

1.1 MONITORING PLAN

Construction period

| Environmental item | Item to be monitored | Monitoring site | Frequency | Method | Party in charge | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------------------------------------|--|--|-------------------|-----------------|----------------------------|---------------|----------------|---------------|--------------|---------------|-----------------|---------------|--------------|--------------|-----|-----|-----|------|-------|-------|-------|-------|-------------------------|-----|-----|-----|------|-------|-------|-------|-------|-----------------|-----|-----|-----|------|-------|-------|-------|-------|-------------------|-----|-----|-----|------|-------|-------|-------|-------|--------|-----|-----|-----|------|-------|-------|-------|-------|--------|-----|-----|-----|------|-------|-------|-------|-------|--------|-----|-----|-----|------|-------|-------|-------|-------|--------|-----|-----|-----|------|-------|-------|-------|-------|--------|-----|-----|-----|------|-------|-------|-------|-------|---------------------|-----|-----|-----|------|-------|-------|-------|-------|
| Air quality | H ₂ S - 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>CAMPO GEOTERMICO BORINQUEN</th> <th>Min CO2 (ppm)</th> <th>Prom CO2 (ppm)</th> <th>Max CO2 (ppm)</th> <th>Standard CO2</th> <th>Min H2S (ppm)</th> <th>Prom H2S2 (ppm)</th> <th>Max H2S (ppm)</th> <th>Standard H2S</th> </tr> </thead> <tbody> <tr> <td>CAÑAS DULCES</td> <td>304</td> <td>336</td> <td>356</td> <td>5000</td> <td>0.000</td> <td>0.001</td> <td>0.002</td> <td>0.014</td> </tr> <tr> <td>CASA MAQUINAS BORINQUEN</td> <td>222</td> <td>287</td> <td>329</td> <td>5000</td> <td>0.000</td> <td>0.000</td> <td>0.002</td> <td>0.014</td> </tr> <tr> <td>HOTEL BORINQUEN</td> <td>219</td> <td>325</td> <td>369</td> <td>5000</td> <td>0.000</td> <td>0.003</td> <td>0.007</td> <td>0.014</td> </tr> <tr> <td>HOTEL BUENA VISTA</td> <td>227</td> <td>313</td> <td>350</td> <td>5000</td> <td>0.000</td> <td>0.000</td> <td>0.002</td> <td>0.014</td> </tr> <tr> <td>PLB-02</td> <td>231</td> <td>298</td> <td>348</td> <td>5000</td> <td>0.000</td> <td>0.001</td> <td>0.002</td> <td>0.014</td> </tr> <tr> <td>PLB-03</td> <td>135</td> <td>304</td> <td>350</td> <td>5000</td> <td>0.000</td> <td>0.000</td> <td>0.002</td> <td>0.014</td> </tr> <tr> <td>PLB-04</td> <td>221</td> <td>292</td> <td>360</td> <td>5000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.014</td> </tr> <tr> <td>PLB-05</td> <td>129</td> <td>289</td> <td>356</td> <td>5000</td> <td>0.000</td> <td>0.001</td> <td>0.004</td> <td>0.014</td> </tr> <tr> <td>PLB-09</td> <td>101</td> <td>285</td> <td>339</td> <td>5000</td> <td>0.000</td> <td>0.000</td> <td>0.001</td> <td>0.014</td> </tr> <tr> <td>POBLADO