
Noise pollution				
D. S N º 38/2011	1, 2 and 9	Construction and operation	For this effect it was done A In-depth study of the possible acoustic impact during the construction and operation of the park Solar. The conclusions of this study indicate that the project complies with the current regulations regarding the maximum emission levels of Noise.	Recording of measurements made in the design phase of the project in which it is demonstrated that this during its Construction, not exceed the maximum limits set by the standard.
Water				
D.F. L N º 725/67	73	Construction and operation	Construction phase: A total of 100 liters per person of potable water will be available in the slaughter plant, complying with the requirements of DS N ° 594/99 minsal. This water will be acquired through a sanitary company that has the authorization of the health care of the region of Tarapacá. Operation phase: The water for the sanitary installations will be provided by the nearest authorized	Copy of contracts with companies responsible for supplying drinking water for workers. Copy of the sanitary authorization of the company responsible for supplying drinking water.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			health company, transferred by means of a tank truck and stored in ponds. Drinking water intended for consumption shall be provided by means of dispensing machines with a bottles of 20 litres, service to be provided by an enterprise that has the permits Respective.	
D. S N º 594/99	12, 13, 14, 15, 19, 21 and 24	Construction and operation	Construction phase: The water to be used for human consumption shall be determined as indicated in DS No. 594/1999 minsal. A provision of 100 L/HAB./day shall be considered for consumption in hygienic services and potable water. The water for human consumption will be provided by means of potable water tanks or purified, cold and hot water dispensers, which will be supplied by a duly certified local company, complying with all the physicochemical requirements,	Construction phase: Copy of contract concluded with local company in charge of supplying the potable water ponds. Record of the daily attendance of workers to slaughter, to determine if the amount of water is sufficient. A copy of analysis that gives an account of the physical and chemical characteristics of drinking water. Operation phase: Record of the daily attendance of workers to slaughter, to determine if the amount of water is sufficient. A copy of analysis that

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			Radioactive and bacteriological provisions established in the applicable regulation, those defined in the standard Of Nch 409/1 of. 05 on drinking water requirements. Operation phase: In the operation phase Of the project it will be necessary to supply potable water for the consumption of the operators and for the operation of the sanitary installations. An average demand of 100 liters of water per person a day is estimated, which must comply with the parameters of the Nch N ° 409 Of 2005, Potable Water-Part 1: Requirements. The water for the facilities will be provided by the nearest sanitary company, transferred by means of a tank truck and stored in ponds. Drinking water intended for consumption shall be provided by means of dispensing machines	gives an account of the physical and chemical characteristics of drinking water. Copy of contract concluded with company responsible for supplying drinking water.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			with a bottles of 20 litres, service to be provided by a company with the respective permits.	
DS N º 735/69 (Modified by D. S N º 10/94)	All	All phases	Construction phase: Water for consumption Human will be provided by drinking water ponds or purified, cold and hot water dispensers, which will be supplied by a duly certified local company, complying with all the requirements physicochemical, radioactive and Established in the applicable regulation, which are defined in the standard Of Nch 409/1 of. 05 on drinking water requirements. Operation phase: Drinking water intended for consumption shall be provided by means of dispensing machines with a bottles of 20 litres, service to be provided by a company with the respective permits.	Sanitary authorisation of companies responsible for Provide potable water for project facilities.
Soil				
D.F. L N º	55	Construction	Is Will request the	Obtaining the permit

Standard	Article	Application phase	Form of Compliance	Compliance indicator
458/1975			change of land use in the Terms of article No. 55 of this law.	described in article N º 160 of the DS N º 40/2012 MMA. Obtaining a favorable report from La remise MINVU. Obtaining the authorization of the agriculture. Plans showing the site affection for the CUS.
Flora and vegetation				
R.e. N º 133/05	All	Construction	During this phase, the purchase of inputs, raw materials and material will be required. For the purchase of these goods, it will be necessary to import the equipment, such as conductors, insulators, cables, electrical equipment, etc., which usually come in wooden packaging, so it will be strictly complied with this resolution.	Comply with the requirements of SAG at the time of its release in customs. In this case a compliance indicator of 100% is established.
Archaeological heritage				
Law n º 17.288/70 and DS N º 484/1990	21 and 26	Construction	The area where the project will be located, is crossed in large amount of its extension by caravan routes that date from the time in which it is They developed nitrate	Obtaining the sectoral environmental permit described in article N º 132 of the DS N º 40/2012 MMA. Authorization of the Council of Monuments Nationals for "collection of

