San Salvador, 5 de septiembre de 2016

N° de Solicitud: SA1448	N° de Reporte: RA5840

Datos del cliente	
Empresa:	ECOINGENIEROS
Responsable:	Inga. Jaqueline Fernández
Dirección:	101 Av. Norte Local 6, Col. Escalón. San Salvador.
Teléfono:	2264-0211

Datos de la Muestra	
Naturaleza:	Agua Marina M23
Fecha de ingreso: Hora de ingreso:	24/08/2016 02:00 pm
Fecha de análisis:	25/08/2016 a 03/09/2016
Recolectado por:	Cliente

REPORTE DE ANALISIS

DETERMINACION MICROBIOLOGICA Y FISICOQUIMICA	RESULTADO	METODO*
Recuento total de bacterias UFC/mL	<1**	Standard Methods, APHA AWWA WEF Ed 21 2005. 9215A y B , Vertido en placa o placa fluida
Coliformes Totales NMP/100mL	6.8	Standard Methods, APHA AWWA WEF Ed 21 2005. 9221B-Tecnica estándar fermentación en tubo múltiple
Coliformes Fecales NMP/100mL	6.8	Standard Methods, APHA AWWA WEF Ed 21 2005. 9221B-Tecnica estándar fermentación en tubo múltiple
Alcalinidad mg/L	120	Standard Methods, APHA AWWA WEF Ed 21 2005. 2320 B - D Metodo Titulometrico
Compuestos fenólicos mg/L	<0.025	Standard Methods, APHA AWWA WEF Ed. 21 2005 . 5530D. Fotometrico Directo
Cloruros mg/L	7,370	Standard Methods, APHA AWWA WEF Ed 21. 4500-Cl E - Método del Tiocianato(analogo al del Ferrocianuro)
Cloro residual mg/L	0	Standard Methods, APHA AWWA WEF Ed 21 2005. 4500-Cl - G Metodo DPD- Colorimetrico
Cloro total mg/L	0	Standard Methods, APHA AWWA WEF Ed 21 2005. 4500-Cl - G Metodo DPD- Colorimetrico
Cadmio mg/L	<0.002	Método espectrofotométrico test de cadmio 1.01745.0001. Merck
Calcio mg/L	460	Standard Methods, APHA AWWA WEF Ed 21. 2005 3500-Ca B Metodo Titulometrico
Cromo mg/L	<0.01	Standard Methods, APHA AWWA WEF Ed 21 2005. 3500-Cr-.B Método Colorimétrico
Dureza total $CaCO_3$ mg/L	7,000	Standard Methods, APHA AWWA WEF Ed 2012 2012. 2340 C. Metodo Titulometrico de EDTA
Mercurio mg/L	<0.001	Standard Methods, APHA AWWA WEF Ed 17 . 1989. 3500-Hg-.C Método de la Ditizona
Níquel mg/L	<0.02	Standard Methods, APHA AWWA WEF Ed 17 . 1989. 3500-Ni-.E Metodo espectrofotometrico de la Dimetilglioxina
Plomo mg/L	<0.002	Absorción atómica Metodo horno de grafito
Sulfuros mg/L	<0.02	Standard Methods,APHA AWWA WEF 21 Ed 2005. 4500 S 2-D, Metodo Azul de metileno
Sulfatos mg/L	673.92	Standard Methods, APHA AWWA WEF Ed 21 2005,ed 2005 4500-SO42, Gravimetrico
Salinidad %	32.7	Método Electrométrico
Sodio mg/L	4,120	Standard Methods, APHA AWWA WEF Ed 21 2005. Metodo fotometrico (tiocianato de mercurio)
Zinc mg/L	<0.05	Standard Methods, APHA AWWA WEF Ed 17 . 1989. 3500-Zn .D Metodo de la Ditizona .Espectrofotometrico

Calle San Antonio Abad, Urbanización Lisboa #35,
San Salvador, El Salvador, C.A.
Teléfonos: (503) 2284-0888, (503) 2284-0223, Telefax:(503) 2284-5933
E-mail: ccci@navegante.com.sv, laboratorio@ccci.com.sv
Pagina Web: ccci.com.sv

DETERMINACION FISICOQUIMICA	RESULTADO	METODO*
Demanda Química de Oxigeno(DQO) mg/L	970	Standard Methods, APHA AWWA WEF Ed 21 2005. 5220 - D Metodo colorimetrico , reflujo cerrado
Demanda Bioquímica de Oxigeno(DBO) mg/L	870	Standard Methods, APHA AWWA WEF Ed 21 2005. 5210 - B o D Metodo Titulometrico de 5 dias o Respirometrico
Arsénico mg/L	<0.001	Standard Methods, APHA AWWA WEF Ed 21 2005. 3500-AS.B Metodo Dietil carbamanato de Plata.
Cobre mg/L	<0.02	Método espectrofotométrico de la cuprizona
Solidos sedimentables mg/L	<0.1	Standard Methods,APHA AWWA WEF , Ed 21 2005. 2540F Volumetrico
Solidos suspendidos totales mg/L	105	Standard Methods APHA AWWA WEF, Ed 21 2005 , 2540DGravimetrico
Aceites y grasas mg/L	2	Standard Methods, APHA AWWAWEF, Ed 21 2005. 5520D. Metodo Extracción Soxhlet

*Standard Methods for the Examination of Water and Wastewater. 21 th. Edición. 2005
**Este valor corresponde a 0 o ausencia UFC por mL de la muestra
mg/L: miligramo por Litro %: Porcentaje NMP: Numero más probable ml: mililitros UFC: Unidades Formadoras de Colonias

CARACTERISTICAS DE LA MUESTRA: Agua de aspecto traslucido, incolora y con olor a degradación marina, con poco sedimento de color café. Recibida en galón plástico.

OBSERVACIONES: No se cuenta con Norma Salvadoreña para Aguas marinas.

Su muestra se conservará por 24 horas después de la recepción del presente informe, para atender cualquier necesidad adicional.
Los resultados del presente reporte corresponden en procedencia y código a la muestra indicada.
Por políticas de confidencialidad y derechos de autor, la reproducción total o parcial de este reporte debe ser autorizada por el laboratorio.
Atentamente,

CENTRO DE CONTROL DE CALIDAD INDUSTRIAL S.A DE C.V – CCCI

Dra. Sulma Yanira Reyes de Serpas.
Directora Ejecutiva

El CCCI trabaja con un sistema de Calidad Implementado bajo la Norma NTS ISO /IEC 17025:2005 como parte de la garantía de calidad de nuestros análisis.

República de El Salvador
C. C. C. I.
LABORATORIO DE ANALISIS DE ALIMENTOS AGUAS Y AGUAS RESIDUALES
Nº LEA-15:07
Prop. SOCIEDAD CENTRO DE CONTROL
Salvador, Dpto. San Salvador.

San Salvador, 05 de septiembre de 2016

N° de Solicitud: SA1439	N° de Reporte: RA5798

Datos del cliente	
Empresa:	ECOINGENIEROS
Responsable:	Inga. Jaqueline Fernández
Dirección:	101 Av. Norte Local 6, Col. Escalón. San Salvador.
Teléfono:	2264-0211

Datos de la Muestra	
Naturaleza:	Agua Marina M24
Fecha de ingreso: Hora de ingreso:	23/08/2016 02:29 pm
Fecha de análisis:	26/08/2016 a 02/09/2016
Recolectado por:	Cliente

REPORTE DE ANALISIS

DETERMINACION MICROBIOLOGICA Y FISICOQUIMICA	RESULTADO	METODO*
Recuento total de bacterias UFC/ml	340**	Standard Methods, APHA AWWA WEF Ed 21 2005. 9215A y B , Vertido en placa o placa fluida
Coliformes Totales NMP/100mL	350	Standard Methods, APHA AWWA WEF Ed 21 2005. 9221B-Tecnica estándar fermentación en tubo múltiple
Coliformes Fecales NMP/100mL	170	Standard Methods, APHA AWWA WEF Ed 21 2005. 9221B-Tecnica estándar fermentación en tubo múltiple
Alcalinidad mg/L	120	Standard Methods, APHA AWWA WEF Ed 21 2005. 2320 B - D Método Titulometrico
Compuestos fenólicos mg/L	<0.025	Standard Methods, APHA AWWA WEF Ed. 21 2005 . 5530D, Fotometrico Directo
Cloruros mg/L	7,442	Standard Methods, APHA AWWA WEF Ed 21. 4500-Cl E - Método del Tiocianato(analogo al del Ferrocianuro)
Cloro residual mg/L	0	Standard Methods, APHA AWWA WEF Ed 21 2005. 4500-Cl - G Método DPD- Colorimetrico
Cloro total mg/L	0	Standard Methods, APHA AWWA WEF Ed 21 2005. 4500-Cl - G Método DPD- Colorimetrico
Cadmio mg/L	<0.002	Método espectrofotométrico test de cadmio 1.01745.0001. Merck
Calcio mg/L	462	Standard Methods, APHA AWWA WEF Ed 21. 2005 3500-Ca B, Método Titulometrico
Cromo mg/L	<0.01	Standard Methods, APHA AWWA WEF Ed 21 2005. 3500-Cr-.B Método Colorimétrico
Dureza total $CaCO_3$ mg/L	6,700	Standard Methods, APHA AWWA WEF Ed 2012 2012. 2340 C. Método Titulometrico de EDTA
Mercurio mg/L	<0.001	Standard Methods, APHA AWWA WEF Ed 17 . 1989. 3500-Hg-.C Método de la Ditizona
Níquel mg/L	<0.02	Standard Methods, APHA AWWA WEF Ed 17 . 1989. 3500-Ni-.E Método espectrofotométrico de la Dimetilglioxina
Plomo mg/L	<0.002	Absorción atómica. Método horno de grafito
Sulfuros mg/L	<0.02	Standard Methods,APHA AWWA WEF 21 Ed 2005. 4500 S 2-D, Método Azul de metileno
Sulfatos mg/L	559.23	Standard Methods, APHA AWWA WEF Ed 21 2005,ed 2005 4500-SO42, Gravimetrico
Salinidad %	32.4	Método Electrométrico
Sodio mg/L	4,500	Standard Methods, APHA AWWA WEF Ed 21 2005. Método fotometrico (tiocianato de mercurio)
Zinc mg/L	<0.05	Standard Methods, APHA AWWA WEF Ed 17 . 1989. 3500-Zn .D Metodo de la Ditizona .Espectrofotometrico

DETERMINACION FISICOQUIMICA	RESULTADO	METODO*
Demanda Química de Oxigeno(DQO) mg/L	610	Standard Methods, APHA AWWA WEF Ed 21 2005. 5220 - D Método colorimétrico , reflujo cerrado
Demanda Bioquímica de Oxigeno(DBO) mg/L	306	Standard Methods, APHA AWWA WEF Ed 21 2005. 5210 - B o D Metodo Titulometrico de 5 dias o Respirometrico
Arsénico mg/L	<0.001	Standard Methods, APHA AWWA WEF Ed 21 2005. 3500-AS.B Método Dietil carbamanato de Plata.
Cobre mg/L	<0.02	Método espectrofotométrico de la cuprizona
Solidos sedimentables mg/L	0.1	Standard Methods,APHA AWWA WEF , Ed 21 2005. 2540F Volumétrico
Solidos suspendidos totales mg/L	131	Standard Methods APHA AWWA WEF, Ed 21 2005 , 2540DGravimetrico
Aceites y grasas mg/L	5	Standard Methods, APHA AWWAWEF, Ed 21 2005. 5520D. Metodo Extracción Soxhlet

*Standard Methods for the Examination of Water and Wastewater. 21 th. Edición. 2005
**Este valor corresponde a una dilución de 10^{-1}
mg/L: miligramo por Litro %: Porcentaje NMP: Numero más probable ml: mililitros UFC: Unidades Formadoras de Colonias

CARACTERISTICAS DE LA MUESTRA: Agua de aspecto traslucido, incolora y con leve olor terreo, con sedimentos de color café. Recibida en frasco de plástico.

OBSERVACIONES: No se cuenta con Norma Salvadoreña para Aguas marinas.

Su muestra se conservará por 24 horas después de la recepción del presente informe, para atender cualquier necesidad adicional.
Los resultados del presente reporte corresponden en procedencia y código a la muestra indicada.
Por políticas de confidencialidad y derechos de autor, la reproducción total o parcial de este reporte debe ser autorizada por el laboratorio.
Atentamente,

CENTRO DE CONTROL DE CALIDAD INDUSTRIAL S.A DE C.V – CCCI

República de El Salvador
C. C. C. I.
LABORATORIO DE ANALISIS DE ALIMENTOS AGUAS Y AGUAS RESIDUALES
Nº LEA-15:07
Prop. SOCIEDAD CENTRO DE CONTROL DE CALIDAD INDUSTRIAL, S.A. DE C.V.
San Salvador, Dpto. San Salvador.

Dra. Sulma Yanira Reyes de Serpas.
Directora Ejecutiva

El CCCI trabaja con un sistema de Calidad Implementado bajo la Norma NTS ISO /IEC 17025:2005 como parte de la garantía de calidad de nuestros análisis.

San Salvador, 05 de septiembre de 2016

N° de Solicitud:	N° de Reporte:
SA1439	RA5799

Datos del cliente	
Empresa:	ECOINGENIEROS
Responsable:	Inga. Jaqueline Fernández
Dirección:	101 Av. Norte Local 6, Col. Escalón. San Salvador.
Teléfono:	2264-0211

Datos de la Muestra	
Naturaleza:	Agua Marina M25
Fecha de ingreso: Hora de ingreso:	23/08/2016 02:29 pm
Fecha de análisis:	26/08/2016 a 02/09/2016
Recolectado por:	Cliente

REPORTE DE ANALISIS

DETERMINACION MICROBIOLOGICA Y FISICOQUIMICA	RESULTADO	METODO*
Recuento total de bacterias UFC/ml	280**	Standard Methods, APHA AWWA WEF Ed 21 2005. 9215A y B , Vertido en placa o placa fluida
Coliformes Totales NMP/100mL	920	Standard Methods, APHA AWWA WEF Ed 21 2005. 9221B-Tecnica estándar fermentación en tubo múltiple
Coliformes Fecales NMP/100mL	170	Standard Methods, APHA AWWA WEF Ed 21 2005. 9221B-Tecnica estándar fermentación en tubo múltiple
Alcalinidad mg/L	120	Standard Methods, APHA AWWA WEF Ed 21 2005. 2320 B - D Metodo Titulometrico
Compuestos fenólicos mg/L	<0.025	Standard Methods, APHA AWWA WEF Ed. 21 2005 . 5530D, Fotometrico Directo
Cloruros mg/L	7,280	Standard Methods, APHA AWWA WEF Ed 21. 4500-Cl E - Método del Tiocianato(analogo al del Ferrocianuro)
Cloro residual mg/L	0	Standard Methods, APHA AWWA WEF Ed 21 2005. 4500-Cl - G Metodo DPD- Colorimetrico
Cloro total mg/L	0	Standard Methods, APHA AWWA WEF Ed 21 2005. 4500-Cl - G Metodo DPD- Colorimetrico
Cadmio mg/L	<0.002	Método espectrofotométrico test de cadmio 1.01745.0001. Merck
Calcio mg/L	454	Standard Methods, APHA AWWA WEF Ed 21. 2005 3500-Ca B, Metodo Titulometrico
Cromo mg/L	<0.01	Standard Methods, APHA AWWA WEF Ed 21 2005. 3500-Cr-.B Método Colorimétrico
Dureza total $CaCO_3$ mg/L	6,000	Standard Methods, APHA AWWA WEF Ed 2012 2012. 2340 C. Metodo Titulometrico de EDTA
Mercurio mg/L	<0.001	Standard Methods, APHA AWWA WEF Ed 17 . 1989. 3500-Hg-.C Método de la Ditizona
Níquel mg/L	<0.02	Standard Methods, APHA AWWA WEF Ed 17 . 1989. 3500-Ni-.E Metodo espectrofotometrico de la Dimetilglioxina
Plomo mg/L	<0.002	Absorción atómica. Metodo horno de grafito
Sulfuros mg/L	<0.02	Standard Methods,APHA AWWA WEF 21 Ed 2005. 4500 S 2-D, Metodo Azul de metileno
Sulfatos mg/L	537.28	Standard Methods, APHA AWWA WEF Ed 21 2005,ed 2005 4500-SO42, Gravimetrico
Salinidad %	32.6	Método Electrométrico
Sodio mg/L	4,150	Standard Methods, APHA AWWA WEF Ed 21 2005. Metodo fotometrico (tiocianato de mercurio)
Zinc mg/L	<0.05	Standard Methods, APHA AWWA WEF Ed 17 . 1989. 3500-Zn .D Metodo de la Ditizona .Espectrofotometrico

DETERMINACION FISICOQUIMICA	RESULTADO	METODO*
Demanda Química de Oxigeno(DQO) mg/L	250	Standard Methods, APHA AWWA WEF Ed 21 2005. 5220 - D Metodo colorimetrico , reflujo cerrado
Demanda Bioquímica de Oxigeno(DBO) mg/L	126	Standard Methods, APHA AWWA WEF Ed 21 2005. 5210 - B o D Metodo Titulometrico de 5 dias o Respirometrico
Arsénico mg/L	<0.001	Standard Methods, APHA AWWA WEF Ed 21 2005. 3500-AS.B Metodo Dietil carbamanato de Plata.
Cobre mg/L	<0.02	Método espectrofotométrico de la cuprizona
Solidos sedimentables mg/L	<0.1	Standard Methods,APHA AWWA WEF , Ed 21 2005. 2540F Volumetrico
Solidos suspendidos totales mg/L	176	Standard Methods APHA AWWA WEF, Ed 21 2005 , 2540DGravimetrico
Aceites y grasas mg/L	4	Standard Methods, APHA AWWAWEF, Ed 21 2005. 5520D. Metodo Extracción Soxhlet

*Standard Methods for the Examination of Water and Wastewater. 21 th. Edición. 2005
**Este valor corresponde a una dilución de 10^{-1}
mg/L: miligramo por Litro %: Porcentaje NMP: Numero más probable ml: mililitros UFC: Unidades Formadoras de Colonias

CARACTERISTICAS DE LA MUESTRA: Agua de aspecto traslucido, incolora y olor no perceptible con pocos sedimentos de color gris. Recibido en frasco plástico.