BUENA VISTA</td> <td>285</td> <td>326</td> <td>347</td> <td>5000</td> <td>0.000</td> <td>0.000</td> <td>0.001</td> <td>0.014</td> </tr> </tbody> </table> | | | | | | CAMPO GEOTERMICO BORINQUEN | Min CO2 (ppm) | Prom CO2 (ppm) | Max CO2 (ppm) | Standard CO2 | Min H2S (ppm) | Prom H2S2 (ppm) | Max H2S (ppm) | Standard H2S | CAÑAS DULCES | 304 | 336 | 356 | 5000 | 0.000 | 0.001 | 0.002 | 0.014 | CASA MAQUINAS BORINQUEN | 222 | 287 | 329 | 5000 | 0.000 | 0.000 | 0.002 | 0.014 | HOTEL BORINQUEN | 219 | 325 | 369 | 5000 | 0.000 | 0.003 | 0.007 | 0.014 | HOTEL BUENA VISTA | 227 | 313 | 350 | 5000 | 0.000 | 0.000 | 0.002 | 0.014 | PLB-02 | 231 | 298 | 348 | 5000 | 0.000 | 0.001 | 0.002 | 0.014 | PLB-03 | 135 | 304 | 350 | 5000 | 0.000 | 0.000 | 0.002 | 0.014 | PLB-04 | 221 | 292 | 360 | 5000 | 0.000 | 0.000 | 0.000 | 0.014 | PLB-05 | 129 | 289 | 356 | 5000 | 0.000 | 0.001 | 0.004 | 0.014 | PLB-09 | 101 | 285 | 339 | 5000 | 0.000 | 0.000 | 0.001 | 0.014 | POBLADO BUENA VISTA | 285 | 326 | 347 | 5000 | 0.000 | 0.000 | 0.001 | 0.014 |
| CAMPO GEOTERMICO BORINQUEN | Min CO2 (ppm) | Prom CO2 (ppm) | Max CO2 (ppm) | Standard CO2 | Min H2S (ppm) | Prom H2S2 (ppm) | Max H2S (ppm) | Standard H2S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAÑAS DULCES | 304 | 336 | 356 | 5000 | 0.000 | 0.001 | 0.002 | 0.014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CASA MAQUINAS BORINQUEN | 222 | 287 | 329 | 5000 | 0.000 | 0.000 | 0.002 | 0.014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HOTEL BORINQUEN | 219 | 325 | 369 | 5000 | 0.000 | 0.003 | 0.007 | 0.014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HOTEL BUENA VISTA | 227 | 313 | 350 | 5000 | 0.000 | 0.000 | 0.002 | 0.014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PLB-02 | 231 | 298 | 348 | 5000 | 0.000 | 0.001 | 0.002 | 0.014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PLB-03 | 135 | 304 | 350 | 5000 | 0.000 | 0.000 | 0.002 | 0.014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PLB-04 | 221 | 292 | 360 | 5000 | 0.000 | 0.000 | 0.000 | 0.014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PLB-05 | 129 | 289 | 356 | 5000 | 0.000 | 0.001 | 0.004 | 0.014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PLB-09 | 101 | 285 | 339 | 5000 | 0.000 | 0.000 | 0.001 | 0.014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POBLADO BUENA VISTA | 285 | 326 | 347 | 5000 | 0.000 | 0.000 | 0.001 | 0.014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Attachment 2

