



May 14, 2015

CERTIFIED MAIL 7012 2920 0001 2295 0194

Joan Leary Matthews
Director- Clean Water Regulatory Branch
USEPA Region 2
290 Broadway, 24th Floor
New York, NY 10007

**RE: REQUEST FOR MODIFICATION OF NPDES PERMIT TO REMOVE SULFATE PARAMETER
ECOELÉCTRICA, LP
NPDES NO. PR 0025984**

Dear Ms. Matthews:

Please refer to the modified Water Quality Certificate ("WQC") issued to EcoEléctrica by the Water Quality Area ("WQA") of the Puerto Rico Environmental Quality Board ("EQB") on March 17, 2014. The conditions and limitations contained in the WQC were included in our National Pollutant Discharge Elimination System ("NPDES") permit of reference. Among other conditions, the WQC included discharge limits and sampling requirements for sulfates (SO_4) that are not applicable to the discharge of our facility. To that end, we respectfully request the modification of EcoEléctrica's NPDES Permit pursuant to the provisions of 40 CFR Parts 122.63, 122.64 and 124.55(b) to eliminate the sulfates limit. See EcoEléctrica's NPDES permit PR0025984, Table A-1, "Effluent Limits and Monitoring Requirements" (Refer to Attachment A).

Ecoelétrica discharges its process waters into the Guayanilla Bay through its outfall 001. According to the Puerto Rico Water Quality Standards Regulation number 7837 promulgated on March 31, 2010, this water body is classified as Class SC. The regulation provides that:

The SC class includes the segments of coastal and estuarine waters identified below....

[...]

3. Guayanilla and Tallaboa Bays - From "Punta Carenero" to "Punta Cuchara."

Rule 1302.19 (C).

The regulation establishes sulfate standards for estuarine waters only. Specifically, for

water bodies classified as Class SC, the regulation provides that: "For estuarine waters classified SC, sulfates shall not exceed 2,800 mg / L". Rule 1303.2 C (2)(h) (emphasis added).

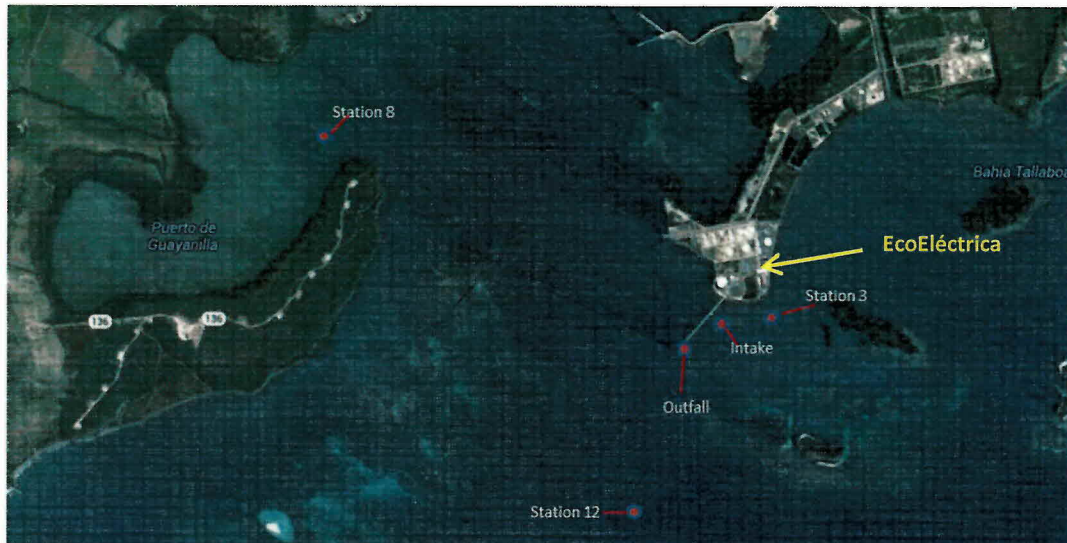
The term "estuary" is defined in the regulation as "that portion of the mouth or lower course of a river, stream, canal or lagõn, in which the fresh water meets the sea water and is subject to the ebb and flow of the tides." Rule 1301.1.

Based on the water quality monitoring program implemented by EcoEléctrica since 2000, the area of the Guayanilla bay in which the facility's Outfall001 is located does not have estuarine characteristics. Table 1 below shows the average and standard deviation of salinity results from 2000 to 2015 at sampling stations located at the facility's Outfall 001 and seawater intake and at two reference stations. Refer to Figure 1.