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			economic activities in the area, without prejudice to the likelihood that many of these correspond to pre-Hispanic routes. Because the project execution will affect these routes. The holder shall apply the following compensation and mitigation measures to the impact: Compensation measures: 1. Collection of isolated findings, which correspond to movable property (earthenware, bottles, among others associated with historical activities) (PAS 132) 2. Exhaustive register of real estate, which would correspond to linear traits (caravan footprints, railway lines), structures and housing remains (PAS 132) Mitigation measures: 1. Fencing of movable and Real estate that will not be directly affected, but because of	Findings" and "exhaustive registration" Copies of reports that account for the collection of findings and exhaustive registration. Photographic registry of perimeter fencing. A copy of the notice given to the Council of National Monuments on the completion of the perimeter fencing. A copy of the notice given to the Council of National monuments to eventual archaeological or paleontological findings.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			its proximity to works or activities of the project require protection during the construction phase. This measure does not require permission, but should be reported to the CMN. Notwithstanding the foregoing, if an archaeological or paleontological finding is made, it shall be proceeded according to the provisions of articles 26 and 27 of this law, that is to say, the works on the working fronts of the or the findings will be paralyzed. , informing immediately in writing and telephonically to the CMN.	
DS N º 484/1990	All	Construction	The area where the project will be located, is crossed in large amount of its extension by caravan routes that date from the time when they developed nitrate economic activities in the zone, without Prejudice that many of these are likely to correspond to pre-	Obtaining the sectoral environmental permit described in article N º 132 of the DS N º 40/2012 MMA. Authorization of the Council of National Monuments for the "collection of Findings" and "registration Comprehensive Copies of reports that

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			Hispanic routes. Because the project execution will affect these routes. The holder shall apply the following compensation and mitigation measures to the impact: Compensation measures: 1. Collection of isolated findings, which correspond to movable property (earthenware, bottles, among others associated with historical activities) (PAS 132) 2. Exhaustive register of real estate, which would correspond to linear traits (caravan footprints, railway lines), structures and housing remains (PAS 132) Mitigation measures: 1. Fencing of movable and immovable property which are not to be directly affected, but which Because of its proximity to works or activities of the project require protection during the construction	account for the collection of findings and exhaustive registration. Photographic registry of perimeter fencing. A copy of the notice given to the Council of National Monuments on the completion of the perimeter fencing. A copy of the notice given to the Council of National monuments to eventual archaeological or paleontological findings.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			phase. This measure does not require permission, but should be reported to the CMN. Notwithstanding the foregoing, if an archaeological or paleontological finding is made, it shall be proceeded according to the provisions of articles 26 and 27 of this law, that is to say, the works on the working fronts of the or the findings will be paralyzed. , informing immediately in writing and telephonically to the CMN.	
Solid waste				
DS N º 148/2003	All	Construction and operation	Construction phase: In the construction phase, hazardous waste will be generated in All The phases. Hazardous waste will be kept temporarily in containers with lids duly labelled. A Hazardous waste cellar, which complies with the requirements of this decree. Storage of this type of waste will not extend	Sanitary authorization of the warehouse of hazardous wastes. Photographic register of containers with cover labelled. Copy of contract concluded with authorized company to carry out the withdrawal of this type of waste. Retirement Record Semiannual waste, in which they contain: date, time, waste and company

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			beyond 6 months. Operation phase: It is estimated that product of the activities of maintenance and cleaning of the installations of the project, will generate hazardous wastes. Hazardous waste will be kept temporarily in containers with lids duly labelled. As for the temporary collection site, the same building will be used for the construction phase.	that makes the withdrawal.
D. S N º 594/99	20	Construction and operation	Construction phase: Waste will be generated from the construction, assembly and unpacking of equipment, mainly wood scraps, cardboard, plastics and metals. It will have containers in the Different working fronts for the primary classification of waste, subsequently, will be classified according to their nature and arranged on a temporary basis in a warehouse of industrial waste, in the sector of installation of	Construction phase: Sanitary authorisation of a yard for the collection of industrial waste. Copy of the contract concluded with the administrator of the authorized dump. Copying contracts with authorized companies For waste recycling. Copy of contract concluded with company responsible for the quarterly waste removal. Registration of quarterly waste, in detail: date, time, quantity of waste and company in charge of

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			operations. Waste such as rubble, wood, ceramics, rubbers and textiles will be available in the nearest authorized dumps. Metal remains may be recycled through authorized companies. The removal of this type of waste will be done once every three months. Operation phase: The industrial waste generated during this phase of the project will be caused by spare parts, cables, among others, in very low quantities. These wastes will be temporarily arranged in a site Specially authorised to be arranged in dumps or recycled, depending on the nature of the waste. As for the collection site, the same industrial waste collection yard built for the construction phase will be used.	the withdrawal. Operation phase: Sanitary clearance of temporary waste storage site. Copy of contract concluded with dump management company to dispose of the waste. Copy of contract concluded with company responsible for the recycling of waste.
D.F. L N º 725/1967.	All	All phases	Construction phase: Waste will be generated from the construction,	Construction phase: Sanitary authorisation of a yard for the collection of