OBSERVACIONES: No se cuenta con Norma Salvadoreña para Aguas marinas.

Su muestra se conservará por 24 horas después de la recepción del presente informe, para atender cualquier necesidad adicional.
Los resultados del presente reporte corresponden en procedencia y código a la muestra indicada.
Por políticas de confidencialidad y derechos de autor, la reproducción total o parcial de este reporte debe ser autorizada por el laboratorio.
Atentamente,

CENTRO DE CONTROL DE CALIDAD INDUSTRIAL S.A DE C.V – CCCI

República de El Salvador
LABORATORIO DE ANALISIS DE ALIMENTOS AGUAS Y AGUAS RESIDUALES
Nº LEA-15:07
Prop. SOCIEDAD CENTRO DE CONTROL DE CALIDAD INDUSTRIAL S.A. DE C.V.

Dra. Sulma Yanira Reyes de Serpas.
Directora Ejecutiva

El CCCI trabaja con un sistema de Calidad Implementado bajo la Norma NTS ISO /IEC 17025:2005 como parte de la garantía de calidad de nuestros análisis.

Appendix 5X–

Sediment Quality Assessment

October 14, 2016

DILLON CONSULTING

1155 North Service Road West
Unit 14
Oakville, Ontario
Canada
L6M 3E3
Telephone
905.901.2912
Fax
905.901.2918

Invenergy Clean Power LLC
One South Wacker Drive, Suite 1800
Chicago, IL
60606

Attention: Mr. Horacio Larios

EDP Sediment Quality Assessment and Sediment Management Plan, Port of Acajutla, El Salvador

Dear Mr. Larios,

Dillon Consulting Limited (Dillon) was retained by Invenergy Clean Power LLC to complete a marine sediment quality assessment associated with the construction and installation of the Energia del Pacifico (EDP) liquefied natural gas (LNG) import terminal to be located near the Port of Acajutla in El Salvador (the "Project Area"). This assessment informs the development of a sediment management concept plan that will be included in the EIA.

BACKGROUND

The proposed marine terminal is to be located approximately 1.25 km west of the Acajutla coast. The purpose of the sediment quality assessment was to assess the potential impact of marine sediment disturbance/excavation on aquatic life during the construction of the marine terminal at the Project Area, and to also determine if there would be any human health concerns related to the use of excavated sediments as fill on industrial port lands. It is Dillon's understanding that two alternatives are being considered for the construction phase of the project, including construction of a concrete caisson, with approximately 75,000 m3 of sediment to be managed, or construction of a cofferdam, with approximately 45,000 m3 of sediment to be managed. The extracted sediment would then need to be disposed of, either at sea, or on land.

SCOPE OF WORK

The scope of work for the assessment was as follows:

- Conduct a sediment quality assessment of the marine sediment by comparing the local sediment chemistry data to applicable marine sediment quality guidelines.

- Compare the sediment chemistry data to the United States Environmental Protection Agency's (U.S. EPA) industrial land use soil quality guidelines, with respect to potential placement of the extracted sediment material on land.
- Develop a sediment management concept plan based on the outcomes of the sediment quality assessment.

METHODOLOGY

The sediment quality assessment was completed in a manner consistent with a number of internationally recognized sediment assessment frameworks including the Canadian Federal Contaminated Sites Action Plan (FCSAP) guidance for aquatic contaminated sites, the 2008 Canada-Ontario Decision-Making Framework for Assessment of Great Lakes Contaminated Sediment, the 2008 Ontario Ministry of the Environment (MOE) Guidelines for Identifying, Assessing and Managing Contaminated Sediments in Ontario, British Columbia Ministry of the Environment (BCMOE) sediment assessment guidance, approaches and benchmarks, and sediment assessment frameworks and approaches developed by the U.S. Environmental Protection Agency (U.S. EPA) and the U.S. National Oceanic and Atmospheric Administration (NOAA). All of these sediment assessment frameworks and approaches are very similar to each other and utilize many of the same or similar tools and techniques. These internationally recognized frameworks have been applied numerous times in a number of countries outside of Canada and the U.S. Their use was verified as being appropriate for the current project, based on review of available international sediment quality assessment guidance (where it exists) from ICES, the IFC, WHO and UNEP.

IDENTIFICATION OF APPLICABLE MARINE SEDIMENT QUALITY BENCHMARKS (SedQBs)

The primary marine SedQBs that were used in this assessment are those developed by the United States National Oceanic and Atmospheric Administration (NOAA).

Through its National Status and Trends (NS&T) Program, NOAA has generated considerable amounts of chemical data on sediments, from which numerical SedQBs were developed as informal (non-regulatory) guidelines for use in interpreting chemical data from analyses of sediments. The NOAA SedQBs have been used in many regional surveys of sediment toxicity performed throughout North America, including many sediment quality surveys conducted by the U.S. EPA, to compare the degree of contamination among sub-regions and to identify chemicals present in sediments that may have concentrations that could result in adverse effects on benthic organisms. There is substantial precedent in the scientific literature and in

international sediment quality assessments for the application of NOAA marine SedQBs in various countries that have not developed their own marine SedQB values. The NOAA SedQBs are also very similar in their derivation method to other marine SedQBs developed by other regulatory agencies in the United States and Canada.

The specific NOAA marine SedQBs used were the NOAA (1999) effects range low (ERL) and effects range median (ERM) values. ERLs correspond to the lower 10th percentile of compiled and validated sediment effects data, while ERM values correspond to the median or 50th percentile, of compiled and validated sediment effects data.

These SedQBs are widely acknowledged as being highly conservative and highly protective values that are routinely used and accepted around the world as indicators of potential marine sediment toxicity. The NOAA ERLs are essentially low effect level SedQBs that represent sediment concentrations associated with a minimal or a low rate of adverse effects in benthic organisms. Comparisons to such values provides a highly conservative estimate of the potential for sediment toxicity, and serves as an initial pre-screening step that can remove sites or areas of sites from further consideration if sediment concentrations are less than the low effect level SedQBs. There is a negligible potential for ecological risk if sediment concentrations are below low effect level SedQBs. It is common for low effect level SedQBs, such as ERLs, to be within typical background sediment concentration ranges for metals and metalloids.

Greater weight was placed on the NOAA ERM values. It has become well established in the scientific and regulatory literature over the years that exceedances over ERMs and similar SedQBs are a more reliable indicator of potential sediment toxicity (or an increased likelihood for benthic community impairment) than low effect level SedQB exceedances. Numerous sediment ecological risk assessments have demonstrated that exceedance of low effect level SedQBs often does not correlate well with other endpoints that are commonly evaluated in such risk assessments (e.g., sediment bioassay results and benthic community parameters). In practice, exceedance of ERMs (and similar SedQBs) is the most realistic indicator of a potential for population or community level adverse effects for benthic organisms, and is also typically the most suitable basis for determining when/if further action or assessment is necessary. This premise is well supported in the scientific and regulatory literature. For example, Long et al., (1998) examined the predictive ability of marine sediment quality guidelines, and noted that probable effect levels (similar to ERMs) are considerably better at predicting the likelihood for toxicity than Threshold Effects Levels (TELs), which are similar to ERLs. NOAA (1999) also states that the ERM values are better indicators of potential adverse effects than ERLs. MDEP (2006) states there is no evidence of significant risk of harm to benthic organisms when sediment

concentrations are below probable effect levels. MacDonald et al., (1996; 2000) found that probable effect level exceedance was the most accurate predictor of potential sediment toxicity.

It should be recognized that all SedQBs are generic values, with no consideration given to site-specific populations/communities or sediment conditions that influence bioavailability. Furthermore, it is typically noted in many regulatory guidance documents and/or SedQB derivation rationale documents that these values cannot be considered toxicity thresholds or quantitative indications of harm to benthic organisms (e.g., NOAA, 1999; MDEP, 2006; Wenning and Ingersoll, 2002). Thus, rather than providing an indication of toxicity, the most appropriate use of SedQBs is to rank or prioritize sites and chemicals of concern, and identify those sites or chemicals that may require further evaluation. Also, it merits recognition that SedQBs are derived by regulatory agencies to be intentionally conservative and protective. Thus, exceedance of these values does not necessarily imply there is a risk of adverse effects; rather, it suggests that further evaluation may be warranted.

SEDIMENT SAMPLING

A sediment sampling program was completed by Fugro Consultants Inc. between August 17 and 24, 2016. A total of 29 sediment samples (i.e., M1 to M29) were collected from the seabed. Samples M1 to M25 were collected from the upper 20 cm of the seabed by scuba divers using hand-held 10 cm PVC cores. Samples M26 to M28 were collected from boring location BH14 at depths of approximately 1.25-1.85 m, 2.35-2.40 m, and 4.0-5.0 m below the seabed, respectively. Sample M29 was collected from boring location BH6B. **Figure 1** in **Attachment A** shows the approximate locations of the samples.

At the time of collection, the characteristics of the sediment samples were documented in terms of colour, texture, and visual and olfactory indications of impact. Field observations coolers with ice until delivery to the laboratory. None of the collected samples showed any visual or olfactory indications of chemical impacts were used to provide a qualitative assessment of the sediment (i.e. did it show visual signs of contamination?), which was confirmed and quantified by the laboratory. The collected samples were placed in sealable bags in

The sediment samples were submitted to Ana-Lab Corp. in Kilgore, Texas (U.S.) for analysis of selected metals and metalloids. Ana-Lab is nationally certified in the U.S. for the analyses of metals and metalloids in sediments.

RESULTS

Comparison of Sediment Chemistry Data against Marine SedQBs

Tables 1 and **2** present a summary of comparisons between the sediment target analyte concentrations and the NOAA ERL and ERM values, respectively. A more detailed table showing sample-specific results for these comparisons is provided in **Attachment B**. Laboratory analytical certificates are provided in **Attachment C**. It is noted that the chemical concentrations show minimal variation among the collected samples suggesting that baseline contamination levels do not significantly vary within the study area.

Prior to assessment, the sediment chemistry data was verified as being of acceptable quality for assessment purposes (See **Attachment C**, which includes laboratory data quality control and assurance performance measure outcomes).

Table 1: Sediment Concentrations Versus Effects Range-Low (ERL) Marine Sediment Quality Benchmarks (SedQBs); mg/kg dry weight

Parameter	RDL	Effects Range-Low SedQBs[a]	Maximum Sediment Concentration	Frequency of SedQB Exceedance (#)	Frequency of SedQB Exceedance (%)
Antimony	0.241	nba	0.57	NA	NA
Arsenic	0.484	8.2	17.1	7	24
Barium	0.725	nba	128	NA	NA
Beryllium	0.241	nba	0.79	NA	NA
Boron	24.1	nba	49.4	NA	NA
Cadmium	1.39	1.2	<0.28	0	0
Chromium	0.241	81	15	0	0
Cobalt	0.241	nba	20.6	NA	NA
Copper	0.241	34	68.5	6	21
Iron	139	nba	57000	NA	NA
Lead	0.241	46.7	12	0	0
Manganese	1.39	nba	1060	NA	NA
Mercury	0.0249	0.15	0.18	1	3
Molybdenum	0.241	nba	0.86	NA	NA
Nickel	0.241	20.9	10.3	0	0
Phosphorous	24.1	nba	743	NA	NA
Selenium	0.725	nba	<1.11	NA	NA

Parameter	RDL	Effects Range-Low SedQBs[a]	Maximum Sediment Concentration	Frequency of SedQB Exceedance (#)	Frequency of SedQB Exceedance (%)
Silver	0.241	1	0.05	0	0
Thallium	0.241	nba	0.21	NA	NA
Tin	12.1	nba	<18.4	NA	NA
Uranium	1.39	nba	2.46	NA	NA
Vanadium	0.241	nba	97.7	NA	NA
Zinc	1.21	150	80.5	0	0
Total Solids (Dry Weight)	0.01	nba	90.5	NA	NA

Notes:
nba=no benchmark available; NA=not applicable; SedQB=sediment quality benchmark; RDL=reportable detection limit.
Shaded chemicals exceeded the ERL SedQB in one or more sediment samples.
a National Oceanic and Atmospheric Administration's Effects Range-Low (ERL) values (NOAA, 1999)

Table 2: Sediment Concentrations Versus Effects Range-Median (ERM) Marine Sediment Quality Benchmarks (SedQBs); mg/kg dry weight

Parameter	RDL	Effects Range-Median SedQBs[a]	Maximum Sediment Concentration	Frequency of SedQB Exceedance (#)	Frequency of SedQB Exceedance (%)
Antimony	0.241	nba	0.57	NA	NA
Arsenic	0.484	70	17.1	0	0
Barium	0.725	nba	128	NA	NA
Beryllium	0.241	nba	0.79	NA	NA
Boron	24.1	nba	49.4	NA	NA
Cadmium	1.39	9.6	<0.28	0	0
Chromium	0.241	370	15	0	0
Cobalt	0.241	nba	20.6	NA	NA
Copper	0.241	270	68.5	0	0
Iron	139	nba	57000	NA	NA
Lead	0.241	218	12	0	0
Manganese	1.39	nba	1060	NA	NA
Mercury	0.0249	0.71	0.18	0	0
Molybdenum	0.241	nba	0.86	NA	NA

Parameter	RDL	Effects Range-Median SedQBs[a]	Maximum Sediment Concentration	Frequency of SedQB Exceedance (#)	Frequency of SedQB Exceedance (%)
Nickel	0.241	51.6	10.3	0	0
Phosphorous	24.1	nba	743	NA	NA
Selenium	0.725	nba	<1.11	NA	NA
Silver	0.241	3.7	0.05	0	0
Thallium	0.241	nba	0.21	NA	NA
Tin	12.1	nba	<18.4	NA	NA
Uranium	1.39	nba	2.46	NA	NA
Vanadium	0.241	nba	97.7	NA	NA
Zinc	1.21	410	80.5	0	0
Total Solids (Dry Weight)	0.01	nba	90.5	NA	NA

Notes:
nba=no benchmark available; NA=not applicable; SedQB=sediment quality benchmark; RDL=reportable detection limit.
Shaded chemicals exceeded the ERM SedQB in one or more sediment samples.
a National Oceanic and Atmospheric Administration's Effects Range-Median (ERM) values (NOAA, 1999).

Table 1 shows that the detected concentrations of arsenic, copper, and mercury were marginally greater than the respective NOAA ERLs in relatively few sediment samples (there was a low frequency of exceedance over the applicable ERLs for arsenic, copper and mercury). However, as previously stated, the NOAA ERM values are better indicators of sediment concentrations that may be associated with adverse effects, and are given the most weight in this assessment. **Table 2** shows that the concentrations of all sediment target analytes were much lower than their respective ERM values. These results suggest that adverse biological effects would not be expected in Project area marine sediments as a result of sediment metal and metalloid concentrations.

As indicated in **Tables 1** and **2**, a number of analytes lack SedQBs from NOAA (as well as from other regulatory sources of SedQBs that were consulted). Some of these analytes (iron, manganese, phosphorus) are major mineral-forming elements in sediments and/or have essential nutrient status for marine aquatic organisms. It is well established that these substances are major constituents (or "building blocks") of soil and sediment minerals and often occur naturally in these media at concentrations in the parts per thousand to the low per cent level range, depending on the soil/sediment type (or texture), underlying geology and local environmental conditions. They are ubiquitous elements in all sediments of the world, and their

presence is rarely related to former or current site activities. For the other analytes that lack marine SedQBs, such substances are often present in trace amounts within marine sediments and are typically unrelated to specific local or regional sources of contamination. Such substances have not been priorities for regulatory agencies to derive marine SedQBs.

SEDIMENT MANAGEMENT CONCEPT PLAN

Given the outcomes of the assessment provided herein, there are no potential ecological or human health risks at this time that would constrain or influence sediment management options. We provide commentary further below on possible sediment management options. The preferred sediment management plan will be dependent on several considerations including: the amount of material to be managed, the results of the marine sediment quality assessment (herein), preferences of Invenergy and perhaps its constructor, cost, and approval agency (MARN) input.

A sediment management concept plan will need to be included in the EIA. The plan should be flexible and adaptable with respect to the specifics of marine terminal construction.