| CAMPO GEOTERMICO BORINQUEN | Min Ruido (dB) | Prom Ruido (dB) | Max Ruido (dB) | Standard Ruido |
|----------------------------|----------------|-----------------|----------------|----------------|
| CAÑAS DULCES | 37 | 43 | 46 | 65 |
| CASA MAQUINAS BORINQUEN | 34 | 36 | 42 | 65 |
| HOTEL BORINQUEN | 46 | 49 | 57 | 65 |
| HOTEL BUENA VISTA | 38 | 44 | 51 | 65 |
| PLB-02 | 33 | 41 | 61 | 65 |
| PLB-03 | 34 | 42 | 62 | 65 |
| PLB-04 | 34 | 36 | 47 | 65 |
| PLB-05 | 32 | 45 | 55 | 65 |
| PLB-09 | 49 | 57 | 71 | 65 |
| POBLADO BUENA VISTA | 34 | 37 | 44 | 65 |

| 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

| Site | pH | | | Conductivity (µS/cm) | | | Chlorides (ppm) | | |
|----------------------------------|------|------|------|----------------------|--------|--------|-----------------|-------|-------|
| Standard | 5-9 | | | N/A | | | 500 | | |
| | Min | Max | Avg | Min | Max | Avg | Min | Max | Avg |
| SALITRAL - PUENTE HOTEL | 6.50 | 8.06 | 7.55 | 101.90 | 265.00 | 178.32 | 2.49 | 15.60 | 7.23 |
| SALITRAL PGB-03 | 6.04 | 8.34 | 7.52 | 100.30 | 283.00 | 169.15 | 2.91 | 17.00 | 6.57 |
| TOMA DE AGUA PGB-01 AGUAS ARRIBA | 6.30 | 8.00 | 7.37 | 120.50 | 387.00 | 238.44 | 2.79 | 18.80 | 11.40 |
| RIO SALITRAL ABAJO - POZO 4 | 6.30 | 8.20 | 7.56 | 100.70 | 323.00 | 168.48 | 2.41 | 19.00 | 6.40 |
| NACIENTE NARAVIT | 5.71 | 7.83 | 6.74 | 150.90 | 245.40 | 185.19 | 2.00 | 7.80 | 4.19 |
| NACIENTE DOS QUEBRADAS | 5.99 | 7.72 | 6.74 | 97.00 | 210.90 | 156.32 | 2.50 | 8.00 | 4.10 |
| QUEBRADA PACAYALES | 6.86 | 7.93 | 7.47 | 86.50 | 258.20 | 154.26 | 3.04 | 11.70 | 5.43 |
| QUEBRADA GATA | 5.36 | 8.12 | 7.20 | 122.50 | 348.00 | 210.68 | 1.31 | 12.20 | 5.75 |
| TERMAL LOS PEDERNALES | 5.95 | 7.28 | 6.63 | 138.70 | 181.70 | 158.67 | 2.64 | 4.72 | 3.16 |
| TOMA AGUA LAS LILAS | 5.90 | 7.01 | 6.65 | 141.50 | 189.00 | 177.11 | 3.79 | 11.50 | 5.53 |
| Q. GALLINON | 6.84 | 8.48 | 7.59 | 158.10 | 336.00 | 242.73 | 4.82 | 14.10 | 8.27 |
| R. TIZATE ARRIBA | 6.36 | 8.02 | 7.59 | 127.80 | 345.00 | 225.69 | 4.50 | 15.00 | 8.80 |
| R. TIZATE ABAJO | 7.59 | 8.27 | 0.00 | 127.40 | 273.00 | 218.35 | 5.20 | 16.10 | 8.84 |
| PBR11 ARRIBA | 5.76 | 7.81 | 6.98 | 74.50 | 263.00 | 147.28 | 1.80 | 11.30 | 5.17 |

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

| Site | Oils and grease (ppm) | |
|-----------------|-----------------------|------|
| Standard | 50 | |
| | Min | Max |
| SALITRAL PGB-03 | <1 | 4.00 |
| QUEBRADA GATA | <1 | 4.00 |

Attachment 2

| | | | | | |
|----------------------|---|---------------------|---------------------|-------|--|
| 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 | |
| | Min | Max |
| CAMPAMENTO CURUBANDE | <0.001 | <0.002 |

| 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 2020. | | | | | |

| Environmental item | Item to be monitored | Monitoring site | Frequency | Method | Party in charge |
|--------------------|----------------------|-----------------|-----------|--------|-----------------|
|--------------------|----------------------|-----------------|-----------|--------|-----------------|

Attachment 2

| | | | | | |
|------------------------|---|---|---|--|-----|
| 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

| Specie in Plant Area | Total |
|---------------------------|-------|
| Alouatta palliata | 21 |
| Ateles geoffroyi | 20 |
| Artibeus jamaicensis | 8 |
| Cebus capucinus | 8 |
| Carollia perspicillata | 6 |
| Odocoileus virginianus | 6 |
| Carollia subrufa | 4 |
| Dasypus novemcinctus | 4 |
| Sciurus variegatoides | 4 |
| Carollia sowelli | 3 |
| Desmodus rotundus | 3 |
| Nasua narica | 3 |
| Artibeus lituratus | 2 |
| Dasypsecta punctata | 2 |
| Dermanura phaeotis | 2 |
| Dermanura toltecus | 2 |
| Lamproncyterus brachyotis | 2 |
| Myotis keaysi | 2 |
| Myotis nigricans | 2 |
| Pteronotus mesoamericanus | 2 |
| Carollia castanea | 1 |
| Dermanura watsoni | 1 |
| Leopardus pardalis | 1 |
| Marmosa mexicana | 1 |
| Mus musculus | 1 |
| Myotis albescens | 1 |
| Myotis elegans | 1 |
| Nyctomys sumichrasti | 1 |
| Nyctomys sumichrasti | 1 |
| Platyrrhinus helleri | 1 |
| Rhogeessa bickhami | 1 |
| Sciurus deppei | 1 |
| Sphiggurus mexicanus | 1 |
| Sturnira parvidens | 1 |
| Tamandua mexicana | 1 |
| Uroderma bilobatum | 1 |

