Attachment 2

1.1 MONITORING PLAN

Construction period

Environmental item	Item to be monitored	Monitoring site	Frequency	Method	Party in charge
Air quality	H_2S - CO_2	Borinquen Hotel and 4 sites (north, south, east and west) on the well base boundary	During testing period (weeks-one month): every three month (quarterly) and permanent monitoring station	Field measurement	ICE

CALIDAD DEL AIRE - CAMPO GEOTERMICO BORINQUEN

Descripcion_Sitio	CO2_Min	CO2_Prom	CO2_Max	CO2_MaxStd	H2S_Min	H2S_Prom	H2S_Max	H2S_MaxStd
CAÑAS DULCES	389	394	398	5000	0,000	0,001	0,001	0,010
CASA MAQUINAS BORINQUEN	328	348	373	5000	0,000	0,001	0,001	0,010
HOTEL BORINQUEN	328	353	371	5000	0,000	0,000	0,000	0,010
HOTEL BUENA VISTA	338	354	374	5000	0,000	0,000	0,001	0,010
PLB-02	329	347	372	5000	0,000	0,001	0,001	0,010
PLB-03	325	346	372	5000	0,000	0,000	0,001	0,010
PLB-05	328	344	366	5000	0,000	0,001	0,002	0,010
PLB-09	327	345	369	5000	0,000	0,000	0,000	0,010
POBLADO BUENA VISTA	328	351	383	5000	0,000	0,000	0,001	0,010

Environmental item	Item to be monitored	Monitoring site	Frequency	Method	Party in charge
Noise	Noise level	Borinquen Hotel, one site on the well base boundary (in the hotel direction), and 4 sites (north, south, east and west) in the vicinity of the power plant site.	During testing period (weeks-one month): once/week During power plant construction: monthly (with peak time for each construction job taken into account)	Field measurement	ICE

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RUIDO - CAMPO GEOTERMICO BORINQUEN

Descripcion_Sitio	Ruido_Min	Ruido_Prom	Ruido_Max	Ruido_MaxStd	RuidoLog
CAÑAS DULCES	39	43	48	65	45
CASA MAQUINAS BORINQUEN	40	49	70	65	52
HOTEL BORINQUEN	33	38	53	65	41
HOTEL BUENA VISTA	33	38	54	65	41
PLB-02	33	42	70	65	45
PLB-03	32	38	53	65	40
PLB-05	52	63	76	65	67
PLB-09	32	40	65	65	42
POBLADO BUENA VISTA	34	36	39	65	38

Environmental item	Item to be monitored	Monitoring site	Frequency	Method	Party in charge
Water quality	1) pH, Electric conductivity (EC), Chlorides (Cl-)	Upper and lower streams of the Salitral rivers, upper and lower streams within the project area (AP) of the creek running.	1) During testing period: twice/testing period (weeks-one month)	Laboratory analysis of collected samples	ICE and External laboratory to hire by ICE

Attachment 2

Geothermal Field	CG-BRQ
Monitored variable	pH Lab.

Site	Max.	Min.	Avg.
CG-BRQ --- NACIENTE DOS QUEBRADAS	7,86	5,99	6,9
CG-BRQ --- NACIENTE NAVARIT	7,87	5,71	6,8
CG-BRQ --- QUEBRADA GATA	8,12	5,36	7,3
CG-BRQ --- QUEBRADA TENCHA (PBR11)	7,93	5,76	6,9
CG-BRQ --- RIO SALITRAL	8,34	6,04	7,5
CG-BRQ --- RIO TIZATE	8,39	6,72	7,8
CG-BRQ --- TERMAL LOS PEDERNALES	7,28	5,95	6,7
CG-BRQ --- TOMA AGUA LAS LILAS	7,01	5,9	6,7
CG-BRQ --- TOMA DE AGUA PLB-02	7,97	4,66	7,3
CG-BRQ --- TOMA DE AGUA PLB-05	8,21	5,8	7,1
CG-BRQ --- LAGUNA DE ALMACENAMIENTO	7,84	3,02	7,1

Geothermal Field	CG-BRQ
Monitored variable	Cond. (µS/cm)