Sediment Placement On-Land

One of the potential sediment management options is the placement of the removed sediment material on the proposed industrial site for the gas plant (for potential use as fill, once de-watered). To evaluate the potential for environmental concerns related to this option, the sediment data were compared to U.S. EPA soil quality guidelines, for industrial land use, for the protection of human health (refer to **Table 3**; the selected soil guidelines are the regional screening levels (RSLs) for soil provided at: https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-may-2016). It should be noted that for carcinogenic chemicals (i.e., arsenic), the RSL was adjusted from a target cancer risk level of 1.0E-06 (1 in 1 million) to a target cancer risk level of 1.0E-05 (1 in 100,000), as it was considered excessively conservative to utilize a soil guideline for industrial land based on a potential increased cancer risk of 1 in 1 million. A target cancer risk level of 1 in 100,000 was deemed more reasonable yet still highly conservative for a scenario of marine sediment material being used as fill on industrial port lands.

Table 3: Sediment Concentrations Versus applicable Soil Quality Guidelines for Industrial Land Use; mg/kg dry weight

Parameter	RDL	Soil Quality Guidelines[a]	Maximum Sediment Concentration
Antimony	0.241	470	0.57
Arsenic	0.484	30[b]	17.1
Barium	0.725	220,000	128
Beryllium	0.241	2300	0.79
Boron	24.1	230,000	49.4
Cadmium	1.39	980	<0.28
Chromium	0.241	1,800,000	15
Cobalt	0.241	350	20.6
Copper	0.241	47,000	68.5
Iron	139	820,000	57000
Lead	0.241	800	12
Manganese	1.39	26,000	1060
Mercury	0.0249	350	0.18
Molybdenum	0.241	5800	0.86
Nickel	0.241	22,000	10.3
Phosphorous	24.1	29,000,000	743
Selenium	0.725	5800	<1.11
Silver	0.241	5800	0.05
Thallium	0.241	12	0.21
Tin	12.1	700,000	<18.4
Uranium	1.39	3500	2.46
Vanadium	0.241	5800	97.7
Zinc	1.21	350,000	80.5
Total Solids (Dry Weight)	0.01	nba	90.5

Notes:
nba=no benchmark available; RDL=reportable detection limit.
Shaded chemicals exceeded the applicable soil quality guideline.
a U.S. EPA Regional Screening Levels for Soil in an Industrial Land Use (U.S. EPA, May 2016). These values are based on an adjusted target cancer risk of 1.0E-05 (for carcinogens) and a target hazard quotient of 1.0 for non-carcinogens.
b The RSL was adjusted from a target cancer risk level of 1.0E-06 to 1.0E-05.

Table 3 shows that the concentrations of all target analytes in the sediment samples are well below the applicable soil quality guidelines for an industrial property. Therefore, potential adverse human health effects would not be expected as a result of the placement of the removed sediment on industrial port lands. Due to the limited terrestrial ecological habitat present on port industrial properties, comparisons against ecological soil quality guidelines were not conducted at this time, and are not considered necessary.

Sediment Placement onto the Seabed

Options for marine (at sea) disposal of excavated sediment material are in the process of being evaluated. The options include: placement back onto the local sea bed, including possibly within the marine enclosure (after temporary storage on barges), side-casting within the port marine environment, and possibly disposal at sea (at an approved off-shore ocean disposal location). Discussions are ongoing regarding the preferred method.

SUMMARY AND CONCLUSIONS

Dillon Consulting Limited (Dillon) was retained by Invenergy Clean Power LLC to complete a sediment quality assessment associated with construction and installation of a marine terminal near the Port of Acajulta in El Salvador (Project Area). The construction of the marine terminal requires disturbance and removal of marine sediment in the Project Area. The purpose of the sediment quality assessment was to assess the potential impact of marine sediment disturbance/excavation on aquatic life during the construction of the marine terminal at the Project Area, and to also determine if there would be any human health concerns related to the use of excavated sediments as fill on industrial port lands.

A total of 29 sediment samples were collected from the project area and analyzed for selected metals and metalloids. The analytical results were compared to the NOAA sediment quality benchmarks (Effects Range-Low and Effects Range-Median values). These comparisons indicated that adverse biological effects are highly unlikely for marine benthic aquatic life as a result of sediment metal and metalloid concentrations, as there were no exceedances over NOAA (1999) ERM values and few (and marginal) exceedances over NOAA (1999) ERL values. Furthermore, the chemical concentrations show minimal variation among the collected samples suggesting that baseline contamination levels do not significantly vary within the study area.

Based on comparisons of the sediment chemistry data to U.S. EPA soil RSLs for an industrial land use, and the lack of exceedances over these RSLs, potential adverse

human health effects would not be expected as a result of the placement of the removed sediment on industrial port lands.

Alternatively, ocean disposal is also a possible alternative subject to local agency approvals.

Overall, there appear to be no environmental or human health constraints at this time on the selection of sediment management options.

DISCLAIMER

This report was prepared exclusively for the purposes, project and site location outlined in the report. The report is based on information provided to, or obtained by Dillon as indicated in the report, and applies solely to site conditions existing at the time of the site investigation. Although a reasonable investigation was conducted, Dillon's investigation was by no means exhaustive and cannot be construed as a certification of the absence of any contaminants from the site. Rather, Dillon's report represents a reasonable review of available information within an agreed work scope, schedule, and budget. It is therefore possible that currently unrecognized contamination or potentially hazardous materials may exist at the site, and that the levels of contamination or hazardous materials may vary across the site. Further review and updating of the report may be required as local and site conditions, and the regulatory and planning frameworks, change over time.

This report was prepared by Dillon for the sole benefit of Invenergy Clean Power LLC. The material in the report reflects Dillon's best judgment in light of the information available to Dillon at the time of preparation. Any use which a third party (i.e., a party other than our Client) makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Dillon accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

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Sincerely,

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AA:cak

Our file: 16-3489

Attachment A
Figures

EDP SEDIMENT QUALITY ASSESSMENT AND SEDIMENT MANAGEMENT PLAN

Port of Acajutla, El Salvador

SEDIMENT SAMPLING LOCATION

FIGURE 1

- AUGUST 2016 SEDIMENT SAMPLING LOCATION

SCALE 1:20,000

0 500 1000 2000m

N W E S

MAP/DRAWING INFORMATION

CREATED BY: AZ
CHECKED BY: AA
DESIGNED BY: AA

File Location:
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October, 13, 2016 4:47 PM

DILLON CONSULTING

PROJECT: 163489
STATUS: DRAFT
DATE: 10/13/16

Attachment B
Summary Tables

Table B-1: Sediment Results

Sample ID	M01	M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M16
Sampler Number	1531229	1531230	1531231	1531232	1531233	1531234	1531235	1531236	1531237	1531238	1531239	1531240	1531241	1531243	1531244	1531245
Sample Code	5635	5636	5637	5829	5838	5839	5640	5641	5642	5643	5830	5831	5832	5833	5644	5786
Sample Date	8/17/2016	8/17/2016	8/17/2016	8/24/2016	8/18/2016	8/18/2016	8/18/2016	8/18/2016	8/17/2016	8/18/2016	8/24/2016	8/24/2016	8/24/2016	8/24/2016	8/17/2016	8/23/2016

Parameter	Units	RDL	Effects Range-Low SedQBs[a]	Effects Range-Median SedQBs[b]														
Antimony	mg/kg	0.241	-	-	0.55	0.39	0.57	0.33	0.38	0.31	0.33	0.31	0.20	0.16	0.24	0.152	0.20	0.17	0.18	0.20
Arsenic	mg/kg	0.484	8.2	70	17.1	15.0	9.83	9.53	7.64	7.04	7.59	8.61	7.07	5.17	5.89	4.11	3.07	3.51	5.21	5.01
Barium	mg/kg	0.725	-	-	19.3	23.0	24.1	24.6	24.3	24.4	24.0	25.1	17.7	18.8	20.8	16.9	22.0	16.9	24.4	27.8
Beryllium	mg/kg	0.241	-	-	0.20	0.49	0.45	0.51	0.38	0.42	0.42	0.43	0.12	0.31	0.38	0.28	0.31	0.26	0.42	0.45
Boron	mg/kg	24.1	-	-	22.1	37.7	30.4	30.1	22.3	26.5	25.3	25.5	14.8	20.3	23.1	17.5	18.7	15.3	27.2	29.4
Cadmium	mg/kg	1.39	1.2	9.6	0.12	0.12	0.12	0.13	0.14	0.10	0.09	0.09	0.03	0.08	0.09	0.05	0.09	0.06	0.16	0.15
Chromium	mg/kg	0.241	81	370	7.3	8.5	6.6	4.3	5.0	4.0	4.5	5.3	3.8	3.8	3.5	3.3	3.3	3.7	3.6	3.4
Cobalt	mg/kg	0.241	-	-	7.61	10.9	13.9	15.7	16.3	13.7	15.5	16.5	5.37	15.3	15.6	15.9	14.4	16.9	13.6	14.0
Copper	mg/kg	0.241	34	270	7.80	21.0	33.2	33.9	27.9	31.8	32.9	31.5	8.68	26.3	31.3	26.0	32.8	25.9	40.4	38.4
Iron	mg/kg	139	-	-	22000	33700	37200	35700	39000	37000	39100	41000	16300	33800	35500	35600	33400	34700	31700	28600
Lead	mg/kg	0.241	46.7	218	3.1	6.2	7.1	7.0	5.5	6.1	6.7	6.9	1.2	4.6	5.1	4.2	4.4	3.6	5.0	5.2
Manganese	mg/kg	1.39	-	-	668	773	661	756	818	712	693	710	336	665	610	598	505	539	490	532
Mercury	mg/kg	0.0249	0.15	0.71	0.01	0.03	0.04	0.04	0.02	0.03	0.03	0.04	<0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.03
Molybdenum	mg/kg	0.241	-	-	0.37	0.30	0.42	0.26	0.24	0.20	0.20	0.25	0.17	0.17	0.18	0.12	0.13	0.15	0.20	0.21
Nickel	mg/kg	0.241	20.9	51.6	5.5	5.9	5.6	4.8	5.5	4.5	5.0	5.6	3.4	5.2	4.7	5.4	5.0	5.9	4.5	4.3
Phosphorus	mg/kg	24.1	-	-	642	730	518	449	393	397	402	469	706	327	350	283	262	266	349	327
Selenium	mg/kg	0.725	-	-	<0.725	<0.679	<1.11	<0.721	<0.834	<0.645	<0.805	<0.772	<0.510	<0.542	<0.705	<0.492	<0.617	<0.558	<0.607	<0.673
Silver	mg/kg	0.241	1	3.7	0.01	0.02	0.04	0.03	0.02	0.03	0.03	0.02	0.01	0.02	0.03	0.02	0.03	0.02	0.04	0.05
Thallium	mg/kg	0.241	-	-	0.08	0.12	0.21	0.12	0.10	0.08	0.08	0.10	0.02	0.06	0.06	0.05	0.06	0.05	0.06	0.08
Tin	mg/kg	12.1	-	-	<12.1	<11.3	<18.4	<12.0	<13.9	<10.7	<13.4	<12.9	<8.51	<9.04	<11.7	<8.20	<10.3	<9.29	<10.1	<11.2
Uranium	mg/kg	1.39	-	-	0.830	1.22	0.742	0.672	0.464	0.576	0.509	0.559	0.527	0.353	0.399	0.294	0.333	0.250	0.446	0.574
Vanadium	mg/kg	0.241	-	-	50.1	45.9	68.8	61.8	75.8	61.7	73.6	77.6	19.2	69.5	72.3	66.9	75.3	82.1	76.6	73.0
Zinc	mg/kg	1.21	150	410	32.5	62.6	69.0	70.7	67.2	64.1	70.4	72.5	17.7	61.2	64.5	58.4	57.6	59.1	63.0	60.9
Total Solids for Dry Weight	%	0.01	-	-	79.6	70.0	65.1	65.5	68.7	62.2	69.6	71.4	81.2	69.5	73.9	76.2	74.5	77.3	71	68.8

Notes:

"-" = no guideline available; SedQB=marine sediment quality benchmark; RDL=reportable detection limit.

a National Oceanic and Atmospheric Administration's Effects Range-Low (ERL) values (NOAA, 1999).

b National Oceanic and Atmospheric Administration's Effects Range-Median (ERM) values (NOAA, 1999).

Shaded — Concentration exceeds ERL value.

Shaded — Concentration exceeds both ERL and ERM values.

Table B-1: Sediment Results

Sample ID	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29
Sampler Number	1531246	1531247	1531248	1531250	1531251	1531252	1531253	1531254	1531255	1531256	1531257	1531258	1531259
Sample Code	5787	5788	5789	5645	5646	5790	5834	5791	5792	BH14 1.25-1.85	BH14 2.35-2.40	BH14 4.00-5.00	BH-6B (Marine BH)
Sample Date	8/23/2016	8/23/2016	8/23/2016	8/17/2016	8/17/2016	8/23/2016	8/24/2016	8/23/2016	8/23/2016	-	-	-	-

Parameter	Units	RDL	Effects Range-Low SedQBs[a]	Effects Range-Median SedQBs[b]											
Antimony	mg/kg	0.241	-	-	0.22	0.160	0.11	0.14	<0.21	0.56	0.52	0.37	0.29	0.40	0.48	0.35	0.29
Arsenic	mg/kg	0.484	8.2	70	5.27	5.03	5.11	4.25	3.54	4.53	10.2	6.66	3.88	0.652	0.790	0.835	10.1
Barium	mg/kg	0.725	-	-	26.6	17.7	15.2	13.6	14.8	18.6	31.9	13.9	12.4	118	78.4	128	27.6
Beryllium	mg/kg	0.241	-	-	0.45	0.33	0.26	0.24	0.28	0.30	0.48	0.14	0.21	0.43	0.54	0.57	0.79
Boron	mg/kg	24.1	-	-	29.9	19.7	17.2	16.2	14.1	15.1	30.5	10.5	11.7	6.63	7.69	4.12	49.4
Cadmium	mg/kg	1.39	1.2	9.6	0.11	0.07	0.04	<0.24	0.05	<0.27	0.13	<0.17	<0.18	<0.27	0.09	<0.28	0.09
Chromium	mg/kg	0.241	81	370	3.4	3.9	2.8	4.1	4.7	4.5	6.4	2.2	4.3	1.1	6.8	13	15
Cobalt	mg/kg	0.241	-	-	14.1	15.7	13.8	17.3	17.3	16.8	11.4	6.04	18.8	8.48	9.93	9.79	20.6
Copper	mg/kg	0.241	34	270	38.6	25.3	13.0	14.5	19.1	26.3	38.0	15.5	14.6	68.5	56.6	30.7	24.0
Iron	mg/kg	139	-	-	30100	35100	30100	35300	34700	40400	39700	17600	42200	32500	27400	37500	57000
Lead	mg/kg	0.241	46.7	218	5.4	3.9	2.7	7.2	4.0	4.9	12	1.2	2.9	2.7	3.5	3.7	4.6
Manganese	mg/kg	1.39	-	-	587	576	529	582	561	589	594	263	587	454	398	474	1060
Mercury	mg/kg	0.0249	0.15	0.71	0.02	0.0212	0.01	0.01	<0.02	<0.02	0.03	<0.02	<0.02	<0.02	0.07	<0.02	0.18
Molybdenum	mg/kg	0.241	-	-	0.17	0.16	0.16	0.16	0.43	0.31	0.28	0.30	0.13	0.12	0.13	0.12	0.86
Nickel	mg/kg	0.241	20.9	51.6	4.2	4.9	6.2	7.8	6.33	6.2	4.9	3.0	8.6	2.2	5.1	8.5	10.3
Phosphorus	mg/kg	24.1	-	-	375	316	251	243	240	292	580	451	211	176	228	262	743
Selenium	mg/kg	0.725	-	-	<0.779	<0.629	<0.496	<0.719	0.272	<0.799	<0.697	<0.503	<0.554	<0.804	<0.916	<0.855	0.333
Silver	mg/kg	0.241	1	3.7	0.04	0.02	0.01	0.01	0.03	0.03	0.05	0.01	0.01	0.01	0.02	0.01	0.03
Thallium	mg/kg	0.241	-	-	0.08	0.07	0.03	0.03	0.08	0.13	0.118	0.03	0.03	0.11	0.14	0.06	0.13
Tin	mg/kg	12.1	-	-	<13.0	<10.5	<8.28	<12.0	<13.6	<13.3	<11.6	<8.38	<9.22	<13.4	<15.3	<14.3	<12.6
Uranium	mg/kg	1.39	-	-	0.454	0.373	0.274	0.315	0.328	0.377	0.827	0.398	0.285	0.265	0.219	0.353	2.46
Vanadium	mg/kg	0.241	-	-	72.8	79.9	48.7	78.6	97.7	87.2	57.0	28.7	76.0	40.9	68.5	57.6	73.9
Zinc	mg/kg	1.21	150	410	67.2	58.0	43.2	52.1	47.6	63.3	80.5	22.1	57.0	36.9	56.3	47.6	48.9
Total Solids for Dry Weight	%	0.01	-	-	70.2	74.6	74.8	77.9	73.8	73.3	64	90.5	76.6	78.4	75.8	79.8	70

Notes:

"-" = no guideline available; SedQB=marine sediment quality benchmark; RDL=reportable detection limit.

a National Oceanic and Atmospheric Administration's Effects Range-Low (ERL) values (NOAA, 1999).

b National Oceanic and Atmospheric Administration's Effects Range-Median (ERM) values (NOAA, 1999).

Shaded — Concentration exceeds ERL value.

Shaded — Concentration exceeds both ERL and ERM values.