Table 1. Average Values and Standard Deviation

Year	Discharge	Intake	Maria Langa (Reference Station)	Station 12 (Reference Station)
2000	34.61	34.44	34.6	34.65
2001	33.84	33.32	33.43	33.36
2002	33.76	33.87	33.92	33.88
2003	34.2	34.3	34.53	34.43
2004	34.66	34.69	35.01	34.88
2005	33.96	34.05	34.53	34.44
2006	34.75	34.76	35.11	35.01
2007	35.34	35.43	35.70	35.6
2011	33.84	33.5	34.02	34.06
2014	34.80	34.15	34.58	33.94
2015	36.88	35.54	35.58	35.54
AVG	34.46	34.53	34.766	34.71
MAX	36.88	35.54	35.70	35.60
MIN	33.76	33.32	33.43	33.36
Std Deviation	0.86	0.68	0.66	0.67

Figure 1. Location of water quality sampling stations at the Guayanilla Bay



This data demonstrates that salinity fluctuations in the area are not significant, as it would be expected in an estuarine system. This conclusion is supported by biological monitoring studies conducted by the facility for over 14 years which indicate the prevailing presence of benthic organisms highly vulnerable to salinity fluctuations. These include: sponges, corals and sea grasses, among others. Note that the sulfate parameter is directly related to salinity concentrations since it represents approximately 7.68% of the composition of seawater.

Additionally, sulfate monitoring results conducted on a monthly basis as part of the requirements of the 2014 NPDES permit show that the samples collected at the facility's seawater intake consistently exceeds the limit of 2,800 mg / L (daily). Refer to Table 2 below.

Table 2. Monthly Sulfate monitoring results for EcoElectrica's sea water intake and outfall 001

Month	Sea water intake (mg/L)	Outfall 001 (mg/L)
November 2014	3,020	3,701
December 2014	3,676	3,188
January 2015	3,488	2,291
February 2015	3,083	3,883
March 2015	3,371	3,557

Based in the information outlined above, we understand that EcoEléctrica does not discharge into an estuarine area of the Guayanilla bay and that accordingly, the sulfate parameter is not applicable to its operations. This information was presented by EcoEléctrica's representatives to the EQB in a meeting held on March 20, 2015 with Mrs. Annette Feliberty, Chief, Point Source Permits Division of the Water Quality Area and Eng. Hery Correa, Technician. Please refer to the presentation material and attendance list included in Attachment B.

We respectfully request the modification of EcoEléctrica's NPDES and WQC to eliminate the sulfate monitoring requirements and the corresponding discharge limit of 2,800 mg/L.

Please contact us at 787-487-6034 if additional information or submittals are necessary to complete this request or if you have any questions.

Sincerely,



Damaris Negrón
Environmental Manager

Cc: Sieglinde Pylypchuk, EPA Region 2
Annette Feliberty, EQB Water Quality Division

ATTACHMENT A

NPDES permit PR0025984, Table A-1, "Effluent Limits and Monitoring Requirements"

PART II. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**A. Final Effluent Limitations—Outfall Number 001**

The Permittee must maintain compliance with the following effluent limitations at Outfall 001, with compliance measured at the Monitoring Location. The discharge at Outfall 001 is composed of cooling tower blowdown, treated stream from the neutralization system, demineralizer backwash, and treated stream from the oil/water separator.

Effluent Limitations Table

Parameter	Units	Effluent limitations			Monitoring requirements		Parameter Code	Footnotes
		Average monthly	Average weekly	Maximum daily	Sample type	Minimum sampling frequency		
Arsenic (As)	ug/l	--	--	Monitoring only	Grab	Monthly / Annually	00978	(1)
BOD ₅	mg/l	30.0	--	--	Composite	Monthly	00310	--
Chlorine, Total Residual	mg/l	--	--	0.20	Grab	Daily	50060	(6) (7)
Chromium, Total	mg/l	0.2	--	0.2	Grab	Weekly	01118	--
Color	Pt-Co	--	--	--	Grab	Monthly	00080	(10) (11)
Copper (Cu)	ug/l	--	--	3.73	Grab	Quarterly	01119	(10)
Cyanide, Free (Cn)	ug/l	--	--	1.0	Grab	Monthly	51173	--
Dissolved Oxygen	mg/l	Must not contain less than 4.0			Grab	Daily	00300	--
Flow	m ³ /day	--	--	81,007	Continuous Recording		50050	(2) (3)
	MGD	--	--	21.4				
Mercury (Hg)	ug/l	--	--	0.051	Grab	Quarterly	71901	(10)
Oil and Grease	mg/l	15.0	--	20.0	Grab	Twice Monthly	00556	--
	mg/l	--	--	--	Grab	Twice Monthly	00556	(12)
pH	standard unit	Must always lie between 7.3 and 8.5			Grab	Daily	00400	--