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			assembly and unpacking of equipment, mainly wood scraps, cardboard, plastics and metals. Containers will be counted on the different working fronts for the primary classification of the waste, then they will be classified according to their nature and arranged temporarily in an industrial waste collection yard, in the sector of Installation of operations. Waste such as rubble, wood, Ceramics, gums and textiles will be available in the nearest authorized dumps. Metal remains may be recycled through authorized companies. The removal of this type of waste will be done once every three months. Operation phase: The industrial waste generated during this phase of the project will be caused by spare parts, cables, among others, in very low quantities.	industrial waste. Copy of the contract concluded with the administrator of the authorized dump. Copy of contracts with authorized companies for waste recycling. Copy of contract concluded with company responsible for the quarterly waste removal. Registration of quarterly waste, in detail: date, time, quantity of waste and company in charge of the withdrawal. Operation phase: Sanitary authorization of Temporary waste storage site. Copy of contract concluded with dump management company to dispose of the waste. Copy of contract concluded with company responsible for the recycling of waste.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			These wastes will be arranged temporarily in a site specially authorized to be then arranged in dumps approved or well recycled, depending on the nature of the waste. As for the collection site, the same industrial waste collection yard built for the construction phase will be used.	
D.F. L N º 1/1989	Numeral 25 of Art. 1	Construction and operation	Construction phase: will be counted on Containers on the different working fronts for the primary classification of waste, subsequently, they will be classified according to their nature and arranged on a temporary basis in an industrial waste collection yard, in the installation sector of Tasks. Waste such as rubble, wood, ceramics, rubbers and textiles will be available in the nearest authorized dumps. Metal remains may be recycled through authorized companies.	Sanitary authorization of the collection yard of Industrial waste

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			Operation phase: These wastes will be arranged temporarily in a site specially authorized to be then arranged in dumps approved or well recycled, depending on the nature of the waste. As for the collection site, the same storage yard will be used of industrial waste built for the construction phase.	
Liquid waste, wastewater				
D.F. L N º 725/67	71, Letter B	Construction and Operation	Construction phase: Wastewater will be generated from the use of bathrooms, showers and sinks for a maximum of 600 people, which considering a provision of 100 L/person/day, will generate an effluent 60,000 liters/day, which is to be driven to a water treatment plant. The treated water will be used for humidifying and for the elaboration of the mixture with Bischofita used in the stabilization of the roads during this phase. Operation phase:	Sanitary authorization of the wastewater treatment plant.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			For the treatment of wastewater, the same modular treatment plant for aerobic digestion of the construction phase will be used, which will be resized to Adapt it to the least amount of workers present during the operation stage. It is estimated that the maximum effluent for the operation phase will correspond to 2.000 l/day.	
D. S N º 594/99	26	Construction and Operation	Construction phase: Wastewater will be generated from the use of bathrooms, showers and sinks for a maximum of 600 people, which considering a provision of 100 L/person/day, will generate an effluent 60,000 liters/day, which is to be driven to a water treatment plant. The treated water will be used for humidifying and for the elaboration of the mixture with Bischofita used in the stabilization of the roads during this phase. For those work fronts	Construction phase: Copy of contract concluded with company in charge of removing the chemical baths. Copy of the contract with the subcontracted company and the sanitary one indicating the points for the dumping of the wastewater from the chemical baths. Records of maintenance carried out to the chemical baths in which it will be indicated: date, time and person in charge of carrying out the maintenance. Monitoring and control of wastewaters.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			that are located more than 75 meters away from the health services installed, It will have chemical baths. These will be withdrawn by an authorized company and its contents will be arranged according to the legislation in force. During this phase, proceed as follows: A copy of the current contract or order of purchase shall be kept in work between the undertaking and a sanitary undertaking, indicating the points authorized for the dumping of wastewater from chemical baths. The replacement of chemical baths and portable showers will be carried out every 2 or 3 days. A record of the monitoring and control of these wastes will be kept with the corresponding supporting documentation. Operation phase: In the operation of the	Sanitary authorisation of the wastewater treatment plant. Operation phase: Sanitary authorization of the treatment plant of wastewater