Attachment C
Laboratory Certificates of Analysis

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Employee Owned Integrity Caring Continual Improvement

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Report

Report To

Fugro Consultants Inc.
Steve DeGregorio
6100 Hillcroft St.
Houston, TX 77081-1009

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LNG TO POWER

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Results

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LNG TO POWER

Account	*Project*
GCT1-G	757120

Report To

Fugro Consultants Inc.
Steve DeGregorio
6100 Hillcroft St.
Houston, TX 77081-1009

Results

1528165 **5635** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 17:07:00 LPS

	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**22.1 ***	**mg/kg**	24.1	J	16000	**7440-42-8**	05
N	**Phosphorus**	**642 ***	**mg/kg**	24.1			**7723-14-0**	05
N	**Tin, Total**	**<12.1 ***	**mg/kg**	12.1			**7440-31-5**	05

EPA 6010C *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685068 10/03/2016 13:08:00 WOB

	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**22000 ***	**mg/Kg**	139		0	**7439-89-6**	08

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 18:07:00 CLK

	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.549 ***	**mg/kg**	0.241	B		**7440-36-0**	05
N	**Arsenic, Total**	**17.1 ***	**mg/kg**	0.484		5.00	**7440-38-2**	05
N	**Barium**	**19.3 ***	**mg/kg**	0.725		440	**7440-39-3**	05
N	**Beryllium, Total**	**0.197 ***	**mg/kg**	0.241	J		**7440-41-7**	05
N	**Chromium, Total**	**7.26 ***	**mg/kg**	0.241		2400	**7440-47-3**	05
N	**Cobalt**	**7.61 ***	**mg/kg**	0.241			**7440-48-4**	05
N	**Copper, Total**	**7.80 ***	**mg/kg**	0.241		1000	**7440-50-8**	05
N	**Lead, Total**	**3.09 ***	**mg/kg**	0.241		6.30	**7439-92-1**	05
N	**Molybdenum**	**0.369 ***	**mg/kg**	0.241		155	**7439-98-7**	05
N	**Nickel, Total**	**5.48 ***	**mg/kg**	0.241		160	**7440-02-0**	05
N	**Selenium, Total**	**<0.725 ***	**mg/kg**	0.725		2.30	**7782-49-2**	05
N	**Silver, Total**	**0.0126 ***	**mg/kg**	0.241	J	0.480	**7440-22-4**	05
N	**Thallium, Total**	**0.081 ***	**mg/kg**	0.241	JB		**7440-28-0**	05
N	**Vanadium**	**50.1 ***	**mg/kg**	0.241		2.94	**7440-62-2**	05
N	**Zinc, Total**	**32.5 ***	**mg/kg**	1.21		2400	**7440-66-6**	05

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 14:50:00 CLK

	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Cadmium, Total**	**163 ***	**mg/kg**	1.39		1.50	**7440-43-9**	08
N	**Manganese, Total**	**1040 ***	**mg/kg**	1.39	D	1200	**7439-96-5**	08
z	**Uranium**	**0.721 ***	**mg/kg**	1.39	J			08

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 14:41:00 LPS

	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*

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Results

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1528165 **5635** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 14:41:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.00956 ***	**mg/kg**	0.0249	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**79.6**	**%**	0.010				01

1528173 **5636** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 17:28:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**37.7 ***	**mg/kg**	22.6		16000	**7440-42-8**	03
N	**Phosphorus**	**730 ***	**mg/kg**	22.6			**7723-14-0**	03
N	**Tin, Total**	**<11.3 ***	**mg/kg**	11.3			**7440-31-5**	03

EPA 6010C *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685068 10/03/2016 13:19:00 WOB

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**33700 ***	**mg/Kg**	97.6		0	**7439-89-6**	06

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 18:22:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.387 ***	**mg/kg**	0.226	B		**7440-36-0**	03
N	**Arsenic, Total**	**15.0 ***	**mg/kg**	0.451		5.00	**7440-38-2**	03
N	**Barium**	**23.0 ***	**mg/kg**	0.679		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.490 ***	**mg/kg**	0.226			**7440-41-7**	03
N	**Cadmium, Total**	**0.121 ***	**mg/kg**	0.226	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**8.47 ***	**mg/kg**	0.226		2400	**7440-47-3**	03
N	**Cobalt**	**10.9 ***	**mg/kg**	0.226			**7440-48-4**	03
N	**Copper, Total**	**21.0 ***	**mg/kg**	0.226		1000	**7440-50-8**	03
N	**Lead, Total**	**6.23 ***	**mg/kg**	0.226		6.30	**7439-92-1**	03
N	**Molybdenum**	**0.304 ***	**mg/kg**	0.226		155	**7439-98-7**	03
N	**Nickel, Total**	**5.93 ***	**mg/kg**	0.226		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.679 ***	**mg/kg**	0.679		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0236 ***	**mg/kg**	0.226	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.117 ***	**mg/kg**	0.226	JB		**7440-28-0**	03
N	**Vanadium**	**45.9 ***	**mg/kg**	0.226		2.94	**7440-62-2**	03
N	**Zinc, Total**	**62.6 ***	**mg/kg**	1.13		2400	**7440-66-6**	03

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1528173 **5636** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 15:05:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Manganese, Total**	**867 ***	**mg/kg**	0.976		1200	**7439-96-5**	06
z	**Uranium**	**1.10 ***	**mg/kg**	0.976				06

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 14:45:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.0277 ***	**mg/kg**	0.0271		0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**70.0**	**%**	0.010				01

1528174 **5637** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 17:41:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**30.4 ***	**mg/kg**	36.9	J	16000	**7440-42-8**	03
N	**Phosphorus**	**518 ***	**mg/kg**	36.9			**7723-14-0**	03
N	**Tin, Total**	**<18.4 ***	**mg/kg**	18.4			**7440-31-5**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684952 09/30/2016 18:35:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**37200 ***	**mg/Kg**	184		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 18:31:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.565 ***	**mg/kg**	0.369	B		**7440-36-0**	03
N	**Arsenic, Total**	**9.83 ***	**mg/kg**	0.739		5.00	**7440-38-2**	03
N	**Barium**	**24.1 ***	**mg/kg**	1.11		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.453 ***	**mg/kg**	0.369			**7440-41-7**	03
N	**Cadmium, Total**	**0.117 ***	**mg/kg**	0.369	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**6.59 ***	**mg/kg**	0.369		2400	**7440-47-3**	03
N	**Cobalt**	**13.9 ***	**mg/kg**	0.369			**7440-48-4**	03
N	**Copper, Total**	**33.2 ***	**mg/kg**	0.369		1000	**7440-50-8**	03
N	**Lead, Total**	**7.11 ***	**mg/kg**	0.369		6.30	**7439-92-1**	03
N	**Manganese, Total**	**661 ***	**mg/kg**	0.369		1200	**7439-96-5**	03
N	**Molybdenum**	**0.424 ***	**mg/kg**	0.369		155	**7439-98-7**	03

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1528174 **5637** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6020A	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684626	09/29/2016	18:31:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Nickel, Total**	**5.58 ***	**mg/kg**	0.369		160	**7440-02-0**	03
N	**Selenium, Total**	**<1.11 ***	**mg/kg**	1.11		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0418 ***	**mg/kg**	0.369	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.210 ***	**mg/kg**	0.369	JB		**7440-28-0**	03
N	**Vanadium**	**68.8 ***	**mg/kg**	0.369		2.94	**7440-62-2**	03
N	**Zinc, Total**	**69.0 ***	**mg/kg**	1.84		2400	**7440-66-6**	03
EPA 6020A	*Prepared:* 684912	10/03/2016	07:40:00	*Analyzed* 685089	10/03/2016	13:43:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.742 ***	**mg/kg**	0.355				04

* Dry Weight Basis

EPA 7471A	*Prepared:* 684405	09/29/2016	08:45:00	*Analyzed* 684562	09/29/2016	14:47:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**0.0447 ***	**mg/kg**	0.0281		0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684786	09/29/2016	14:00:00	*Analyzed* 684786	09/29/2016	14:00:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**65.1**	**%**	0.010				01

1528175 **5829** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684640	09/29/2016	17:45:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**30.1 ***	**mg/kg**	24.0		16000	**7440-42-8**	03
N	**Phosphorus**	**449 ***	**mg/kg**	24.0			**7723-14-0**	03
N	**Tin, Total**	**<12.0 ***	**mg/kg**	12.0			**7440-31-5**	03
EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684952	09/30/2016	18:38:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**35700 ***	**mg/Kg**	120		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684626	09/29/2016	18:34:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.328 ***	**mg/kg**	0.240	B		**7440-36-0**	03
N	**Arsenic, Total**	**9.53 ***	**mg/kg**	0.479		5.00	**7440-38-2**	03
N	**Barium**	**24.6 ***	**mg/kg**	0.721		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.513 ***	**mg/kg**	0.240			**7440-41-7**	03

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Results

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1528175 **5829** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6020A	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684626	09/29/2016	18:34:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Cadmium, Total**	**0.129 ***	**mg/kg**	0.240	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**4.34 ***	**mg/kg**	0.240		2400	**7440-47-3**	03
N	**Cobalt**	**15.7 ***	**mg/kg**	0.240			**7440-48-4**	03
N	**Copper, Total**	**33.9 ***	**mg/kg**	0.240		1000	**7440-50-8**	03
N	**Lead, Total**	**7.04 ***	**mg/kg**	0.240		6.30	**7439-92-1**	03
N	**Manganese, Total**	**756 ***	**mg/kg**	0.240		1200	**7439-96-5**	03
N	**Molybdenum**	**0.261 ***	**mg/kg**	0.240		155	**7439-98-7**	03
N	**Nickel, Total**	**4.76 ***	**mg/kg**	0.240		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.721 ***	**mg/kg**	0.721		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0313 ***	**mg/kg**	0.240	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.118 ***	**mg/kg**	0.240	JB		**7440-28-0**	03
N	**Vanadium**	**61.8 ***	**mg/kg**	0.240		2.94	**7440-62-2**	03
N	**Zinc, Total**	**70.7 ***	**mg/kg**	1.20		2400	**7440-66-6**	03
EPA 6020A	*Prepared:* 684912	10/03/2016	07:40:00	*Analyzed* 685089	10/03/2016	13:52:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.672 ***	**mg/kg**	0.278				04

* Dry Weight Basis

EPA 7471A	*Prepared:* 684405	09/29/2016	08:45:00	*Analyzed* 684562	09/29/2016	14:48:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**0.0374 ***	**mg/kg**	0.027		0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684786	09/29/2016	14:00:00	*Analyzed* 684786	09/29/2016	14:00:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**65.5**	**%**	0.010				01

1528176 **5838** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

BAG ID: 5638

EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684640	09/29/2016	17:49:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**22.3 ***	**mg/kg**	27.8	J	16000	**7440-42-8**	03
N	**Phosphorus**	**393 ***	**mg/kg**	27.8			**7723-14-0**	03
N	**Tin, Total**	**<13.9 ***	**mg/kg**	13.9			**7440-31-5**	03
EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684952	09/30/2016	18:42:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**39000 ***	**mg/Kg**	139		0	**7439-89-6**	03

* Dry Weight Basis

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Results

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1528176 **5838** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

BAG ID: 5638

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 18:37:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.376 ***	**mg/kg**	0.278	B		**7440-36-0**	03
N	**Arsenic, Total**	**7.64 ***	**mg/kg**	0.556		5.00	**7440-38-2**	03
N	**Barium**	**24.3 ***	**mg/kg**	0.834		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.378 ***	**mg/kg**	0.278			**7440-41-7**	03
N	**Cadmium, Total**	**0.136 ***	**mg/kg**	0.278	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**4.99 ***	**mg/kg**	0.278		2400	**7440-47-3**	03
N	**Cobalt**	**16.3 ***	**mg/kg**	0.278			**7440-48-4**	03
N	**Copper, Total**	**27.9 ***	**mg/kg**	0.278		1000	**7440-50-8**	03
N	**Lead, Total**	**5.52 ***	**mg/kg**	0.278		6.30	**7439-92-1**	03
N	**Manganese, Total**	**818 ***	**mg/kg**	0.278		1200	**7439-96-5**	03
N	**Molybdenum**	**0.240 ***	**mg/kg**	0.278	J	155	**7439-98-7**	03
N	**Nickel, Total**	**5.52 ***	**mg/kg**	0.278		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.834 ***	**mg/kg**	0.834		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0227 ***	**mg/kg**	0.278	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.102 ***	**mg/kg**	0.278	JB		**7440-28-0**	03
N	**Vanadium**	**75.8 ***	**mg/kg**	0.278		2.94	**7440-62-2**	03
N	**Zinc, Total**	**67.2 ***	**mg/kg**	1.39		2400	**7440-66-6**	03

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 13:55:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
z	**Uranium**	**0.464 ***	**mg/kg**	0.303				04

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 14:50:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.0246 ***	**mg/kg**	0.0255	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**68.7**	**%**	0.010				01

1528177 **5839** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

BAG ID: 5639

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 17:53:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**26.5 ***	**mg/kg**	21.5		16000	**7440-42-8**	03
N	**Phosphorus**	**397 ***	**mg/kg**	21.5			**7723-14-0**	03
N	**Tin, Total**	**<10.7 ***	**mg/kg**	10.7			**7440-31-5**	03

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1528177 **5839** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

BAG ID: 5639

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684952 09/30/2016 18:45:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**37000 ***	**mg/Kg**	107		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 18:40:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.312 ***	**mg/kg**	0.215	B		**7440-36-0**	03
N	**Arsenic, Total**	**7.04 ***	**mg/kg**	0.429		5.00	**7440-38-2**	03
N	**Barium**	**24.4 ***	**mg/kg**	0.645		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.416 ***	**mg/kg**	0.215			**7440-41-7**	03
N	**Cadmium, Total**	**0.104 ***	**mg/kg**	0.215	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**4.02 ***	**mg/kg**	0.215		2400	**7440-47-3**	03
N	**Cobalt**	**13.7 ***	**mg/kg**	0.215			**7440-48-4**	03
N	**Copper, Total**	**31.8 ***	**mg/kg**	0.215		1000	**7440-50-8**	03
N	**Lead, Total**	**6.05 ***	**mg/kg**	0.215		6.30	**7439-92-1**	03
N	**Manganese, Total**	**712 ***	**mg/kg**	0.215		1200	**7439-96-5**	03
N	**Molybdenum**	**0.195 ***	**mg/kg**	0.215	J	155	**7439-98-7**	03
N	**Nickel, Total**	**4.53 ***	**mg/kg**	0.215		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.645 ***	**mg/kg**	0.645		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0273 ***	**mg/kg**	0.215	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0809 ***	**mg/kg**	0.215	JB		**7440-28-0**	03
N	**Vanadium**	**61.7 ***	**mg/kg**	0.215		2.94	**7440-62-2**	03
N	**Zinc, Total**	**64.1 ***	**mg/kg**	1.07		2400	**7440-66-6**	03

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 13:58:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
z	**Uranium**	**0.576 ***	**mg/kg**	0.215				04

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 14:54:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.0342 ***	**mg/kg**	0.028		0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**62.2**	**%**	0.010				01

1528178 **5640** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

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1528178 **5640** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 6010C	*Prepared: 684461 09/29/2016 11:20:00*	*Analyzed 684640 09/29/2016 17:57:00 LPS*						
N	**Boron**	**25.3 ***	**mg/kg**	26.9	J	16000	**7440-42-8**	03
N	**Phosphorus**	**402 ***	**mg/kg**	26.9			**7723-14-0**	03
N	**Tin, Total**	**<13.4 ***	**mg/kg**	13.4			**7440-31-5**	03
EPA 6010C	*Prepared: 684461 09/29/2016 11:20:00*	*Analyzed 684952 09/30/2016 18:49:00 LPS*						
N	**Total Iron**	**39100 ***	**mg/Kg**	134		0	**7439-89-6**	03

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 6020A	*Prepared: 684461 09/29/2016 11:20:00*	*Analyzed 684626 09/29/2016 18:43:00 CLK*						
N	**Antimony, Total**	**0.329 ***	**mg/kg**	0.269	B		**7440-36-0**	03
N	**Arsenic, Total**	**7.59 ***	**mg/kg**	0.536		5.00	**7440-38-2**	03
N	**Barium**	**24.0 ***	**mg/kg**	0.805		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.422 ***	**mg/kg**	0.269			**7440-41-7**	03
N	**Cadmium, Total**	**0.0938 ***	**mg/kg**	0.269	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**4.54 ***	**mg/kg**	0.269		2400	**7440-47-3**	03
N	**Cobalt**	**15.5 ***	**mg/kg**	0.269			**7440-48-4**	03
N	**Copper, Total**	**32.9 ***	**mg/kg**	0.269		1000	**7440-50-8**	03
N	**Lead, Total**	**6.68 ***	**mg/kg**	0.269		6.30	**7439-92-1**	03
N	**Manganese, Total**	**693 ***	**mg/kg**	0.269		1200	**7439-96-5**	03
N	**Molybdenum**	**0.201 ***	**mg/kg**	0.269	J	155	**7439-98-7**	03
N	**Nickel, Total**	**5.03 ***	**mg/kg**	0.269		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.805 ***	**mg/kg**	0.805		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0329 ***	**mg/kg**	0.269	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0833 ***	**mg/kg**	0.269	BJ		**7440-28-0**	03
N	**Vanadium**	**73.6 ***	**mg/kg**	0.269		2.94	**7440-62-2**	03
N	**Zinc, Total**	**70.4 ***	**mg/kg**	1.34		2400	**7440-66-6**	03
EPA 6020A	*Prepared: 684912 10/03/2016 07:40:00*	*Analyzed 685089 10/03/2016 14:01:00 CLK*						
z	**Uranium**	**0.509 ***	**mg/kg**	0.326				04