Parameter	Units	Effluent limitations			Monitoring requirements		Parameter Code	Footnotes
		Average monthly	Average weekly	Maximum daily	Sample type	Minimum sampling frequency		
Suspended, Colloidal, or Settleable Solids	ml/l	--	--	--	Grab	Monthly		(13)
Sulfates(SO ₄)	mg/l	--	--	2,800.0	Grab	Monthly / Annually		(4) (10)
Sulfide (undissociated H ₂ S)	ug/l	--	--	Monitor only	Grab	Monthly / Annually	51202	(1) (10)
Surfactants (as MBAS)	ug/l	--	--	Monitor only	Grab	Monthly / Annually	38260	(1) (10)
Temperature	°F (°C)	Must not cause the temperature of any site to exceed 90°F (32.2°C)			Grab	Daily	00010	(8)
Total Suspended Solids (TSS)	mg/l	30.0	--	100.0	Composite	Twice Monthly	00530	(10)
Turbidity	NTU	--	--	10.0	Grab	Monthly	82079	(10)
Whole Effluent Toxicity, Acute	TU _a	--	--	--	24-hr Composite	1/Quarter	TS000	(5)
Zinc (Zn)	ug/l	--	--	81.0	Grab	Quarterly	01094	(10)
126 Priority Pollutants (see Appendix A)	mg/l	No detectable amounts			Composite	Annually		(9)

Notes, Footnotes and Abbreviations

Dashes (--) indicate there are no effluent limitations or monitoring requirements for this parameter.

- (1) The permittee must implement a monthly monitoring program using the analytical method approved by EPA with the lowest possible detection level, in accordance with Rule 1306.2(C) of the PRWQS, as amended, for one (1) year period, after which they will be conducted annually. The monitoring program must commence no later than thirty (30) days after the EDP. The results of the monitoring program will be submitted to EQB and EPA-Region 2 no later than sixty (60) days of completion of the one (1) year monitoring program. Based on evaluation of the results obtained, EQB will determine if an effluent limitation is necessary for this parameter. In such case, the WQC will be reopened to include the applicable effluent limitation.
- (2) The flow of discharge 001 must not exceed the limitation of 81,007 m³/day (21.4 MGD) as the daily maximum. No increase in flow of discharge 001 must be authorized without recertification from the Puerto Rico Environmental Quality Board.
- (3) The flow measuring device for the Outfall 001, must be periodically calibrated and properly maintained. Calibration and maintenance records must be kept in compliance with the applicable Rules and Regulations.
- (4) The permittee must implement a monthly monitoring program using the analytical method approved by EPA with the lowest possible detection level, in accordance with Rule 1306.2(C) of the PRWQS, as amended, for one (1) year period, after which they will be conducted annually. The monitoring program must commence not later than thirty (30) days after EDP. The results of the monitoring program must be submitted to EQB and EPA-Region 2 not later than sixty (60) days of completion of the one year monitoring program. Based on the evaluation of the results obtained, EQB will determine if more frequent monitoring is necessary for this parameter. In such case, the WQC will be reopened to revise the monitoring frequency for such parameter, if considered necessary.
- (5) See Part IV.B.2. Whole Effluent Toxicity Testing for monitoring and reporting requirements for WET.
- (6) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator of State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level or chlorination.

- (7) Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours per day is required for macroinvertebrate control.
- (8) Except by natural causes, no heat may be added to the waters of Puerto Rico which would cause the temperature of any site to exceed 90°F. No thermal discharge or combination of thermal discharges into or onto the surface, estuarine and coastal waters must be injurious to fish or shellfish or the culture or propagation of a balanced indigenous population thereof nor in any way affect the designated uses.
- (9) There must be no detectable amounts of the 126 priority pollutants (Appendix A), except for chromium and zinc (as provided for in the table above). Discharge of any product registered under the Federal Insecticide, Fungicide and Rodenticide Act is prohibited unless specifically authorized elsewhere in the permit. The first monitoring/sampling event must be performed within six (6) months following commencement of the discharge, and at twelve month intervals thereafter.
- (10) Gross Discharge Limitation - If the applicable Water Quality Standard (WQS) is not exceeded in the inlet, the effluent limitation (applicable WQS) established herein shall not be exceeded at the discharge point 001.
No Net Addition Limitation - If the applicable WQS is exceeded in the inlet, the same measurement shall be achieved at the discharge point 001. In order to demonstrate compliance with the No Net Addition Limitation, influent and effluent monitoring must be conducted at the frequency specified herein. The permittee shall account for the residence time of the influent when scheduling influent and effluent monitoring. The permittee shall report the results of these measurements in the DMRs. Alternatively, the permittee may forego influent monitoring and comply with Gross Discharge Limitation.
- (11) Shall not be altered by other than natural phenomena except when it can be proven that such change in color is harmless to biota and aesthetically acceptable.
- (12) The waters of Puerto Rico shall be substantially free from floating petroleum oils and greases as well as petroleum derived oils and greases.
- (13) Solids from wastewaters source shall not cause deposition in, or be deleterious to the existing or designated uses of the water body.