| Specie in direct influence area PGB | Total |
|-------------------------------------|-------|
| <i>Dasyprocta punctata</i> | 90 |
| <i>Ateles geoffroyi</i> | 58 |
| <i>Alouatta palliata</i> | 54 |
| <i>Artibeus jamaicensis</i> | 52 |
| <i>Cuniculus paca</i> | 51 |
| <i>Nasua narica</i> | 51 |
| <i>Cebus capucinus</i> | 44 |
| <i>Carollia perspicillata</i> | 43 |
| <i>Dasypus novemcinctus</i> | 43 |
| <i>Liomys salvini</i> | 37 |
| <i>Sciurus variegatoides</i> | 29 |
| <i>Desmodus rotundus</i> | 28 |
| <i>Sigmodon hirsutus</i> | 27 |
| <i>Odocoileus virginianus</i> | 26 |
| <i>Dermanura toltecus</i> | 25 |
| <i>Carollia sowelli</i> | 21 |
| <i>Heteromys nubicolens</i> | 21 |
| <i>Dermanura phaeotis</i> | 18 |
| <i>Platyrrhinus helleri</i> | 18 |
| <i>Artibeus lituratus</i> | 17 |
| <i>Glossophaga soricina</i> | 17 |
| <i>Sturnira parvidens</i> | 17 |
| <i>Leopardus pardalis</i> | 16 |
| <i>Carollia subrufa</i> | 15 |
| <i>Eira barbara</i> | 13 |
| <i>Sylvilagus floridanus</i> | 11 |
| <i>Didelphis marsupialis</i> | 9 |
| <i>Pteronotus mesoamericanus</i> | 9 |
| <i>Potos flavus</i> | 8 |
| <i>Sciurus deppei</i> | 8 |
| <i>Uroderma bilobatum</i> | 8 |
| <i>Carollia castanea</i> | 7 |
| <i>Conepatus semistriatus</i> | 7 |
| <i>Myotis keaysi</i> | 7 |
| <i>Tylomys watsoni</i> | 7 |
| <i>Dermanura watsoni</i> | 5 |
| <i>Glossophaga commissarisi</i> | 5 |

Attachment 2

| | |
|-----------------------------------|---|
| <i>Micronycteris microtis</i> | 5 |
| <i>Panthera onca</i> | 5 |
| <i>Puma concolor</i> | 5 |
| <i>Tamandua mexicana</i> | 5 |
| <i>Vampyressa thuyone</i> | 5 |
| <i>Lamproncycterus brachyotis</i> | 4 |
| <i>Lontra longicaudis</i> | 4 |
| <i>Micronycteris schmidtorum</i> | 4 |
| <i>Pecari tajacu</i> | 4 |
| <i>Tapirus bairdii</i> | 4 |
| <i>Didelphis virginiana</i> | 3 |
| <i>Marmosa mexicana</i> | 3 |
| <i>Micronycteris hirsuta</i> | 3 |
| <i>Mus musculus</i> | 3 |
| <i>Myotis albescens</i> | 3 |
| <i>Ototylomys phyllotis</i> | 3 |
| <i>Philander opossum</i> | 3 |
| <i>Rhogeessa bickhami</i> | 3 |
| <i>Vampyriscus nymphaea</i> | 3 |
| <i>Caluromys derbianus</i> | 2 |
| <i>Canis latrans</i> | 2 |
| <i>Centurio senex</i> | 2 |
| <i>Eptesicus furinalis</i> | 2 |
| <i>Glossophaga leachii</i> | 2 |
| <i>Lonchophylla mordax</i> | 2 |
| <i>Myotis nigricans</i> | 2 |
| <i>Nyctomys sumichrasti</i> | 2 |
| <i>Orthogeomys cherriei</i> | 2 |
| <i>Tayassu pecari</i> | 2 |
| <i>Vampyrodes major</i> | 2 |
| <i>Chiroderma villosum</i> | 1 |
| <i>Dermanura aztecus</i> | 1 |
| <i>Enchisthenes hartii</i> | 1 |
| <i>Eptesicus brasiliensis</i> | 1 |
| <i>Galictis vittata</i> | 1 |
| <i>Leopardus wiedii</i> | 1 |
| <i>Lonchophylla robusta</i> | 1 |
| <i>Lophostoma brasiliense</i> | 1 |

Attachment 2

| | | <i>Myotis elegans</i> | | 1 | |
|---------------------------|---|-------------------------------|------------------|--|-------------------------|
| | | <i>Myotis oxyotus</i> | | 1 | |
| | | <i>Natalus mexicanus</i> | | 1 | |
| | | <i>Nyctomys sumichrasti</i> | | 1 | |
| | | <i>Phyllostomus discolor</i> | | 1 | |
| | | <i>Pteronotus gymnonotus</i> | | 1 | |
| | | <i>Saccopteryx bilineata</i> | | 1 | |
| | | <i>Sphiggurus mexicanus</i> | | 1 | |
| | | <i>Sturnira hondurensis</i> | | 1 | |
| 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 2021 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).