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 7471A	*Prepared: 684405 09/29/2016 08:45:00*	*Analyzed 684562 09/29/2016 14:56:00 LPS*						
N	**Mercury**	**0.0322 ***	**mg/kg**	0.0272		0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
SM2540 G-1997 /MOD	*Prepared: 684786 09/29/2016 14:00:00*	*Analyzed 684786 09/29/2016 14:00:00 TH2*						
N	**Total Solids for Dry Wt**	**69.6**	**%**	0.010				01

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Results

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1528179 **5641** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 6010C	*Prepared: 684461 09/29/2016 11:20:00*	*Analyzed 684640 09/29/2016 18:01:00 LPS*						
N	**Boron**	**25.5 ***	**mg/kg**	25.8	J	16000	**7440-42-8**	03
N	**Phosphorus**	**469 ***	**mg/kg**	25.8			**7723-14-0**	03
N	**Tin, Total**	**<12.9 ***	**mg/kg**	12.9			**7440-31-5**	03
EPA 6010C	*Prepared: 684461 09/29/2016 11:20:00*	*Analyzed 684952 09/30/2016 18:52:00 LPS*						
N	**Total Iron**	**41000 ***	**mg/Kg**	129		0	**7439-89-6**	03

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 6020A	*Prepared: 684461 09/29/2016 11:20:00*	*Analyzed 684626 09/29/2016 18:46:00 CLK*						
N	**Antimony, Total**	**0.308 ***	**mg/kg**	0.258	B		**7440-36-0**	03
N	**Arsenic, Total**	**8.61 ***	**mg/kg**	0.515		5.00	**7440-38-2**	03
N	**Barium**	**25.1 ***	**mg/kg**	0.772		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.431 ***	**mg/kg**	0.258			**7440-41-7**	03
N	**Cadmium, Total**	**0.0899 ***	**mg/kg**	0.258	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**5.34 ***	**mg/kg**	0.258		2400	**7440-47-3**	03
N	**Cobalt**	**16.5 ***	**mg/kg**	0.258			**7440-48-4**	03
N	**Copper, Total**	**31.5 ***	**mg/kg**	0.258		1000	**7440-50-8**	03
N	**Lead, Total**	**6.86 ***	**mg/kg**	0.258		6.30	**7439-92-1**	03
N	**Manganese, Total**	**710 ***	**mg/kg**	0.258		1200	**7439-96-5**	03
N	**Molybdenum**	**0.246 ***	**mg/kg**	0.258	J	155	**7439-98-7**	03
N	**Nickel, Total**	**5.57 ***	**mg/kg**	0.258		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.772 ***	**mg/kg**	0.772		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0245 ***	**mg/kg**	0.258	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0986 ***	**mg/kg**	0.258	JB		**7440-28-0**	03
N	**Vanadium**	**77.6 ***	**mg/kg**	0.258		2.94	**7440-62-2**	03
N	**Zinc, Total**	**72.5 ***	**mg/kg**	1.29		2400	**7440-66-6**	03
EPA 6020A	*Prepared: 684912 10/03/2016 07:40:00*	*Analyzed 685089 10/03/2016 14:04:00 CLK*						
z	**Uranium**	**0.559 ***	**mg/kg**	0.192				04

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 7471A	*Prepared: 684405 09/29/2016 08:45:00*	*Analyzed 684562 09/29/2016 14:57:00 LPS*						
N	**Mercury**	**0.0367 ***	**mg/kg**	0.027		0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
SM2540 G-1997 /MOD	*Prepared: 684786 09/29/2016 14:00:00*	*Analyzed 684786 09/29/2016 14:00:00 TH2*						
N	**Total Solids for Dry Wt**	**71.4**	**%**	0.010				01

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Results

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1528180 **5642** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 6010C	*Prepared:* 684461 09/29/2016 11:20:00	*Analyzed* 684640 09/29/2016 18:05:00 LPS						
N	**Boron**	**14.8 ***	**mg/kg**	17.0	J	16000	**7440-42-8**	03
N	**Phosphorus**	**706 ***	**mg/kg**	17.0			**7723-14-0**	03
N	**Tin, Total**	**<8.51 ***	**mg/kg**	8.51			**7440-31-5**	03
EPA 6010C	*Prepared:* 684461 09/29/2016 11:20:00	*Analyzed* 684952 09/30/2016 18:55:00 LPS						
N	**Total Iron**	**16300 ***	**mg/Kg**	85.1		0	**7439-89-6**	03

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 6020A	*Prepared:* 684461 09/29/2016 11:20:00	*Analyzed* 684626 09/29/2016 18:49:00 CLK						
N	**Antimony, Total**	**0.200 ***	**mg/kg**	0.170	B		**7440-36-0**	03
N	**Arsenic, Total**	**7.07 ***	**mg/kg**	0.340		5.00	**7440-38-2**	03
N	**Barium**	**17.7 ***	**mg/kg**	0.510		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.124 ***	**mg/kg**	0.170	J		**7440-41-7**	03
N	**Cadmium, Total**	**0.0347 ***	**mg/kg**	0.170	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**3.82 ***	**mg/kg**	0.170		2400	**7440-47-3**	03
N	**Cobalt**	**5.37 ***	**mg/kg**	0.170			**7440-48-4**	03
N	**Copper, Total**	**8.68 ***	**mg/kg**	0.170		1000	**7440-50-8**	03
N	**Lead, Total**	**1.15 ***	**mg/kg**	0.170		6.30	**7439-92-1**	03
N	**Manganese, Total**	**336 ***	**mg/kg**	0.170		1200	**7439-96-5**	03
N	**Molybdenum**	**0.167 ***	**mg/kg**	0.170	J	155	**7439-98-7**	03
N	**Nickel, Total**	**3.42 ***	**mg/kg**	0.170		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.510 ***	**mg/kg**	0.510		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.00531 ***	**mg/kg**	0.170	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.016 ***	**mg/kg**	0.170	JB		**7440-28-0**	03
N	**Vanadium**	**19.2 ***	**mg/kg**	0.170		2.94	**7440-62-2**	03
N	**Zinc, Total**	**17.7 ***	**mg/kg**	0.851		2400	**7440-66-6**	03
EPA 6020A	*Prepared:* 684912 10/03/2016 07:40:00	*Analyzed* 685089 10/03/2016 14:07:00 CLK						
z	**Uranium**	**0.527 ***	**mg/kg**	0.232				04

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 7471A	*Prepared:* 684405 09/29/2016 08:45:00	*Analyzed* 684562 09/29/2016 14:59:00 LPS						
N	**Mercury**	**<0.0212 ***	**mg/kg**	0.0212		0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
SM2540 G-1997 /MOD	*Prepared:* 684786 09/29/2016 14:00:00	*Analyzed* 684786 09/29/2016 14:00:00 TH2						
N	**Total Solids for Dry Wt**	**81.2**	**%**	0.010				01

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Results

Printed: 10/03/2016

1528181 **5643** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 18:18:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Phosphorus**	**327 ***	**mg/kg**	18.1			**7723-14-0**	03
N	**Tin, Total**	**<9.04 ***	**mg/kg**	9.04			**7440-31-5**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684824 09/30/2016 13:09:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**20.3 ***	**mg/kg**	18.1		16000	**7440-42-8**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684952 09/30/2016 18:59:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**33800 ***	**mg/Kg**	90.4		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 18:58:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.161 ***	**mg/kg**	0.181	JB		**7440-36-0**	03
N	**Arsenic, Total**	**5.17 ***	**mg/kg**	0.361		5.00	**7440-38-2**	03
N	**Barium**	**18.8 ***	**mg/kg**	0.542		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.311 ***	**mg/kg**	0.181			**7440-41-7**	03
N	**Cadmium, Total**	**0.0822 ***	**mg/kg**	0.181	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**3.84 ***	**mg/kg**	0.181		2400	**7440-47-3**	03
N	**Cobalt**	**15.3 ***	**mg/kg**	0.181			**7440-48-4**	03
N	**Copper, Total**	**26.3 ***	**mg/kg**	0.181		1000	**7440-50-8**	03
N	**Lead, Total**	**4.58 ***	**mg/kg**	0.181		6.30	**7439-92-1**	03
N	**Manganese, Total**	**665 ***	**mg/kg**	0.181		1200	**7439-96-5**	03
N	**Molybdenum**	**0.173 ***	**mg/kg**	0.181	J	155	**7439-98-7**	03
N	**Nickel, Total**	**5.22 ***	**mg/kg**	0.181		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.542 ***	**mg/kg**	0.542		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0233 ***	**mg/kg**	0.181	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0567 ***	**mg/kg**	0.181	JB		**7440-28-0**	03
N	**Vanadium**	**69.5 ***	**mg/kg**	0.181		2.94	**7440-62-2**	03
N	**Zinc, Total**	**61.2 ***	**mg/kg**	0.904		2400	**7440-66-6**	03

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 14:10:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
z	**Uranium**	**0.353 ***	**mg/kg**	0.197				04

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 15:01:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.0174 ***	**mg/kg**	0.0247	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**69.5**	**%**	0.010				01

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Results

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1528182 **5830** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 18:23:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Phosphorus**	**350** *	**mg/kg**	23.5			**7723-14-0**	03
N	**Tin, Total**	**<11.7** *	**mg/kg**	11.7			**7440-31-5**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684824 09/30/2016 13:13:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**23.1** *	**mg/kg**	23.5	J	16000	**7440-42-8**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684952 09/30/2016 19:10:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**35500** *	**mg/Kg**	117		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 19:01:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.235** *	**mg/kg**	0.235	JB		**7440-36-0**	03
N	**Arsenic, Total**	**5.89** *	**mg/kg**	0.470		5.00	**7440-38-2**	03
N	**Barium**	**20.8** *	**mg/kg**	0.705		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.376** *	**mg/kg**	0.235			**7440-41-7**	03
N	**Cadmium, Total**	**0.0903** *	**mg/kg**	0.235	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**3.46** *	**mg/kg**	0.235		2400	**7440-47-3**	03
N	**Cobalt**	**15.6** *	**mg/kg**	0.235			**7440-48-4**	03
N	**Copper, Total**	**31.3** *	**mg/kg**	0.235		1000	**7440-50-8**	03
N	**Lead, Total**	**5.07** *	**mg/kg**	0.235		6.30	**7439-92-1**	03
N	**Manganese, Total**	**610** *	**mg/kg**	0.235		1200	**7439-96-5**	03
N	**Molybdenum**	**0.183** *	**mg/kg**	0.235	J	155	**7439-98-7**	03
N	**Nickel, Total**	**4.71** *	**mg/kg**	0.235		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.705** *	**mg/kg**	0.705		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0286** *	**mg/kg**	0.235	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0617** *	**mg/kg**	0.235	JB		**7440-28-0**	03
N	**Vanadium**	**72.3** *	**mg/kg**	0.235		2.94	**7440-62-2**	03
N	**Zinc, Total**	**64.5** *	**mg/kg**	1.17		2400	**7440-66-6**	03

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 14:14:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
z	**Uranium**	**0.399** *	**mg/kg**	0.214				04

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 15:07:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.0184** *	**mg/kg**	0.0242	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**73.9**	**%**	0.010				01

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1528183 **5831** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 18:27:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Phosphorus**	**283** *	**mg/kg**	16.4			**7723-14-0**	03
N	**Tin, Total**	**<8.20** *	**mg/kg**	8.20			**7440-31-5**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684824 09/30/2016 13:17:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**17.5** *	**mg/kg**	16.4		16000	**7440-42-8**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684952 09/30/2016 19:14:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**35600** *	**mg/Kg**	82.0		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 19:05:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.152** *	**mg/kg**	0.164	JB		**7440-36-0**	03
N	**Arsenic, Total**	**4.11** *	**mg/kg**	0.328		5.00	**7440-38-2**	03
N	**Barium**	**16.9** *	**mg/kg**	0.492		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.283** *	**mg/kg**	0.164			**7440-41-7**	03
N	**Cadmium, Total**	**0.0514** *	**mg/kg**	0.164	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**3.29** *	**mg/kg**	0.164		2400	**7440-47-3**	03
N	**Cobalt**	**15.9** *	**mg/kg**	0.164			**7440-48-4**	03
N	**Copper, Total**	**26.0** *	**mg/kg**	0.164		1000	**7440-50-8**	03
N	**Lead, Total**	**4.17** *	**mg/kg**	0.164		6.30	**7439-92-1**	03
N	**Manganese, Total**	**598** *	**mg/kg**	0.164		1200	**7439-96-5**	03
N	**Molybdenum**	**0.120** *	**mg/kg**	0.164	J	155	**7439-98-7**	03
N	**Nickel, Total**	**5.39** *	**mg/kg**	0.164		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.492** *	**mg/kg**	0.492		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0197** *	**mg/kg**	0.164	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0483** *	**mg/kg**	0.164	JB		**7440-28-0**	03
N	**Vanadium**	**66.9** *	**mg/kg**	0.164		2.94	**7440-62-2**	03
N	**Zinc, Total**	**58.4** *	**mg/kg**	0.820		2400	**7440-66-6**	03

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 14:17:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
z	**Uranium**	**0.294** *	**mg/kg**	0.211				04

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 15:08:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.0201** *	**mg/kg**	0.0249	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**76.2**	**%**	0.010				01

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1528184 **5832** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 18:31:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Phosphorus**	**262** *	**mg/kg**	20.5			**7723-14-0**	05
N	**Tin, Total**	**<10.3** *	**mg/kg**	10.3			**7440-31-5**	05

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684824 09/30/2016 13:21:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**18.7** *	**mg/kg**	20.5	J	16000	**7440-42-8**	05

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684952 09/30/2016 19:17:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**33400** *	**mg/Kg**	103		0	**7439-89-6**	05

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 19:08:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.197** *	**mg/kg**	0.205	JB		**7440-36-0**	05
N	**Arsenic, Total**	**3.07** *	**mg/kg**	0.412		5.00	**7440-38-2**	05
N	**Barium**	**22.0** *	**mg/kg**	0.617		440	**7440-39-3**	05
N	**Beryllium, Total**	**0.310** *	**mg/kg**	0.205			**7440-41-7**	05
N	**Cadmium, Total**	**0.0874** *	**mg/kg**	0.205	J	1.50	**7440-43-9**	05
N	**Chromium, Total**	**3.33** *	**mg/kg**	0.205		2400	**7440-47-3**	05
N	**Cobalt**	**14.4** *	**mg/kg**	0.205			**7440-48-4**	05
N	**Copper, Total**	**32.8** *	**mg/kg**	0.205		1000	**7440-50-8**	05
N	**Lead, Total**	**4.38** *	**mg/kg**	0.205		6.30	**7439-92-1**	05
N	**Manganese, Total**	**505** *	**mg/kg**	0.205		1200	**7439-96-5**	05
N	**Molybdenum**	**0.131** *	**mg/kg**	0.205	J	155	**7439-98-7**	05
N	**Nickel, Total**	**4.95** *	**mg/kg**	0.205		160	**7440-02-0**	05
N	**Selenium, Total**	**<0.617** *	**mg/kg**	0.617		2.30	**7782-49-2**	05
N	**Silver, Total**	**0.0268** *	**mg/kg**	0.205	J	0.480	**7440-22-4**	05
N	**Thallium, Total**	**0.0573** *	**mg/kg**	0.205	JB		**7440-28-0**	05
N	**Vanadium**	**75.3** *	**mg/kg**	0.205		2.94	**7440-62-2**	05
N	**Zinc, Total**	**57.6** *	**mg/kg**	1.03		2400	**7440-66-6**	05

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 14:20:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
z	**Uranium**	**0.333** *	**mg/kg**	0.195				06

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 15:02:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.014** *	**mg/kg**	0.024	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**74.5**	**%**	0.010				01

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Results

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1528185 **5833** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684640	09/29/2016	18:35:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Phosphorus**	**266 ***	**mg/kg**	18.6			**7723-14-0**	03
N	**Tin, Total**	**<9.29 ***	**mg/kg**	9.29			**7440-31-5**	03
EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684824	09/30/2016	13:35:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**15.3 ***	**mg/kg**	18.6	J	16000	**7440-42-8**	03
EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684952	09/30/2016	19:20:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**34700 ***	**mg/Kg**	92.9		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684626	09/29/2016	19:11:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.173 ***	**mg/kg**	0.186	JB		**7440-36-0**	03
N	**Arsenic, Total**	**3.51 ***	**mg/kg**	0.371		5.00	**7440-38-2**	03
N	**Barium**	**16.9 ***	**mg/kg**	0.558		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.256 ***	**mg/kg**	0.186			**7440-41-7**	03
N	**Cadmium, Total**	**0.0578 ***	**mg/kg**	0.186	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**3.71 ***	**mg/kg**	0.186		2400	**7440-47-3**	03
N	**Cobalt**	**16.9 ***	**mg/kg**	0.186			**7440-48-4**	03
N	**Copper, Total**	**25.9 ***	**mg/kg**	0.186		1000	**7440-50-8**	03
N	**Lead, Total**	**3.61 ***	**mg/kg**	0.186		6.30	**7439-92-1**	03
N	**Manganese, Total**	**539 ***	**mg/kg**	0.186		1200	**7439-96-5**	03
N	**Molybdenum**	**0.150 ***	**mg/kg**	0.186	J	155	**7439-98-7**	03
N	**Nickel, Total**	**5.90 ***	**mg/kg**	0.186		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.558 ***	**mg/kg**	0.558		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0185 ***	**mg/kg**	0.186	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0505 ***	**mg/kg**	0.186	JB		**7440-28-0**	03
N	**Vanadium**	**82.1 ***	**mg/kg**	0.186		2.94	**7440-62-2**	03
N	**Zinc, Total**	**59.1 ***	**mg/kg**	0.929		2400	**7440-66-6**	03
EPA 6020A	*Prepared:* 684912	10/03/2016	07:40:00	*Analyzed* 685089	10/03/2016	14:29:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.250 ***	**mg/kg**	0.163				04