B. Interim Effluent Limitations— Not applicable

ATTACHMENT B

EQB PRESENTATION MATERIAL AND ATTENDANCE LIST



¿Quién es EcoEléctrica?



Planta de Cogeneración

- 507 MW de Capacidad
- Opera con gas natural licuado/gas propano/diesel en caso de emergencias



Planta Desalinizadora de Agua de Mar

- 2 Millones galones/día
- Franquicia



Terminal de Importación de Gas Natural Licuado

- Tanque de almacenaje con capacidad 42 millones galones
- (1 millón de barriles)
- Muelle de 1,800 pies de longitud
- Regasificación(2) 93 MM SCF



EcoEléctrica supe cerca del 30% de la energía eléctrica que se consume en el país.



15% produccion de electricidad/15% envio de gas natural a PREPA



Barco metanero descargando gas natural licuado en el muelle de EcoEléctrica.

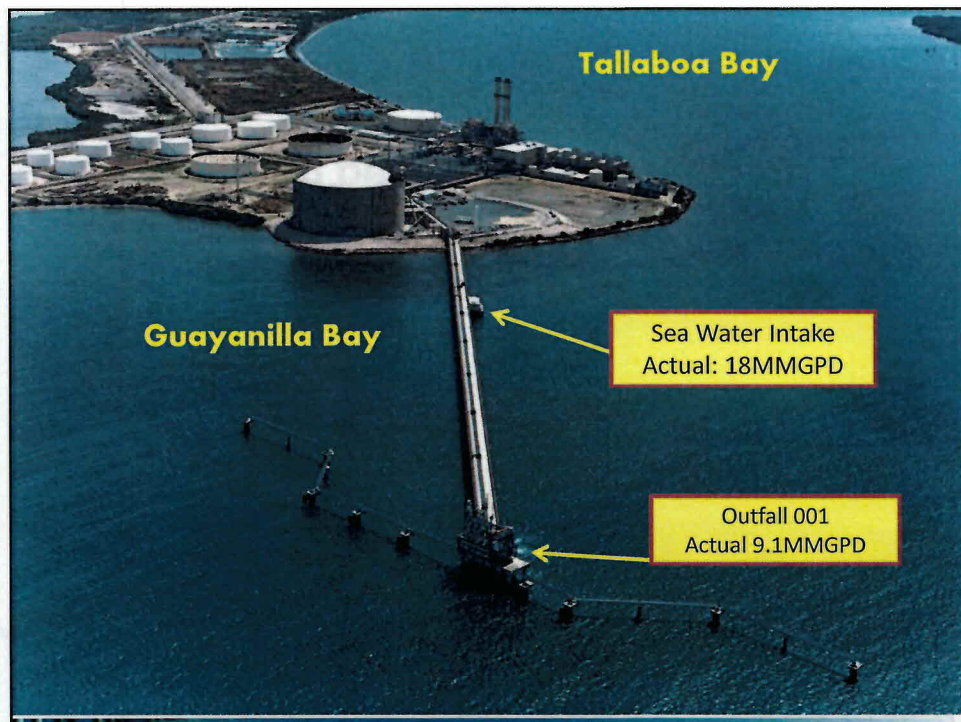


Tanque de almacenaje de gas natural licuado con capacidad para 42 MM₇ de galones.



CALIDAD DE AGUA

En adición a los 2 millones de galones diarios de agua de mar procesada en la planta, se extraen cerca de 9 millones de galones diarios de agua de mar sin procesar para ser utilizada en las torres de enfriamiento.





Certificado de Calidad de Agua
Sulfatos



Clase SC. El Reglamento dispone:

La clase SC incluye los segmentos de aguas costaneras y estuarinas identificados a continuación....

[...]

3. Bahías de Guayanilla y Tallaboa – Desde Punta Carenero a Punta Cuchara.

Regla 1302.19(C).

El Reglamento establece estándares de Sulfatos para aguas de estuarios únicamente. Específicamente, para los cuerpos de agua clasificados como Clase SC, el Reglamento establece que: “Para aguas estuarinas clasificadas SC, los sulfatos no excederán 2,800 mg/L”. Regla 1303.2 C (2)(h).