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			project, the waters Services generated will be the product of the operation and maintenance activities carried out to the photovoltaic park. Permanent health Service facilities for the use of staff shall be counted; These facilities will be composed by bathroom, sink and shower and will be located in the operation and maintenance building. For the treatment of wastewater, the same modular treatment plant for aerobic digestion of the construction phase will be used, which will be resized to suit the lowest number of workers present during the operation stage. It is estimated that the maximum effluent for FAsE of operation will correspond to 2.000 L/day.	
DS N º 236/26	3	Construction and operation	The project in both phases will have PlantS of wastewater treatment. In	Sanitary authorization of the treatment plant of wastewater.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			construction phase, it will have a capacity to treat an effluent of 60,000 liters/day, and in operation phase will have a CapaciTo treat an effluent of 2.000 L/day.	
Transportation of Materials				
D.F. L N º 1/2007	56 and 57	Construction and operation	The holder shall take all necessary measures to ensure that the charges do not exceed the maximum weights laid down in the law, and that during the transport of these, they are Duly insured so as not to generate accident hazards. The holder shall require all drivers of vehicles working in any of the areas of the project to carry their driver's license in force	Current Driver License Registration.
Resolution No. 1/95	All	Construction and operation	In the eventual case that the project requires vehicles with dimensions larger than those established, the authorization shall be requested corresponding to the road management and the security measures to be	Authorization of circulation, if necessary.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			adopted in each case will be agreed	
D. S N º 158/1980	2 and 4	Construction and operation	The project considers the transfer of workers and the transport of materials, by means of heavy and medium-sized motor vehicles, by different routes of the region.	Contracts with carriers in which the maximum weight of vehicles that circulates is established.
D. S N º 200/1993	All	Construction and operation	The project considers the transport of materials and workers, by means of heavy and medium-sized motor vehicles, by different urban routes.	Contracts with carriers in which the maximum weight of vehicles that circulates is established
D. S N º 75/1987	All	Construction and operation	The company will require contractors that cargo trucks or vehicles that transport materials, debris or land during the construction phase have blankets that prevent the fall of these materials and dust dispersion.	Photographic records. Moistening Records made to the loading of trucks, indicating: date, time and amount of wet load.
Hazardous substances				
DS N º 78/2009	All	Construction	For the construction phase it will be stored: Oil of Motor, lubricating grease, zinc spray and polyurethane foam. For the storage of these substances, a storage warehouse will be	Sanitary authorization of the storage warehouse of Hazardous substances. Registration of hazardous substances withdrawal, stating: Date, time and quantity withdrawn. Photographic records of

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			enabled which shall comply with the stipulations of this decree. Storage will not exceed 6 months and will be made in separate enclosures, one for hazardous substances and one for non-hazardous substances. For the design of the wineries, it shall be considered the provisions of NCH No. 2,190 of 2003 or the one that replaces it. In the operating phase, there will be no storage of hazardous substances.	the characteristics of the winery.
DS N º 160/2009	All	Construction	It should be noted that there will be inside the slaughter plant, a fuel storage warehouse where seven ponds are to be stored, Surface Stationary, Horizontal and steel ASTM A-36, certified by the Superintendence of electricity and fuel (SEC).	SEC Certification
DS N º 298/1994	Art. 3	Construction	For the transport of loads which, by their characteristics, are	Technical review

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			dangerous or represent risks to the health of persons, public safety or the environment, no spell vehicles shall be used, but only those which comply with the conditions indicated between which are vehicles of less than 15 years old, and which will be periodically required to comply with the corresponding technical reviews	
DS N º 656/2000	All	Construction	The project will require its contractors to use asbestos-containing products in the construction of the camps and slaughter facilities.	A copy of contracts to establish clauses prohibiting the use of asbestos.
R.E. N º 610/1982	All	Construction And Operation	This standard applies To The project, to the extent that it prohibits the use of Binephi Biphenyls (PCB) as dielectric fluid	Copying contracts Concluded with contractors to establish clauses prohibiting the use of Binephi Biphenyls
Native peoples				
Law No. 19,253	All	Construction and operation	In the region of Tarapacá, the Indigenous Development Area (ADI) has been defined.Jiwasa Oraje "which contemplates the	Interviews made to members of the indigenous associations. Register of indigenous communities and associations in the region of Tarapacá, Conadi.

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			communes of Colchane, Camiña, Pozo Almonte, Huara and Pica. Notwithstanding the foregoing, the project "Cielos de Tarapacá" is located more than 25 km from said ADI. There are no indigenous communities within the project area, nor within their area of influence. However, it can be verified that there are three indigenous associations within the area of influence of the project, within the locality of Colonia de Pintado, in three of its sub-sectors, which are the indigenous association Aymara Lands of Jehovah, The Indigenous association Aymara Youth of the desert and the Indigenous association Santa Cruz de Pintado, who were duly interviewed. Of these three associations, and according to information from Conadi requested by law of Transparency	

Standard	Article	Application phase	Form of Compliance	Compliance indicator
			Folio 1426, only the indigenous association is registered and in force. Aymara Jehovah's Lands. It is of the case to note that in this area there are no indigenous patrimonial sites, nor sacred places in which the manifestations of culture or folklore are carried out. In view of all the foregoing, the project shall comply with all the provisions of this law and will not in any way affect groups belonging to native peoples.	

TAB d. Voluntary environmental commitment

Commitment	form of verification	Compliance indicators