* Dry Weight Basis

EPA 7471A	*Prepared:* 684405	09/29/2016	08:45:00	*Analyzed* 684562	09/29/2016	15:13:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**0.0197 ***	**mg/kg**	0.0234	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684786	09/29/2016	14:00:00	*Analyzed* 684786	09/29/2016	14:00:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**77.3**	**%**	0.010				01

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Results

Printed: 10/03/2016

1528186 **5644** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 18:39:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Phosphorus**	**349 ***	**mg/kg**	20.3			**7723-14-0**	03
N	**Tin, Total**	**<10.1 ***	**mg/kg**	10.1			**7440-31-5**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684824 09/30/2016 13:39:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**27.2 ***	**mg/kg**	20.3		16000	**7440-42-8**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684952 09/30/2016 19:24:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**31700 ***	**mg/Kg**	101		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 19:14:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.179 ***	**mg/kg**	0.203	JB		**7440-36-0**	03
N	**Arsenic, Total**	**5.21 ***	**mg/kg**	0.404		5.00	**7440-38-2**	03
N	**Barium**	**24.4 ***	**mg/kg**	0.607		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.421 ***	**mg/kg**	0.203			**7440-41-7**	03
N	**Cadmium, Total**	**0.163 ***	**mg/kg**	0.203	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**3.61 ***	**mg/kg**	0.203		2400	**7440-47-3**	03
N	**Cobalt**	**13.6 ***	**mg/kg**	0.203			**7440-48-4**	03
N	**Copper, Total**	**40.4 ***	**mg/kg**	0.203		1000	**7440-50-8**	03
N	**Lead, Total**	**4.97 ***	**mg/kg**	0.203		6.30	**7439-92-1**	03
N	**Manganese, Total**	**490 ***	**mg/kg**	0.203		1200	**7439-96-5**	03
N	**Molybdenum**	**0.201 ***	**mg/kg**	0.203	J	155	**7439-98-7**	03
N	**Nickel, Total**	**4.45 ***	**mg/kg**	0.203		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.607 ***	**mg/kg**	0.607		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0383 ***	**mg/kg**	0.203	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0646 ***	**mg/kg**	0.203	JB		**7440-28-0**	03
N	**Vanadium**	**76.6 ***	**mg/kg**	0.203		2.94	**7440-62-2**	03
N	**Zinc, Total**	**63.0 ***	**mg/kg**	1.01		2400	**7440-66-6**	03

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 14:32:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
z	**Uranium**	**0.446 ***	**mg/kg**	0.197				04

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 15:15:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.0234 ***	**mg/kg**	0.0269	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**71.0**	**%**	0.010				01

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Employee Owned Integrity Caring Continual Improvement

Results

Printed: 10/03/2016

1528187 **5786** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684640	09/29/2016	18:43:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Phosphorus**	**327 ***	**mg/kg**	22.4			**7723-14-0**	03
N	**Tin, Total**	**<11.2 ***	**mg/kg**	11.2			**7440-31-5**	03
EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684824	09/30/2016	13:43:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**29.4 ***	**mg/kg**	22.4		16000	**7440-42-8**	03
EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684952	09/30/2016	19:27:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**28600 ***	**mg/Kg**	112		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684626	09/29/2016	19:17:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.203 ***	**mg/kg**	0.224	JB		**7440-36-0**	03
N	**Arsenic, Total**	**5.01 ***	**mg/kg**	0.449		5.00	**7440-38-2**	03
N	**Barium**	**27.8 ***	**mg/kg**	0.673		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.449 ***	**mg/kg**	0.224			**7440-41-7**	03
N	**Cadmium, Total**	**0.147 ***	**mg/kg**	0.224	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**3.40 ***	**mg/kg**	0.224		2400	**7440-47-3**	03
N	**Cobalt**	**14.0 ***	**mg/kg**	0.224			**7440-48-4**	03
N	**Copper, Total**	**38.4 ***	**mg/kg**	0.224		1000	**7440-50-8**	03
N	**Lead, Total**	**5.20 ***	**mg/kg**	0.224		6.30	**7439-92-1**	03
N	**Manganese, Total**	**532 ***	**mg/kg**	0.224		1200	**7439-96-5**	03
N	**Molybdenum**	**0.208 ***	**mg/kg**	0.224	J	155	**7439-98-7**	03
N	**Nickel, Total**	**4.32 ***	**mg/kg**	0.224		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.673 ***	**mg/kg**	0.673		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0462 ***	**mg/kg**	0.224	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0834 ***	**mg/kg**	0.224	JB		**7440-28-0**	03
N	**Vanadium**	**73.0 ***	**mg/kg**	0.224		2.94	**7440-62-2**	03
N	**Zinc, Total**	**60.9 ***	**mg/kg**	1.12		2400	**7440-66-6**	03
EPA 6020A	*Prepared:* 684912	10/03/2016	07:40:00	*Analyzed* 685089	10/03/2016	14:35:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.574 ***	**mg/kg**	0.212				04

* Dry Weight Basis

EPA 7471A	*Prepared:* 684405	09/29/2016	08:45:00	*Analyzed* 684562	09/29/2016	15:16:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**0.0254 ***	**mg/kg**	0.0291	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684786	09/29/2016	14:00:00	*Analyzed* 684786	09/29/2016	14:00:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**68.8**	**%**	0.010				01

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Results

Printed: 10/03/2016

1528188 **5787** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 18:47:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Phosphorus**	**375 ***	**mg/kg**	25.9			**7723-14-0**	03
N	**Tin, Total**	**<13.0 ***	**mg/kg**	13.0			**7440-31-5**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684824 09/30/2016 13:47:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**29.9 ***	**mg/kg**	25.9		16000	**7440-42-8**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684952 09/30/2016 19:31:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**30100 ***	**mg/Kg**	130		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 19:20:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.215 ***	**mg/kg**	0.259	JB		**7440-36-0**	03
N	**Arsenic, Total**	**5.27 ***	**mg/kg**	0.520		5.00	**7440-38-2**	03
N	**Barium**	**26.6 ***	**mg/kg**	0.779		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.453 ***	**mg/kg**	0.259			**7440-41-7**	03
N	**Cadmium, Total**	**0.111 ***	**mg/kg**	0.259	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**3.38 ***	**mg/kg**	0.259		2400	**7440-47-3**	03
N	**Cobalt**	**14.1 ***	**mg/kg**	0.259			**7440-48-4**	03
N	**Copper, Total**	**38.6 ***	**mg/kg**	0.259		1000	**7440-50-8**	03
N	**Lead, Total**	**5.43 ***	**mg/kg**	0.259		6.30	**7439-92-1**	03
N	**Manganese, Total**	**587 ***	**mg/kg**	0.259		1200	**7439-96-5**	03
N	**Molybdenum**	**0.171 ***	**mg/kg**	0.259	J	155	**7439-98-7**	03
N	**Nickel, Total**	**4.22 ***	**mg/kg**	0.259		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.779 ***	**mg/kg**	0.779		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0373 ***	**mg/kg**	0.259	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0793 ***	**mg/kg**	0.259	JB		**7440-28-0**	03
N	**Vanadium**	**72.8 ***	**mg/kg**	0.259		2.94	**7440-62-2**	03
N	**Zinc, Total**	**67.2 ***	**mg/kg**	1.30		2400	**7440-66-6**	03

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 14:38:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
z	**Uranium**	**0.454 ***	**mg/kg**	0.339				04

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 15:18:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.0224 ***	**mg/kg**	0.0281	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**70.2**	**%**	0.010				01

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Results

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1528189 **5788** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684640	09/29/2016	18:51:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Phosphorus**	**316 ***	**mg/kg**	20.9			**7723-14-0**	03
N	**Tin, Total**	**<10.5 ***	**mg/kg**	10.5			**7440-31-5**	03
EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684824	09/30/2016	13:51:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**19.7 ***	**mg/kg**	20.9	J	16000	**7440-42-8**	03
EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684952	09/30/2016	19:34:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**35100 ***	**mg/Kg**	105		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684626	09/29/2016	19:23:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.160 ***	**mg/kg**	0.209	JB		**7440-36-0**	03
N	**Arsenic, Total**	**5.03 ***	**mg/kg**	0.418		5.00	**7440-38-2**	03
N	**Barium**	**17.7 ***	**mg/kg**	0.629		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.332 ***	**mg/kg**	0.209			**7440-41-7**	03
N	**Cadmium, Total**	**0.0741 ***	**mg/kg**	0.209	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**3.90 ***	**mg/kg**	0.209		2400	**7440-47-3**	03
N	**Cobalt**	**15.7 ***	**mg/kg**	0.209			**7440-48-4**	03
N	**Copper, Total**	**25.3 ***	**mg/kg**	0.209		1000	**7440-50-8**	03
N	**Lead, Total**	**3.86 ***	**mg/kg**	0.209		6.30	**7439-92-1**	03
N	**Manganese, Total**	**576 ***	**mg/kg**	0.209		1200	**7439-96-5**	03
N	**Molybdenum**	**0.155 ***	**mg/kg**	0.209	J	155	**7439-98-7**	03
N	**Nickel, Total**	**4.92 ***	**mg/kg**	0.209		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.629 ***	**mg/kg**	0.629		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0228 ***	**mg/kg**	0.209	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0651 ***	**mg/kg**	0.209	JB		**7440-28-0**	03
N	**Vanadium**	**79.9 ***	**mg/kg**	0.209		2.94	**7440-62-2**	03
N	**Zinc, Total**	**58.0 ***	**mg/kg**	1.05		2400	**7440-66-6**	03
EPA 6020A	*Prepared:* 684912	10/03/2016	07:40:00	*Analyzed* 685089	10/03/2016	14:41:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.373 ***	**mg/kg**	0.252				04

* Dry Weight Basis

EPA 7471A	*Prepared:* 684405	09/29/2016	08:45:00	*Analyzed* 684562	09/29/2016	15:19:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**0.0212 ***	**mg/kg**	0.0249	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684786	09/29/2016	14:00:00	*Analyzed* 684786	09/29/2016	14:00:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**74.6**	**%**	0.010				01

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Results

Printed: 10/03/2016

1528190 **5789** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684640	09/29/2016	18:55:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Phosphorus**	**251 ***	**mg/kg**	16.6			**7723-14-0**	03
N	**Tin, Total**	**<8.28 ***	**mg/kg**	8.28			**7440-31-5**	03
EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684824	09/30/2016	13:55:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**17.2 ***	**mg/kg**	16.6		16000	**7440-42-8**	03
EPA 6010C	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684952	09/30/2016	19:37:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**30100 ***	**mg/Kg**	82.8		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A	*Prepared:* 684461	09/29/2016	11:20:00	*Analyzed* 684626	09/29/2016	19:26:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.110 ***	**mg/kg**	0.166	JB		**7440-36-0**	03
N	**Arsenic, Total**	**5.11 ***	**mg/kg**	0.332		5.00	**7440-38-2**	03
N	**Barium**	**15.2 ***	**mg/kg**	0.496		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.262 ***	**mg/kg**	0.166			**7440-41-7**	03
N	**Cadmium, Total**	**0.044 ***	**mg/kg**	0.166	J	1.50	**7440-43-9**	03
N	**Chromium, Total**	**2.83 ***	**mg/kg**	0.166		2400	**7440-47-3**	03
N	**Cobalt**	**13.8 ***	**mg/kg**	0.166			**7440-48-4**	03
N	**Copper, Total**	**13.0 ***	**mg/kg**	0.166		1000	**7440-50-8**	03
N	**Lead, Total**	**2.66 ***	**mg/kg**	0.166		6.30	**7439-92-1**	03
N	**Manganese, Total**	**529 ***	**mg/kg**	0.166		1200	**7439-96-5**	03
N	**Molybdenum**	**0.158 ***	**mg/kg**	0.166	J	155	**7439-98-7**	03
N	**Nickel, Total**	**6.18 ***	**mg/kg**	0.166		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.496 ***	**mg/kg**	0.496		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0084 ***	**mg/kg**	0.166	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0299 ***	**mg/kg**	0.166	JB		**7440-28-0**	03
N	**Vanadium**	**48.7 ***	**mg/kg**	0.166		2.94	**7440-62-2**	03
N	**Zinc, Total**	**43.2 ***	**mg/kg**	0.828		2400	**7440-66-6**	03
EPA 6020A	*Prepared:* 684912	10/03/2016	07:40:00	*Analyzed* 685089	10/03/2016	14:44:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.274 ***	**mg/kg**	0.217				04

* Dry Weight Basis

EPA 7471A	*Prepared:* 684405	09/29/2016	08:45:00	*Analyzed* 684562	09/29/2016	15:20:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**0.00977 ***	**mg/kg**	0.0227	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684786	09/29/2016	14:00:00	*Analyzed* 684786	09/29/2016	14:00:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**74.8**	**%**	0.010				01

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Results

Printed: 10/03/2016

1528191 **5645** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684640 09/29/2016 19:08:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Phosphorus**	**243 ***	**mg/kg**	24.0			**7723-14-0**	03
N	**Tin, Total**	**<12.0 ***	**mg/kg**	12.0			**7440-31-5**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684824 09/30/2016 13:59:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**16.2 ***	**mg/kg**	24.0	J	16000	**7440-42-8**	03

EPA 6010C *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684952 09/30/2016 19:41:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**35300 ***	**mg/Kg**	120		0	**7439-89-6**	03

* Dry Weight Basis

EPA 6020A *Prepared:* 684461 09/29/2016 11:20:00 *Analyzed* 684626 09/29/2016 19:35:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.136 ***	**mg/kg**	0.240	JB		**7440-36-0**	03
N	**Arsenic, Total**	**4.25 ***	**mg/kg**	0.479		5.00	**7440-38-2**	03
N	**Barium**	**13.6 ***	**mg/kg**	0.719		440	**7440-39-3**	03
N	**Beryllium, Total**	**0.236 ***	**mg/kg**	0.240	J		**7440-41-7**	03
N	**Cadmium, Total**	**<0.240 ***	**mg/kg**	0.240		1.50	**7440-43-9**	03
N	**Chromium, Total**	**4.07 ***	**mg/kg**	0.240		2400	**7440-47-3**	03
N	**Cobalt**	**17.3 ***	**mg/kg**	0.240			**7440-48-4**	03
N	**Copper, Total**	**14.5 ***	**mg/kg**	0.240		1000	**7440-50-8**	03
N	**Lead, Total**	**7.24 ***	**mg/kg**	0.240		6.30	**7439-92-1**	03
N	**Manganese, Total**	**582 ***	**mg/kg**	0.240		1200	**7439-96-5**	03
N	**Molybdenum**	**0.155 ***	**mg/kg**	0.240	J	155	**7439-98-7**	03
N	**Nickel, Total**	**7.82 ***	**mg/kg**	0.240		160	**7440-02-0**	03
N	**Selenium, Total**	**<0.719 ***	**mg/kg**	0.719		2.30	**7782-49-2**	03
N	**Silver, Total**	**0.0125 ***	**mg/kg**	0.240	J	0.480	**7440-22-4**	03
N	**Thallium, Total**	**0.0299 ***	**mg/kg**	0.240	JB		**7440-28-0**	03
N	**Vanadium**	**78.6 ***	**mg/kg**	0.240		2.94	**7440-62-2**	03
N	**Zinc, Total**	**52.1 ***	**mg/kg**	1.20		2400	**7440-66-6**	03

EPA 6020A *Prepared:* 684912 10/03/2016 07:40:00 *Analyzed* 685089 10/03/2016 14:47:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
z	**Uranium**	**0.315 ***	**mg/kg**	0.211				04

* Dry Weight Basis

EPA 7471A *Prepared:* 684405 09/29/2016 08:45:00 *Analyzed* 684562 09/29/2016 15:22:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.0108 ***	**mg/kg**	0.0217	J	0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**77.9**	**%**	0.010				01

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Employee Owned Integrity Caring Continual Improvement

Results

Printed: 10/03/2016

1528192 **5646** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684479 09/29/2016 12:42:54 *Analyzed* 684640 09/29/2016 16:00:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**14.1 ***	**mg/kg**	27.1	J	16000	**7440-42-8**	02
N	**Phosphorus**	**240 ***	**mg/kg**	27.1			**7723-14-0**	02
N	**Tin, Total**	**<13.6 ***	**mg/kg**	13.6	BP		**7440-31-5**	02

EPA 6010C *Prepared:* 684479 09/29/2016 12:42:54 *Analyzed* 684952 09/30/2016 17:04:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**34700 ***	**mg/Kg**	136		0	**7439-89-6**	02