**Tres características:**

1. Localización y geomorfología
2. Fluctuaciones de Salinidad
3. Organismos bénticos



Localización de Descarga 001



Influencia de los Ríos

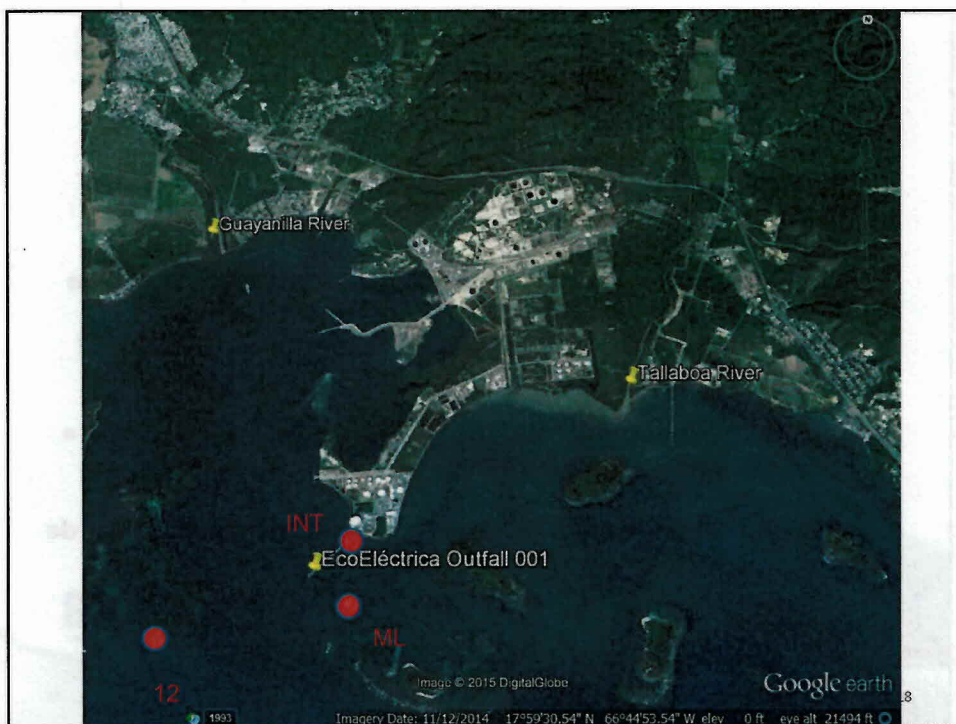
- Localización de la descarga 001 no se encuentra rodeada por tierra y está fuera de la desembocadura de los ríos.



Bahías de Guayanilla y Tallaboa



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Datos de Salinidad y Sulfatos



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Salinidad/sulfatos

- El promedio de en el área de EcoElectrica salinidad es 35 PSU (agua de mar).
- Aproximadamente hay 2,710 mg/L de sulfatos en el agua de mar de 35 PSU (Riley and Chester, 1961); http://www.ocean.washington.edu/courses/oc400/Lecture_Notes/CHPT4.pdf).
- Fluctuaciones de salinidad en EcoElectrica insignificantes = 0.71 desviación estándar.
- Concentraciones de sulfatos en la entrada de agua de mar de EcoEléctrica > 2,800 mg/L.



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Resumen de los datos de salinidad historico EcoElectrica 2000-2014

Year	Discharge	Intake	Maria Langa	Station 12
2000	34.61	34.44	34.6	34.65
2001	33.84	33.32	33.43	33.36
2002	33.76	33.87	33.92	33.88
2003	34.2	34.3	34.53	34.43
2004	34.66	34.69	35.01	34.88
2005	33.96	34.05	34.53	34.44
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2015	36.88	35.54	35.58	35.54
AVG	34.46	34.53	34.766	34.71
MAX	36.88	35.54	35.70	35.60
MIN	33.76	33.32	33.43	33.36
Std Deviation	0.86	0.68	0.66	0.67

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Resultados de los monitoreos regulatorios de sulfatos en la toma de agua de mar y en la descarga 001 de Ecoeléctrica

Mes	Entrada de Agua de Mar (mg/L)	Salida 001 (mg/L)
Noviembre 2014	3,020	3,701
Diciembre 2014	3,676	3,188
Enero 2015	3,488	2,291
Febrero 2015	3,083	3,833
Marzo 2015	3,371	3,557