Site	Max.	Min.	Avg.
CG-BRQ --- NACIENTE DOS QUEBRADAS	210,9	97	154,9
CG-BRQ --- NACIENTE NAVARIT	245,4	148,9	183,7
CG-BRQ --- QUEBRADA GATA	348	115,4	212,5
CG-BRQ --- QUEBRADA TENCHA (PBR11)	263	74,5	138,2
CG-BRQ --- RIO SALITRAL	328	80,8	170,3
CG-BRQ --- RIO TIZATE	306,5	125,2	217,5
CG-BRQ --- TERMAL LOS PEDERNALES	238	138,7	165,8
CG-BRQ --- TOMA AGUA LAS LILAS	213	141,5	179,2
CG-BRQ --- TOMA DE AGUA PLB-02	432,3	70,6	119,2
CG-BRQ --- TOMA DE AGUA PLB-05	971	78,8	166,2
CG-BRQ --- LAGUNA DE ALMACENAMIENTO	885	92	275,7

Attachment 2

Geothermal Field	CG-BRQ
Monitored variable	Cl- (ppm)

Site	**Max.**	**Min.**	**Avg.**
CG-BRQ --- NACIENTE DOS QUEBRADAS	8	2,2	4,2
CG-BRQ --- NACIENTE NAVARIT	7,8	2	4,2
CG-BRQ --- QUEBRADA GATA	12,2	1,31	5,6
CG-BRQ --- QUEBRADA TENCHA (PBR11)	11,3	1,2	4,2
CG-BRQ --- RIO SALITRAL	27,94	1,35	6,4
CG-BRQ --- RIO TIZATE	16,1	2,2	8,6
CG-BRQ --- TERMAL LOS PEDERNALES	4,72	2,47	3,2
CG-BRQ --- TOMA AGUA LAS LILAS	11,5	3,79	5,5
CG-BRQ --- TOMA DE AGUA PLB-02	7,49	2,75	4,3
CG-BRQ --- TOMA DE AGUA PLB-05	13,1	1,42	4,4
CG-BRQ --- LAGUNA DE ALMACENAMIENTO	8,18	0,97	3,6

Water quality	2) Oils and grease,	Outlet of the settling basin (construction work effluents). Only in the presence of machinery in the project area (AP)	2) Oils and grease, every six months (semester) After 2 years, the continuation of monitoring will be reconsidered based on opinions of professional experts.)	Laboratory analysis of collected samples	ICE and External laboratory to hire by ICE

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Site	Oils and grease (mg/L)	
Standard 50 mg/L	**Min**	**Max**
Q. Gata Abajo	<0,2	8
Q. Gata Arriba	<0,2	<1
Río Salitral Abajo	<0,2	4
Río Salitral Arriba	<0,2	<1
Río Tizate Abajo	<0,2	<1
Río Tizate Arriba	<0,2	<1
Tencha Abajo	<0,2	<1
Tencha Arriba	<0,2	<1
Toma PLB-02	<0,2	<1
Toma PLB-05	<0,2	<1

Water quality	3) Hexavalent chrome (Cr+6), and Mercury (Hg) and COD	NOT APPLICABLE (NA)	NOT APPLICABLE (NA)	--------	
Water quality	4) Arsenic (As)	Only in drinking water intakes	every six months (semester) After 2 years, the continuation of monitoring will be reconsidered based on opinions of professional experts.)	Laboratory analysis of collected samples	ICE and External laboratory to hire by ICE

Site	Arsenic (mg/L)	
Standard 0,01 mg/L	**Min**	**Max**
Plantel Curubandé	<1	<2

Attachment 2

Environmental item	Item to be monitored	Monitoring site	Frequency	Method	Party in charge
Soil	Complete analysis - Cadmium (Cd), Lead (Pb), As, Cr^{+6}, Hg, etc.	Four points in the vicinity of a representative geothermal field	One year before construction starts, and once five years after operation starts	Laboratory analysis of collected samples	ICE
		Four points in the vicinity of the power plant site	One year before construction starts, and once five years after operation starts		
	Not applicable for this period. Monitoring in 2023.				
Environmental item	**Item to be monitored**	**Monitoring site**	**Frequency**	**Method**	**Party in charge**
Fauna and flora	Plants and animals (birds, amphibians, reptiles, and mammals)	Area in the vicinity of wells and power plant site, the project site side of the national park, and gallery forest along the Salitral river	Monthly (with rainy and dry seasons, breeding seasons, etc. taken into account)	Visual observation records and photographs	ICE

Attachment 2

Results of monitoring and state of conservation of species. January, February and March 2023.