* Dry Weight Basis

EPA 6020A *Prepared:* 684913 10/03/2016 07:41:00 *Analyzed* 685053 10/03/2016 12:56:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**<0.206 ***	**mg/kg**	0.206			**7440-36-0**	08
N	**Arsenic, Total**	**3.54 ***	**mg/kg**	0.411	P	5.00	**7440-38-2**	08
N	**Barium**	**14.8 ***	**mg/kg**	0.206		440	**7440-39-3**	08
N	**Beryllium, Total**	**0.283 ***	**mg/kg**	0.206			**7440-41-7**	08
N	**Cadmium, Total**	**0.0489 ***	**mg/kg**	0.206	J	1.50	**7440-43-9**	08
N	**Chromium, Total**	**4.73 ***	**mg/kg**	0.206		2400	**7440-47-3**	08
N	**Cobalt**	**17.3 ***	**mg/kg**	0.206			**7440-48-4**	08
N	**Copper, Total**	**19.1 ***	**mg/kg**	0.206		1000	**7440-50-8**	08
N	**Lead, Total**	**4.02 ***	**mg/kg**	0.206		6.30	**7439-92-1**	08
N	**Manganese, Total**	**561 ***	**mg/kg**	0.206		1200	**7439-96-5**	08
N	**Molybdenum**	**0.428 ***	**mg/kg**	0.617	J	155	**7439-98-7**	08
N	**Nickel, Total**	**6.33 ***	**mg/kg**	0.206		160	**7440-02-0**	08
N	**Selenium, Total**	**0.272 ***	**mg/kg**	0.617	J	2.30	**7782-49-2**	08
N	**Silver, Total**	**0.0257 ***	**mg/kg**	0.206	J	0.480	**7440-22-4**	08
N	**Thallium, Total**	**0.0797 ***	**mg/kg**	0.206	J		**7440-28-0**	08
z	**Uranium**	**0.328 ***	**mg/kg**	0.206				08
N	**Vanadium**	**97.7 ***	**mg/kg**	0.206		2.94	**7440-62-2**	08
N	**Zinc, Total**	**47.6 ***	**mg/kg**	1.03		2400	**7440-66-6**	08

* Dry Weight Basis

EPA 7471A *Prepared:* 684508 09/29/2016 14:25:00 *Analyzed* 684830 09/30/2016 13:20:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**<0.0236 ***	**mg/kg**	0.0236		0.0078 pH dependent	**7439-97-6**	05

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684786 09/29/2016 14:00:00 *Analyzed* 684786 09/29/2016 14:00:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**73.8**	**%**	0.010				01

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Employee Owned Integrity Caring Continual Improvement

Results

Printed: 10/03/2016

1528193 **5790** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 6010C	*Prepared: 684479 09/29/2016 12:42:54 Analyzed 684640 09/29/2016 16:13:00 LPS*							
N	**Boron**	**15.1 ***	**mg/kg**	26.6	J	16000	**7440-42-8**	02
N	**Phosphorus**	**292 ***	**mg/kg**	26.6			**7723-14-0**	02
N	**Tin, Total**	**<13.3 ***	**mg/kg**	13.3	B		**7440-31-5**	02
EPA 6010C	*Prepared: 684479 09/29/2016 12:42:54 Analyzed 684952 09/30/2016 17:15:00 LPS*							
N	**Total Iron**	**40400 ***	**mg/Kg**	133		0	**7439-89-6**	02

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 6020A	*Prepared: 684479 09/29/2016 12:42:54 Analyzed 684626 09/29/2016 17:18:00 CLK*							
N	**Antimony, Total**	**0.558 ***	**mg/kg**	0.266	B		**7440-36-0**	02
N	**Arsenic, Total**	**4.53 ***	**mg/kg**	0.533		5.00	**7440-38-2**	02
N	**Barium**	**18.6 ***	**mg/kg**	0.799		440	**7440-39-3**	02
N	**Beryllium, Total**	**0.295 ***	**mg/kg**	0.266			**7440-41-7**	02
N	**Cadmium, Total**	**<0.266 ***	**mg/kg**	0.266		1.50	**7440-43-9**	02
N	**Chromium, Total**	**4.49 ***	**mg/kg**	0.266		2400	**7440-47-3**	02
N	**Cobalt**	**16.8 ***	**mg/kg**	0.266			**7440-48-4**	02
N	**Copper, Total**	**26.3 ***	**mg/kg**	0.266		1000	**7440-50-8**	02
N	**Lead, Total**	**4.94 ***	**mg/kg**	0.266		6.30	**7439-92-1**	02
N	**Manganese, Total**	**589 ***	**mg/kg**	0.266		1200	**7439-96-5**	02
N	**Molybdenum**	**0.311 ***	**mg/kg**	0.266		155	**7439-98-7**	02
N	**Nickel, Total**	**6.15 ***	**mg/kg**	0.266		160	**7440-02-0**	02
N	**Selenium, Total**	**<0.799 ***	**mg/kg**	0.799		2.30	**7782-49-2**	02
N	**Silver, Total**	**0.0312 ***	**mg/kg**	0.266	J	0.480	**7440-22-4**	02
N	**Thallium, Total**	**0.132 ***	**mg/kg**	0.266	JB		**7440-28-0**	02
N	**Vanadium**	**87.2 ***	**mg/kg**	0.266		2.94	**7440-62-2**	02
N	**Zinc, Total**	**63.3 ***	**mg/kg**	1.33		2400	**7440-66-6**	02
EPA 6020A	*Prepared: 684913 10/03/2016 07:41:00 Analyzed 685053 10/03/2016 13:06:00 CLK*							
z	**Uranium**	**0.377 ***	**mg/kg**	0.169				04

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
EPA 7471A	*Prepared: 684508 09/29/2016 14:25:00 Analyzed 684830 09/30/2016 13:32:00 CLK*							
N	**Mercury**	**<0.0237 ***	**mg/kg**	0.0237		0.0078 pH dependent	**7439-97-6**	03

* Dry Weight Basis

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
SM2540 G-1997 /MOD	*Prepared: 684786 09/29/2016 14:00:00 Analyzed 684786 09/29/2016 14:00:00 TH2*							
N	**Total Solids for Dry Wt**	**73.3**	**%**	0.010				01

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Employee Owned Integrity Caring Continual Improvement

Results

Printed: 10/03/2016

1528194 **5834** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684640	09/29/2016	16:17:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**30.5 ***	**mg/kg**	23.3		16000	**7440-42-8**	02
N	**Phosphorus**	**580 ***	**mg/kg**	23.3			**7723-14-0**	02
N	**Tin, Total**	**<11.6 ***	**mg/kg**	11.6	B		**7440-31-5**	02
EPA 6010C	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684952	09/30/2016	17:18:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**39700 ***	**mg/Kg**	116		0	**7439-89-6**	02

* Dry Weight Basis

EPA 6020A	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684626	09/29/2016	17:21:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.519 ***	**mg/kg**	0.233	B		**7440-36-0**	02
N	**Arsenic, Total**	**10.2 ***	**mg/kg**	0.466		5.00	**7440-38-2**	02
N	**Barium**	**31.9 ***	**mg/kg**	0.697		440	**7440-39-3**	02
N	**Beryllium, Total**	**0.477 ***	**mg/kg**	0.233			**7440-41-7**	02
N	**Cadmium, Total**	**0.125 ***	**mg/kg**	0.233	J	1.50	**7440-43-9**	02
N	**Chromium, Total**	**6.38 ***	**mg/kg**	0.233		2400	**7440-47-3**	02
N	**Cobalt**	**11.4 ***	**mg/kg**	0.233			**7440-48-4**	02
N	**Copper, Total**	**38.0 ***	**mg/kg**	0.233		1000	**7440-50-8**	02
N	**Lead, Total**	**12.1 ***	**mg/kg**	0.233		6.30	**7439-92-1**	02
N	**Manganese, Total**	**594 ***	**mg/kg**	0.233		1200	**7439-96-5**	02
N	**Molybdenum**	**0.284 ***	**mg/kg**	0.233		155	**7439-98-7**	02
N	**Nickel, Total**	**4.91 ***	**mg/kg**	0.233		160	**7440-02-0**	02
N	**Selenium, Total**	**<0.697 ***	**mg/kg**	0.697		2.30	**7782-49-2**	02
N	**Silver, Total**	**0.0505 ***	**mg/kg**	0.233	J	0.480	**7440-22-4**	02
N	**Thallium, Total**	**0.118 ***	**mg/kg**	0.233	JB		**7440-28-0**	02
N	**Vanadium**	**57.0 ***	**mg/kg**	0.233		2.94	**7440-62-2**	02
N	**Zinc, Total**	**80.5 ***	**mg/kg**	1.16		2400	**7440-66-6**	02
EPA 6020A	*Prepared:* 684913	10/03/2016	07:41:00	*Analyzed* 685053	10/03/2016	13:09:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.827 ***	**mg/kg**	0.325				04

* Dry Weight Basis

EPA 7471A	*Prepared:* 684508	09/29/2016	14:25:00	*Analyzed* 684830	09/30/2016	13:34:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**0.0298 ***	**mg/kg**	0.028		0.0078 pH dependent	**7439-97-6**	03

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684786	09/29/2016	14:00:00	*Analyzed* 684786	09/29/2016	14:00:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**64.0**	**%**	0.010				01

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Employee Owned Integrity Caring Continual Improvement

Results

Printed: 10/03/2016

1528195 **5791** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684640	09/29/2016	16:21:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**10.5 ***	**mg/kg**	16.8	J	16000	**7440-42-8**	02
N	**Phosphorus**	**451 ***	**mg/kg**	16.8			**7723-14-0**	02
N	**Tin, Total**	**<8.38 ***	**mg/kg**	8.38	B		**7440-31-5**	02
EPA 6010C	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684952	09/30/2016	17:28:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**17600 ***	**mg/Kg**	83.8		0	**7439-89-6**	02

* Dry Weight Basis

EPA 6020A	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684626	09/29/2016	17:25:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.370 ***	**mg/kg**	0.168	B		**7440-36-0**	02
N	**Arsenic, Total**	**6.66 ***	**mg/kg**	0.335		5.00	**7440-38-2**	02
N	**Barium**	**13.9 ***	**mg/kg**	0.503		440	**7440-39-3**	02
N	**Beryllium, Total**	**0.135 ***	**mg/kg**	0.168	J		**7440-41-7**	02
N	**Cadmium, Total**	**<0.168 ***	**mg/kg**	0.168		1.50	**7440-43-9**	02
N	**Chromium, Total**	**2.17 ***	**mg/kg**	0.168		2400	**7440-47-3**	02
N	**Cobalt**	**6.04 ***	**mg/kg**	0.168			**7440-48-4**	02
N	**Copper, Total**	**15.5 ***	**mg/kg**	0.168		1000	**7440-50-8**	02
N	**Lead, Total**	**1.19 ***	**mg/kg**	0.168		6.30	**7439-92-1**	02
N	**Manganese, Total**	**263 ***	**mg/kg**	0.168		1200	**7439-96-5**	02
N	**Molybdenum**	**0.299 ***	**mg/kg**	0.168		155	**7439-98-7**	02
N	**Nickel, Total**	**2.99 ***	**mg/kg**	0.168		160	**7440-02-0**	02
N	**Selenium, Total**	**<0.503 ***	**mg/kg**	0.503		2.30	**7782-49-2**	02
N	**Silver, Total**	**0.0101 ***	**mg/kg**	0.168	J	0.480	**7440-22-4**	02
N	**Thallium, Total**	**0.032 ***	**mg/kg**	0.168	JB		**7440-28-0**	02
N	**Vanadium**	**28.7 ***	**mg/kg**	0.168		2.94	**7440-62-2**	02
N	**Zinc, Total**	**22.1 ***	**mg/kg**	0.838		2400	**7440-66-6**	02
EPA 6020A	*Prepared:* 684913	10/03/2016	07:41:00	*Analyzed* 685053	10/03/2016	13:13:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.398 ***	**mg/kg**	0.170				06

* Dry Weight Basis

EPA 7471A	*Prepared:* 684508	09/29/2016	14:25:00	*Analyzed* 684830	09/30/2016	13:42:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**<0.019 ***	**mg/kg**	0.019		0.0078 pH dependent	**7439-97-6**	03

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684786	09/29/2016	14:00:00	*Analyzed* 684786	09/29/2016	14:00:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**90.5**	**%**	0.010				01

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Employee Owned Integrity Caring Continual Improvement

Results

Printed: 10/03/2016

1528196 **5792** SEABED SEDIMENT *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684640	09/29/2016	16:25:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**11.7 ***	**mg/kg**	18.4	J	16000	**7440-42-8**	02
N	**Phosphorus**	**211 ***	**mg/kg**	18.4			**7723-14-0**	02
N	**Tin, Total**	**<9.22 ***	**mg/kg**	9.22	B		**7440-31-5**	02
EPA 6010C	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684952	09/30/2016	17:31:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**42200 ***	**mg/Kg**	92.2		0	**7439-89-6**	02

* Dry Weight Basis

EPA 6020A	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684626	09/29/2016	17:28:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.294 ***	**mg/kg**	0.184	B		**7440-36-0**	02
N	**Arsenic, Total**	**3.88 ***	**mg/kg**	0.368		5.00	**7440-38-2**	02
N	**Barium**	**12.4 ***	**mg/kg**	0.554		440	**7440-39-3**	02
N	**Beryllium, Total**	**0.213 ***	**mg/kg**	0.184			**7440-41-7**	02
N	**Cadmium, Total**	**<0.184 ***	**mg/kg**	0.184		1.50	**7440-43-9**	02
N	**Chromium, Total**	**4.26 ***	**mg/kg**	0.184		2400	**7440-47-3**	02
N	**Cobalt**	**18.8 ***	**mg/kg**	0.184			**7440-48-4**	02
N	**Copper, Total**	**14.6 ***	**mg/kg**	0.184		1000	**7440-50-8**	02
N	**Lead, Total**	**2.89 ***	**mg/kg**	0.184		6.30	**7439-92-1**	02
N	**Manganese, Total**	**587 ***	**mg/kg**	0.184		1200	**7439-96-5**	02
N	**Molybdenum**	**0.129 ***	**mg/kg**	0.184	J	155	**7439-98-7**	02
N	**Nickel, Total**	**8.55 ***	**mg/kg**	0.184		160	**7440-02-0**	02
N	**Selenium, Total**	**<0.554 ***	**mg/kg**	0.554		2.30	**7782-49-2**	02
N	**Silver, Total**	**0.0101 ***	**mg/kg**	0.184	J	0.480	**7440-22-4**	02
N	**Thallium, Total**	**0.0322 ***	**mg/kg**	0.184	JB		**7440-28-0**	02
N	**Vanadium**	**76.0 ***	**mg/kg**	0.184		2.94	**7440-62-2**	02
N	**Zinc, Total**	**57.0 ***	**mg/kg**	0.922		2400	**7440-66-6**	02
EPA 6020A	*Prepared:* 684913	10/03/2016	07:41:00	*Analyzed* 685053	10/03/2016	13:16:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.285 ***	**mg/kg**	0.218				04

* Dry Weight Basis

EPA 7471A	*Prepared:* 684508	09/29/2016	14:25:00	*Analyzed* 684830	09/30/2016	13:35:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**<0.0218 ***	**mg/kg**	0.0218		0.0078 pH dependent	**7439-97-6**	03

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684786	09/29/2016	14:00:00	*Analyzed* 684786	09/29/2016	14:00:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**76.6**	**%**	0.010				01

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Employee Owned Integrity Caring Continual Improvement

Results

Printed: 10/03/2016

1528197 **BH14 1.25-1.85** SEABED GEOLOGIC CORE *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684640	09/29/2016	16:38:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**6.63 ***	**mg/kg**	26.8	J	16000	**7440-42-8**	02
N	**Phosphorus**	**176 ***	**mg/kg**	26.8			**7723-14-0**	02
N	**Tin, Total**	**<13.4 ***	**mg/kg**	13.4	B		**7440-31-5**	02
EPA 6010C	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684952	09/30/2016	17:35:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**32500 ***	**mg/Kg**	134		0	**7439-89-6**	02

* Dry Weight Basis

EPA 6020A	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684626	09/29/2016	17:31:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.402 ***	**mg/kg**	0.268	B		**7440-36-0**	02
N	**Arsenic, Total**	**0.652 ***	**mg/kg**	0.536		5.00	**7440-38-2**	02
N	**Barium**	**118 ***	**mg/kg**	0.804		440	**7440-39-3**	02
N	**Beryllium, Total**	**0.427 ***	**mg/kg**	0.268			**7440-41-7**	02
N	**Cadmium, Total**	**<0.268 ***	**mg/kg**	0.268		1.50	**7440-43-9**	02
N	**Chromium, Total**	**1.10 ***	**mg/kg**	0.268	B	2400	**7440-47-3**	02
N	**Cobalt**	**8.48 ***	**mg/kg**	0.268			**7440-48-4**	02
N	**Copper, Total**	**68.5 ***	**mg/kg**	0.268		1000	**7440-50-8**	02
N	**Lead, Total**	**2.69 ***	**mg/kg**	0.268		6.30	**7439-92-1**	02
N	**Manganese, Total**	**454 ***	**mg/kg**	0.268		1200	**7439-96-5**	02
N	**Molybdenum**	**0.123 ***	**mg/kg**	0.268	J	155	**7439-98-7**	02
N	**Nickel, Total**	**2.18 ***	**mg/kg**	0.268		160	**7440-02-0**	02
N	**Selenium, Total**	**<0.804 ***	**mg/kg**	0.804		2.30	**7782-49-2**	02
N	**Silver, Total**	**0.0122 ***	**mg/kg**	0.268	J	0.480	**7440-22-4**	02
N	**Thallium, Total**	**0.107 ***	**mg/kg**	0.268	JB		**7440-28-0**	02
N	**Vanadium**	**40.9 ***	**mg/kg**	0.268		2.94	**7440-62-2**	02
N	**Zinc, Total**	**36.9 ***	**mg/kg**	1.34		2400	**7440-66-6**	02
EPA 6020A	*Prepared:* 684913	10/03/2016	07:41:00	*Analyzed* 685053	10/03/2016	13:26:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.265 ***	**mg/kg**	0.298	J			04