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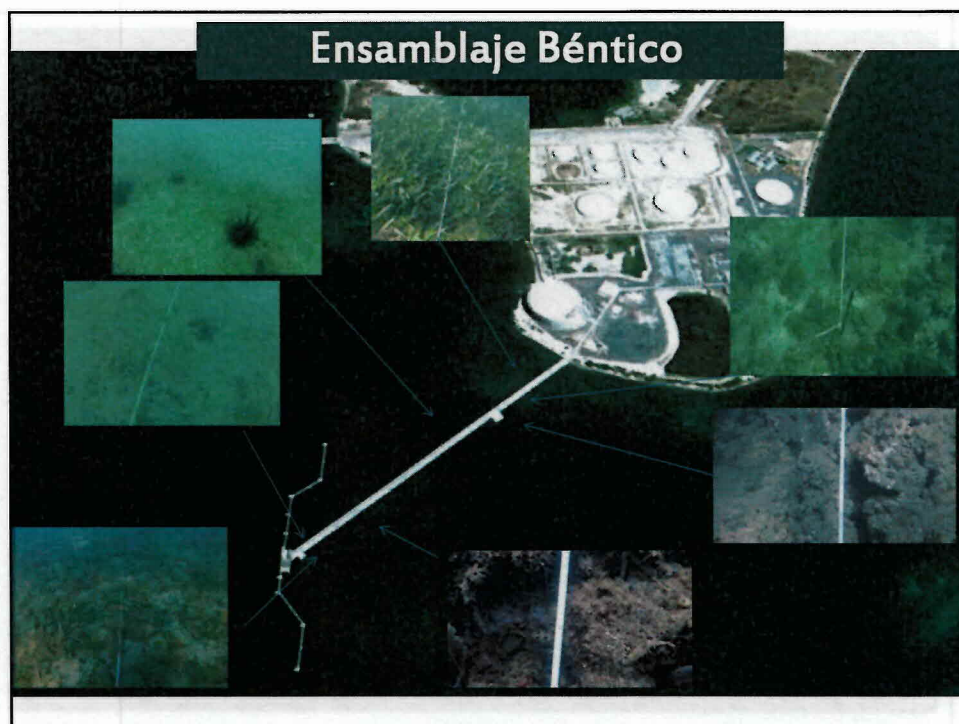
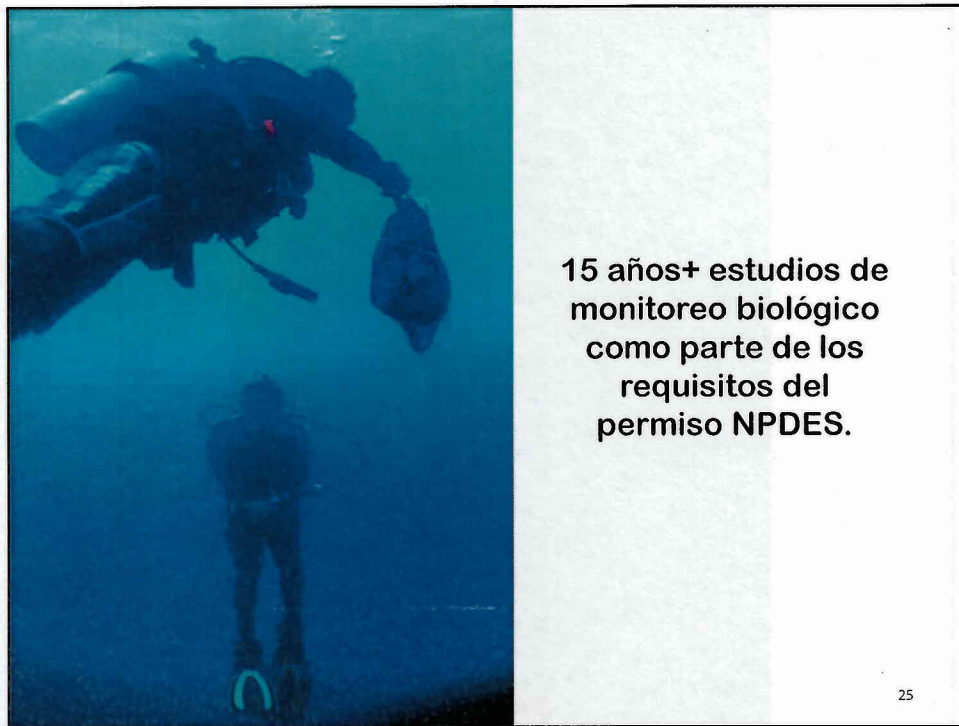
Características Bénticas