Group	State of conservation		
Amphibian	CITES	IUCN	MINAE N° 40548-Regulations
Agalychnis callidryas	II		RP
Craugastor fitzingeri			
Craugastor megacephalus			RP
Craugastor mimus			
Diasporus diastema			
Engystomops pustulosus			RP
Lithobates taylori			
Lithobates warszewitschii			
Rhinella horribilis			
Smilisca baudinii			
Smilisca sordida			
Trachycephalus typhonius			
Duellmanohyla rufioculis			
Birds			
Amazilia tzacatl	II		RP
Amazona albifrons	II		RP
Antrostomus carolinensis			
Archilochus colubris	II		RP
Arremonops rufivirgatus			
Basileuterus rufifrons			
Brotogeris jugularis	II		RP
Buteo plagiatus	II		RP
Calocitta formosa			
Campephilus guatemalensis			
Campylopterus hemileucurus	II		RP
Campylorhynchus rufinucha			
Cantorchilus modestus			
Cathartes aura			
Chiroxiphia linearis			
Ciccaba nigrolineata	II		RP
Ciccaba virgata	II		RP

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Coragyps atratus				
Crax rubra	III	VU	RP	
Crotophaga sulcirostris				
Crypturellus cinnamomeus				
Dendrocincla homochroa				
Empidonax flaviventris				
Eucometis penicillata				
Eumomota superciliosa				
Euphonia hirundinacea				
Euphonia luteicapilla				
Eupsittula canicularis	II		RP	
Falco rufigularis	II		RP	
Geothlypis poliocephala				
Habia fuscicauda				
Henicorhina leucosticta				
Herpetotheres cachinnans	II		RP	
Hylocharis eliciae	II		RP	
Henicorhina leucosticta				
Herpetotheres cachinnans	II		RP	
Hylocharis eliciae	II		RP	
Hylocichla mustelina		NT		
Icterus galbula				
Leiothlypis peregrina				
Lepidocolaptes souleyetii				
Leptotila verreauxi				
Megarynchus pitangua				
Melanerpes hoffmannii				
Mniotilta varia				
Momotus lessonii				
Morococcyx erythropygus				
Myiarchus crinitus				
Myiarchus tuberculifer				
Myiarchus tyrannulus				
Myiothlypis fulvicauda				
Myiozetetes similis				
Nyctibius jamaicensis				
Nyctidromus albicollis				
Pachysylvia decurtatus				

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Passerina caerulea				
Patagioenas flavirostris				
Penelope purpurascens	III		RP	
Peucaea ruficauda				
Phaethornis guy	II		RP	
Phaethornis striigularis	II		RP	
Piaya cayana				
Pitangus sulphuratus				
Psarocolius montezuma				
Psilorhinus morio				
Ramphastos sulfuratus	II		RP	
Setophaga petechia				
Sittasomus griseicapillus				
Thryophilus pleurostictus				
Thryophilus rufalbus				
Tolmomyias sulphurescens				
Trogon melanocephalus				
Turdus grayi				
Tyrannus melancholicus				
Vireo flavifrons				
Vireo olivaceus				
Volatinia jacarina				
Mammals (Visual, Sherman, Mist nets and Camera trap)				
Alouatta palliata	I		EN	
Artibeus jamaicensis			RP	
Artibeus lituratus				
Artibeus tolteca				
Artibeus watsoni				
Ateles geoffroyi	I	EN	EN	
Carollia castanea				
Carollia perspicillata				
Carollia sowelli				
Cebus imitator	II		RP	
Cuniculus paca	III			
Dasyprocta punctata	III			
Glossophaga commissarisi				
Glossophaga soricina				
Marmosa mexicana				