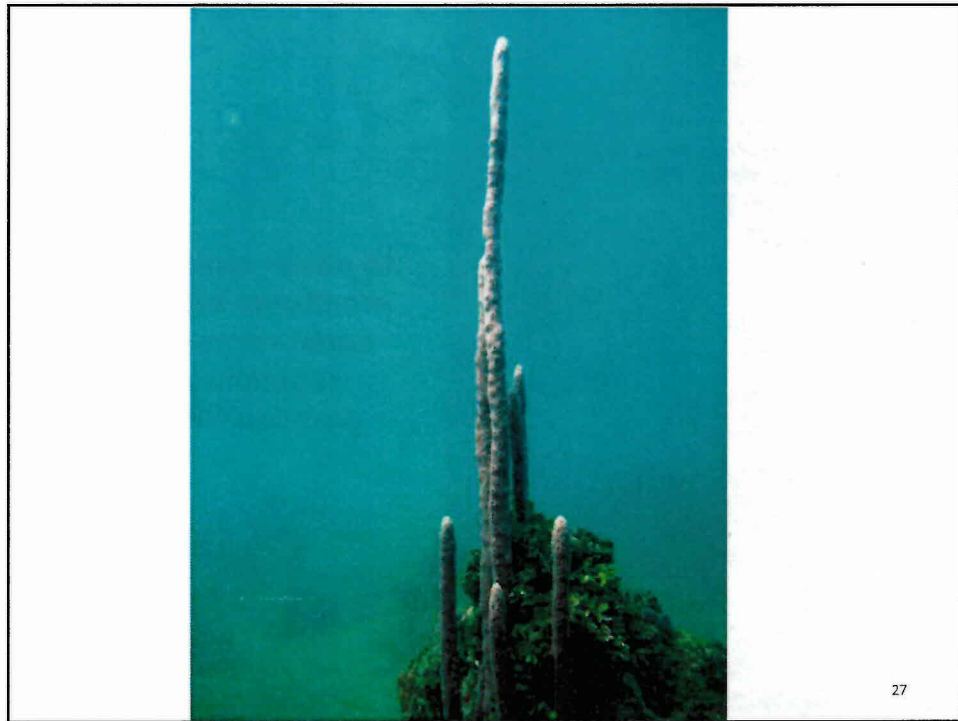


Características bénticas

- Prevalecen organismos altamente vulnerables a las fluctuaciones de salinidad.