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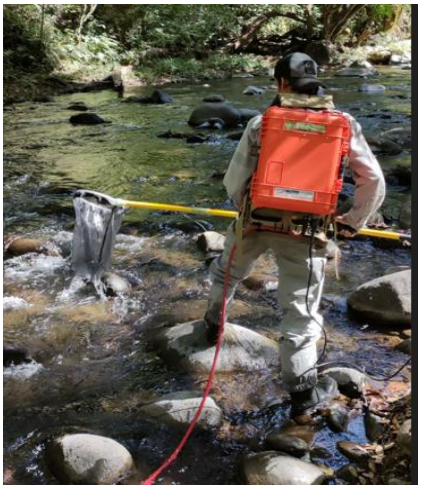
Myotis albescens			
Nasua narica	III		
Odocoileus virginianus	III		
Platyrrhinus helleri			
Pteronotus mesoamericanus			
Puma concolor	I		EN
Sciurus variegatoides			
Tapirus bairdii	I	EN	EN
Tylomys watsoni			
Uroderma bilobatum			
Vampyriscus nymphaea			RP
Conepatus semistriatus			
Didelphis marsupialis			
Didelphis virginiana			
Eira barbara			
Leopardus pardalis	I		EN
Pecari tajacu	II		RP
Sylvilagus floridanus			
Reptiles			
Boa imperator	II		RP
Bothrops asper			
Coleonyx mitratus			RP
Ctenosaura similis			
Enulius flavitorques			
Holcosus festivus			
Leptodeira rhombifera			
Micrurus nigrocinctus	III		
Norops cupreus			
Norops oxylophus			
Scolecophis atrocinctus			
Sphenomorphus cherriei			
Tantilla vermiformis			

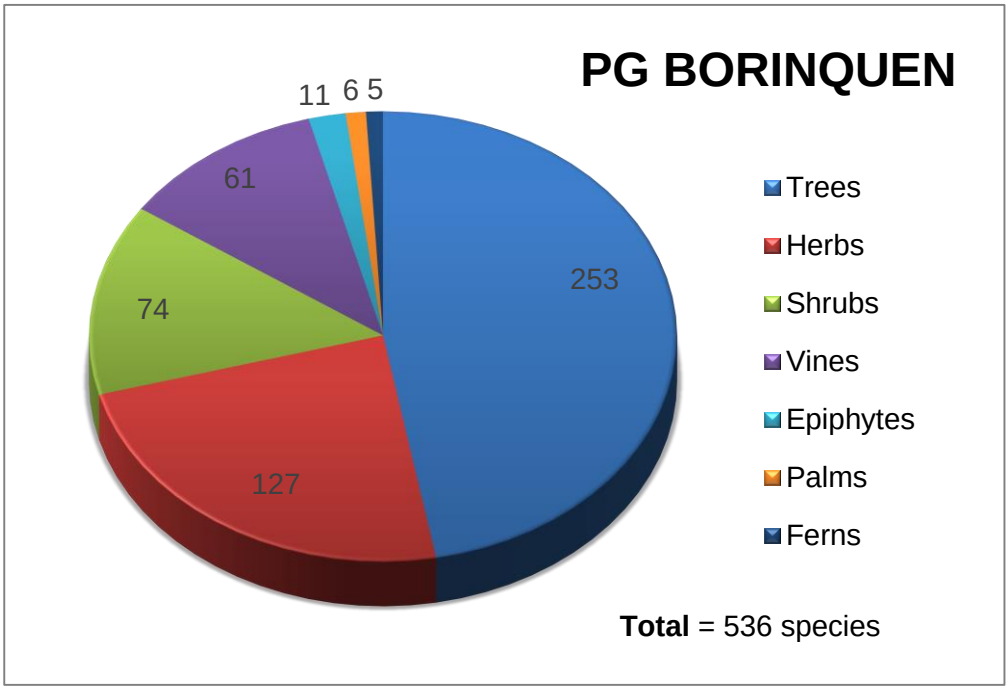
Attachment 2

I=Appendix I CITES, II=Appendix II CITES, III=Appendix III CITES, IUCN= The International Union for Conservation of Nature, CITES=The Convention on International Trade in Endangered Species of Wild Fauna and Flora, NT= Near Threatened, EN= endangered species, RP= species with reduced or threatened populations, VU= Vulnerable.

Wild animals monitoring and fish monitoring. February 2023.



Distribution of flora species by habits registered in the Borinquen Geothermal Field. March 2014 – March 2023.



Attachment 2

Environmental item	Item to be monitored	Monitoring site	Frequency	Method	Party in charge
Waste*	Generated amount	Power plant construction site	Monthly	Total of generated amount (weight or volume)	Construction contractor
	Not applicable for this period. In 2023 starts the construction of plant.				

*Appropriate waste management including disposal of sludge will be implemented in accordance with Law for the Integrated Management of Residues (Law 8839), and in reference to Resolution No. 1948-2008-SETENA17 (page26).