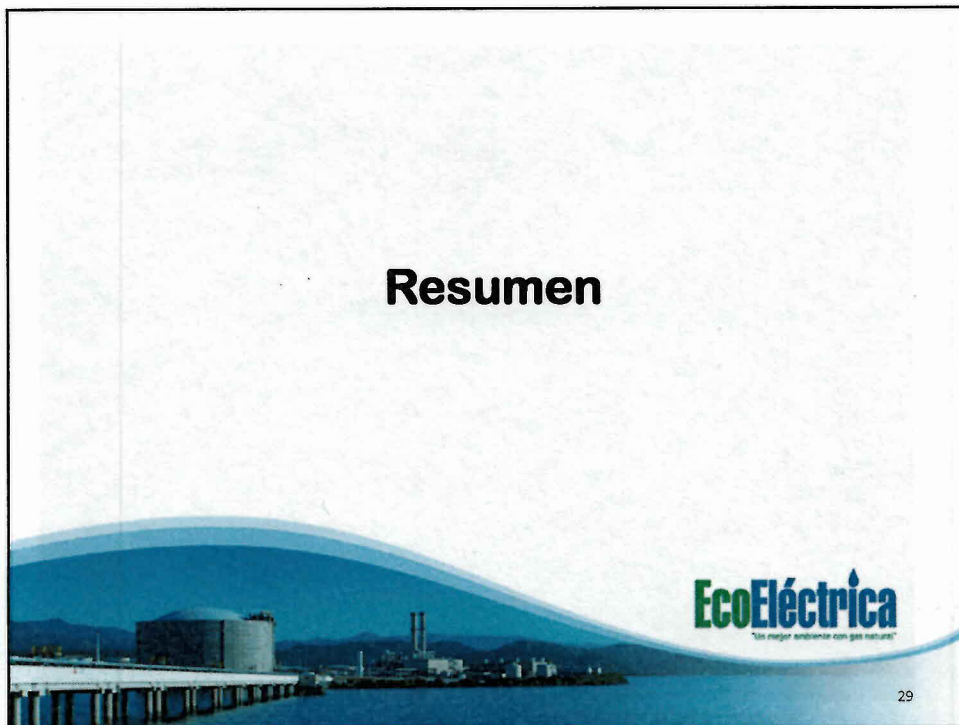




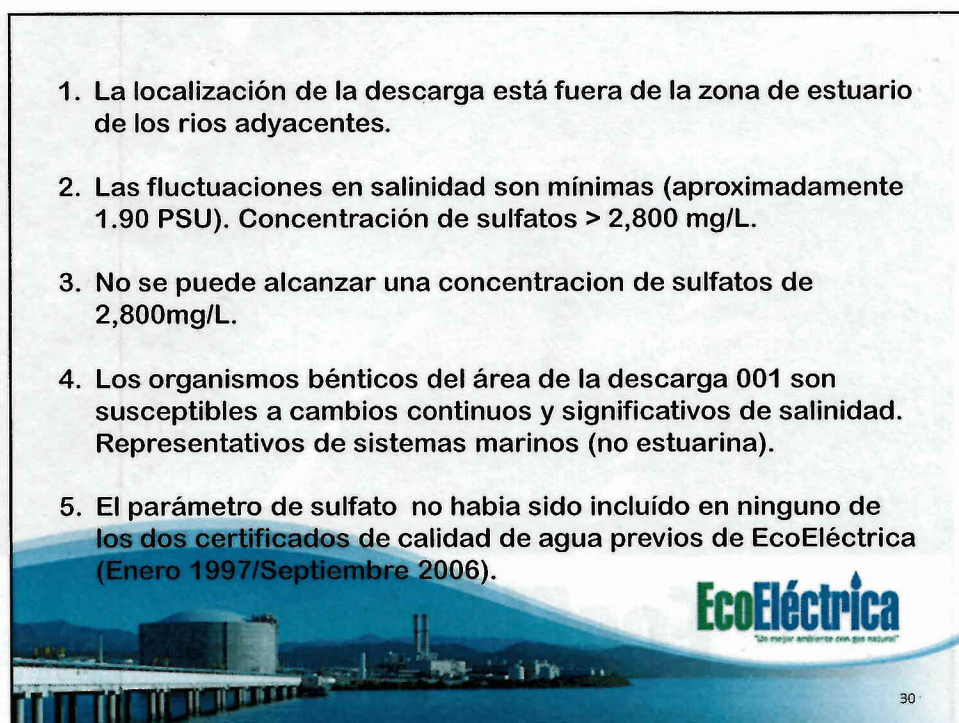
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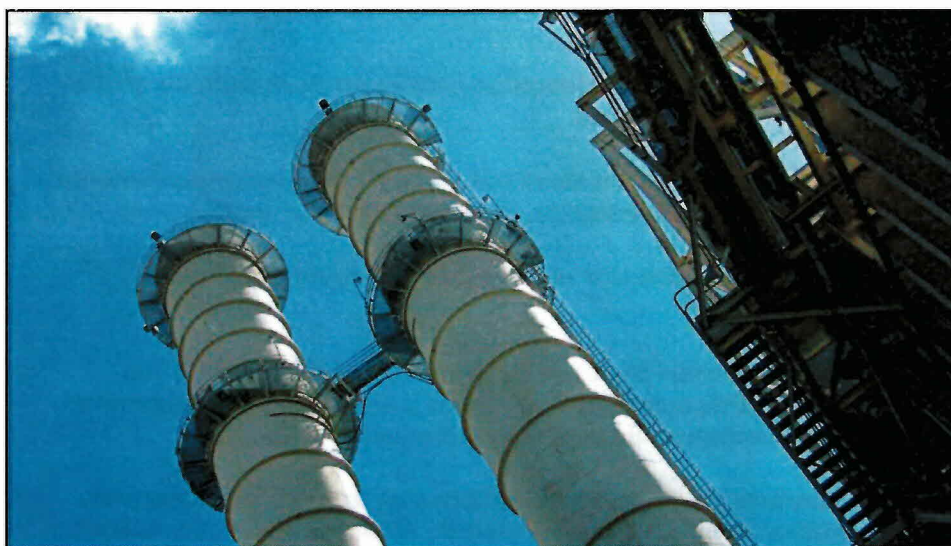


Resumen



1. La localización de la descarga está fuera de la zona de estuario de los ríos adyacentes.
2. Las fluctuaciones en salinidad son mínimas (aproximadamente 1.90 PSU). Concentración de sulfatos > 2,800 mg/L.
3. No se puede alcanzar una concentración de sulfatos de 2,800mg/L.
4. Los organismos bénticos del área de la descarga 001 son susceptibles a cambios continuos y significativos de salinidad. Representativos de sistemas marinos (no estuarina).
5. El parámetro de sulfato no había sido incluido en ninguno de los dos certificados de calidad de agua previos de EcoEléctrica (Enero 1997/Septiembre 2006).





EcoEléctrica
Un mejor ambiente con gas natural



ESTADO LIBRE ASOCIADO DE
PUERTO RICO
JUNTA DE CALIDAD AMBIENTAL

ASISTENCIA

Viernes, 20 de marzo de 2015

Piso 3, Salón de Conferencias

RE: ECOELECTRICA LNG TERMINAL AND COGENERATION PROJECT
PEÑUELAS, PUERTO RICO
NPDES NO. PR0025984

Hora de Comienzo: 2:00 pm / Hora de Culminación: 2:43 pm

	Nombre Name	Agencia/Organización Agency/Organization	Teléfono Telephone	Correo Electrónico E-mail
1.	Carlos A. Reyes	EcoElectrica	787-487-6002	C. Reyes
2.	Henry I. Correa	Junta Calidad Ambiental	767-8181 x-3458	henrycorrea@jca.gobierno.pr
3.	Ernesto Otero	UPR-M	787-859- 2048	ernesto.otero3 @upr.edu
4.	Damaris Negrón	EcoElectrica	787-487- 6034	damaris.negron @ecoelectrica.com
5.	Annette Feliberty Ruiz	Agua	787-767- 8073	annettefeliberty @ jca.gobierno.pr
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