* Dry Weight Basis

EPA 7471A	*Prepared:* 684508	09/29/2016	14:25:00	*Analyzed* 684830	09/30/2016	13:37:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**<0.0247 ***	**mg/kg**	0.0247		0.0078 pH dependent	**7439-97-6**	03

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684786	09/29/2016	14:00:00	*Analyzed* 684786	09/29/2016	14:00:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**78.4**	**%**	0.010				01

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Results

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1528198 **BH14 2.35-2.40** SEABED GEOLOGIC CORE *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684640	09/29/2016	16:42:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Boron**	**7.69 ***	**mg/kg**	30.5	J	16000	**7440-42-8**	02
N	**Phosphorus**	**228 ***	**mg/kg**	30.5			**7723-14-0**	02
N	**Tin, Total**	**<15.3 ***	**mg/kg**	15.3	B		**7440-31-5**	02
EPA 6010C	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684952	09/30/2016	17:46:00	LPS	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Iron**	**27400 ***	**mg/Kg**	153		0	**7439-89-6**	02

* Dry Weight Basis

EPA 6020A	*Prepared:* 684479	09/29/2016	12:42:54	*Analyzed* 684626	09/29/2016	17:34:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Antimony, Total**	**0.478 ***	**mg/kg**	0.305	B		**7440-36-0**	02
N	**Arsenic, Total**	**0.790 ***	**mg/kg**	0.611		5.00	**7440-38-2**	02
N	**Barium**	**78.4 ***	**mg/kg**	0.916		440	**7440-39-3**	02
N	**Beryllium, Total**	**0.544 ***	**mg/kg**	0.305			**7440-41-7**	02
N	**Cadmium, Total**	**0.0892 ***	**mg/kg**	0.305	J	1.50	**7440-43-9**	02
N	**Chromium, Total**	**6.79 ***	**mg/kg**	0.305		2400	**7440-47-3**	02
N	**Cobalt**	**9.93 ***	**mg/kg**	0.305			**7440-48-4**	02
N	**Copper, Total**	**56.6 ***	**mg/kg**	0.305		1000	**7440-50-8**	02
N	**Lead, Total**	**3.54 ***	**mg/kg**	0.305		6.30	**7439-92-1**	02
N	**Manganese, Total**	**398 ***	**mg/kg**	0.305		1200	**7439-96-5**	02
N	**Molybdenum**	**0.133 ***	**mg/kg**	0.305	J	155	**7439-98-7**	02
N	**Nickel, Total**	**5.09 ***	**mg/kg**	0.305		160	**7440-02-0**	02
N	**Selenium, Total**	**<0.916 ***	**mg/kg**	0.916		2.30	**7782-49-2**	02
N	**Silver, Total**	**0.0156 ***	**mg/kg**	0.305	J	0.480	**7440-22-4**	02
N	**Thallium, Total**	**0.137 ***	**mg/kg**	0.305	JB		**7440-28-0**	02
N	**Vanadium**	**68.5 ***	**mg/kg**	0.305		2.94	**7440-62-2**	02
N	**Zinc, Total**	**56.3 ***	**mg/kg**	1.53		2400	**7440-66-6**	02
EPA 6020A	*Prepared:* 684913	10/03/2016	07:41:00	*Analyzed* 685053	10/03/2016	13:30:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
z	**Uranium**	**0.219 ***	**mg/kg**	0.244	J			04

* Dry Weight Basis

EPA 7471A	*Prepared:* 684508	09/29/2016	14:25:00	*Analyzed* 684830	09/30/2016	13:39:00	CLK	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Mercury**	**0.0702 ***	**mg/kg**	0.0249		0.0078 pH dependent	**7439-97-6**	03

* Dry Weight Basis

SM2540 G-1997 /MOD	*Prepared:* 684794	09/29/2016	14:20:00	*Analyzed* 684794	09/29/2016	14:20:00	TH2	
	Parameter	*Results*	*Units*	*RL*	*Flags*	*MAL*	*CAS*	*Bottle*
N	**Total Solids for Dry Wt**	**75.8**	**%**	0.010				01

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Results

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1528199 **BH14 4.00-5.00** SEABED GEOLOGIC CORE *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

BAG ID: 4.00-5.80

EPA 6010C *Prepared:* 684479 09/29/2016 12:42:54 *Analyzed* 684640 09/29/2016 16:46:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**4.12 ***	**mg/kg**	28.4	J	16000	**7440-42-8**	02
N	**Phosphorus**	**262 ***	**mg/kg**	28.4			**7723-14-0**	02
N	**Tin, Total**	**<14.3 ***	**mg/kg**	14.3	B		**7440-31-5**	02

EPA 6010C *Prepared:* 684479 09/29/2016 12:42:54 *Analyzed* 684952 09/30/2016 17:50:00 LPS

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**37500 ***	**mg/Kg**	143		0	**7439-89-6**	02

* Dry Weight Basis

EPA 6020A *Prepared:* 684479 09/29/2016 12:42:54 *Analyzed* 684626 09/29/2016 17:37:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.348 ***	**mg/kg**	0.284	B		**7440-36-0**	02
N	**Arsenic, Total**	**0.835 ***	**mg/kg**	0.570		5.00	**7440-38-2**	02
N	**Barium**	**128 ***	**mg/kg**	0.855		440	**7440-39-3**	02
N	**Beryllium, Total**	**0.570 ***	**mg/kg**	0.284			**7440-41-7**	02
N	**Cadmium, Total**	**<0.284 ***	**mg/kg**	0.284		1.50	**7440-43-9**	02
N	**Chromium, Total**	**13.3 ***	**mg/kg**	0.284		2400	**7440-47-3**	02
N	**Cobalt**	**9.79 ***	**mg/kg**	0.284			**7440-48-4**	02
N	**Copper, Total**	**30.7 ***	**mg/kg**	0.284		1000	**7440-50-8**	02
N	**Lead, Total**	**3.65 ***	**mg/kg**	0.284		6.30	**7439-92-1**	02
N	**Manganese, Total**	**474 ***	**mg/kg**	0.284		1200	**7439-96-5**	02
N	**Molybdenum**	**0.122 ***	**mg/kg**	0.284	J	155	**7439-98-7**	02
N	**Nickel, Total**	**8.46 ***	**mg/kg**	0.284		160	**7440-02-0**	02
N	**Selenium, Total**	**<0.855 ***	**mg/kg**	0.855		2.30	**7782-49-2**	02
N	**Silver, Total**	**0.0148 ***	**mg/kg**	0.284	J	0.480	**7440-22-4**	02
N	**Thallium, Total**	**0.0643 ***	**mg/kg**	0.284	BJ		**7440-28-0**	02
N	**Vanadium**	**57.6 ***	**mg/kg**	0.284		2.94	**7440-62-2**	02
N	**Zinc, Total**	**47.6 ***	**mg/kg**	1.43		2400	**7440-66-6**	02

EPA 6020A *Prepared:* 684913 10/03/2016 07:41:00 *Analyzed* 685053 10/03/2016 13:37:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
z	**Uranium**	**0.353 ***	**mg/kg**	0.232				04

* Dry Weight Basis

EPA 7471A *Prepared:* 684508 09/29/2016 14:25:00 *Analyzed* 684830 09/30/2016 13:40:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**<0.0249 ***	**mg/kg**	0.0249		0.0078 pH dependent	**7439-97-6**	03

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684794 09/29/2016 14:20:00 *Analyzed* 684794 09/29/2016 14:20:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**79.8**	**%**	0.010				01

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Results

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1528710 **BH-6B (Marine BH)** SPT #1 *Received:* 09/28/2016

olid & Chemical Material *Collected by:* Client *Affiliation:* Fugro Consultants In

EPA 6010C *Prepared:* 684913 10/03/2016 07:41:00 *Analyzed* 685068 10/03/2016 12:44:00 WOB

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Iron**	**57000 ***	**mg/Kg**	126		0	**7439-89-6**	05

EPA 6010C *Prepared:* 684913 10/03/2016 07:41:00 *Analyzed* 685065 10/03/2016 14:06:00 WOB

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Boron**	**49.4 ***	**mg/kg**	25.1	B	16000	**7440-42-8**	05
N	**Phosphorus**	**743 ***	**mg/kg**	25.1			**7723-14-0**	05
N	**Tin, Total**	**<12.6 ***	**mg/kg**	12.6	B		**7440-31-5**	05

* Dry Weight Basis

EPA 6020A *Prepared:* 684913 10/03/2016 07:41:00 *Analyzed* 685053 10/03/2016 13:40:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Antimony, Total**	**0.287 ***	**mg/kg**	0.251			**7440-36-0**	05
N	**Arsenic, Total**	**10.1 ***	**mg/kg**	0.503		5.00	**7440-38-2**	05
N	**Barium**	**27.6 ***	**mg/kg**	0.251		440	**7440-39-3**	05
N	**Beryllium, Total**	**0.794 ***	**mg/kg**	0.251			**7440-41-7**	05
N	**Cadmium, Total**	**0.0864 ***	**mg/kg**	0.251	J	1.50	**7440-43-9**	05
N	**Chromium, Total**	**14.6 ***	**mg/kg**	0.251		2400	**7440-47-3**	05
N	**Cobalt**	**20.6 ***	**mg/kg**	0.251			**7440-48-4**	05
N	**Copper, Total**	**24.0 ***	**mg/kg**	0.251		1000	**7440-50-8**	05
N	**Lead, Total**	**4.59 ***	**mg/kg**	0.251		6.30	**7439-92-1**	05
N	**Manganese, Total**	**1060 ***	**mg/kg**	0.251		1200	**7439-96-5**	05
N	**Molybdenum**	**0.860 ***	**mg/kg**	0.754		155	**7439-98-7**	05
N	**Nickel, Total**	**10.3 ***	**mg/kg**	0.251		160	**7440-02-0**	05
N	**Selenium, Total**	**0.333 ***	**mg/kg**	0.754	J	2.30	**7782-49-2**	05
N	**Silver, Total**	**0.0349 ***	**mg/kg**	0.251	J	0.480	**7440-22-4**	05
N	**Thallium, Total**	**0.128 ***	**mg/kg**	0.251	J		**7440-28-0**	05
z	**Uranium**	**2.46 ***	**mg/kg**	0.251				05
N	**Vanadium**	**73.9 ***	**mg/kg**	0.251		2.94	**7440-62-2**	05
N	**Zinc, Total**	**48.9 ***	**mg/kg**	1.26		2400	**7440-66-6**	05

* Dry Weight Basis

EPA 7471A *Prepared:* 684665 09/30/2016 09:40:00 *Analyzed* 684830 09/30/2016 14:14:00 CLK

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Mercury**	**0.183 ***	**mg/kg**	0.0253		0.0078 pH dependent	**7439-97-6**	02

* Dry Weight Basis

SM2540 G-1997 /MOD *Prepared:* 684949 09/30/2016 15:24:00 *Analyzed* 684949 09/30/2016 15:24:00 TH2

	Parameter	Results	Units	RL	Flags	MAL	CAS	Bottle
N	**Total Solids for Dry Wt**	**70.0**	**%**	0.010				01

Sample Preparation

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Results

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1528165 **5635** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:40*	*Calculated*		*10/03/2016*	*17:00:40*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.30**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.13**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5062**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528173 **5636** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:41*	*Calculated*		*10/03/2016*	*17:00:41*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.58**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.83**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5271**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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Results

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1528174 **5637** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:41*	*Calculated*		*10/03/2016*	*17:00:41*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.04**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.08**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5450**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528175 **5829** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:41*	*Calculated*		*10/03/2016*	*17:00:41*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.59**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.37**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5652**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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Results

Printed: 10/03/2016

1528176 **5838** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:41*	*Calculated*		*10/03/2016*	*17:00:41*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.31**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.20**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5730**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528177 **5839** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:41*	*Calculated*		*10/03/2016*	*17:00:41*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.87**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.86**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5739**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528178 **5640** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:41*	*Calculated*		*10/03/2016*	*17:00:41*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.34**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.10**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5302**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528179 **5641** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:41*	*Calculated*		*10/03/2016*	*17:00:41*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.36**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.83**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5192**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528180 **5642** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:41*	*Calculated*		*10/03/2016*	*17:00:41*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.81**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.33**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5813**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528181 **5643** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:41*	*Calculated*		*10/03/2016*	*17:00:41*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.99**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.82**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5814**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528182 **5830** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:42*	*Calculated*		*10/03/2016*	*17:00:42*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.44**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.58**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5592**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528183 **5831** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:42*	*Calculated*		*10/03/2016*	*17:00:42*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/2.00**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.55**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5252**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528184 **5832** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:42*	*Calculated*		*10/03/2016*	*17:00:42*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.63**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.73**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5579**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528185 **5833** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:42*	*Calculated*		*10/03/2016*	*17:00:42*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.74**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.99**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5529**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528186 **5644** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:42*	*Calculated*		*10/03/2016*	*17:00:42*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.74**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.78**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5248**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528187 **5786** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:42*	*Calculated*		*10/03/2016*	*17:00:42*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.62**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.71**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5002**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528188 **5787** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:42*	*Calculated*		*10/03/2016*	*17:00:42*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.37**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.05**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5084**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528189 **5788** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:42*	*Calculated*		*10/03/2016*	*17:00:42*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.60**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.33**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5380**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528190 **5789** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:42*	*Calculated*		*10/03/2016*	*17:00:42*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/2.02**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.54**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5885**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528191 **5645** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*17:00:42*	*Calculated*		*10/03/2016*	*17:00:42*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684461*	*09/29/2016*	*11:20:00*	*Analyzed*	*684461*	*09/29/2016*	*11:20:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.34**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684912*	*10/03/2016*	*07:40:00*	*Analyzed*	*684912*	*10/03/2016*	*07:40:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.52**	**grams**						01	
EPA 7471A		*Prepared:*	*684405*	*09/29/2016*	*08:45:00*	*Analyzed*	*684405*	*09/29/2016*	*08:45:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5904**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528192 **5646** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*16:33:43*	*Calculated*		*10/03/2016*	*16:33:43*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684479*	*09/29/2016*	*12:42:54*	*Analyzed*	*684479*	*09/29/2016*	*12:42:54*	*CLK*
N	**Solid Metals Digestion**	**50/1.25**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684913*	*10/03/2016*	*07:41:00*	*Analyzed*	*684913*	*10/03/2016*	*07:41:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.65**	**grams**						01	
EPA 7471A		*Prepared:*	*684508*	*09/29/2016*	*14:25:00*	*Analyzed*	*684508*	*09/29/2016*	*14:25:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5759**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528193 **5790** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*16:33:43*	*Calculated*		*10/03/2016*	*16:33:43*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684479*	*09/29/2016*	*12:42:54*	*Analyzed*	*684479*	*09/29/2016*	*12:42:54*	*CLK*
N	**Solid Metals Digestion**	**50/1.28**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684913*	*10/03/2016*	*07:41:00*	*Analyzed*	*684913*	*10/03/2016*	*07:41:00*	*CLK*
N	**Solid Metals Digestion**	**50/2.01**	**grams**						01	
EPA 7471A		*Prepared:*	*684508*	*09/29/2016*	*14:25:00*	*Analyzed*	*684508*	*09/29/2016*	*14:25:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5750**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528194 **5834** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*16:33:43*	*Calculated*		*10/03/2016*	*16:33:43*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684479*	*09/29/2016*	*12:42:54*	*Analyzed*	*684479*	*09/29/2016*	*12:42:54*	*CLK*
N	**Solid Metals Digestion**	**50/1.68**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684913*	*10/03/2016*	*07:41:00*	*Analyzed*	*684913*	*10/03/2016*	*07:41:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.20**	**grams**						01	
EPA 7471A		*Prepared:*	*684508*	*09/29/2016*	*14:25:00*	*Analyzed*	*684508*	*09/29/2016*	*14:25:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5583**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528195 **5791** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*16:33:43*	*Calculated*		*10/03/2016*	*16:33:43*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684479*	*09/29/2016*	*12:42:54*	*Analyzed*	*684479*	*09/29/2016*	*12:42:54*	*CLK*
N	**Solid Metals Digestion**	**50/1.65**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684913*	*10/03/2016*	*07:41:00*	*Analyzed*	*684913*	*10/03/2016*	*07:41:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.62**	**grams**						01	
EPA 7471A		*Prepared:*	*684508*	*09/29/2016*	*14:25:00*	*Analyzed*	*684508*	*09/29/2016*	*14:25:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5801**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528196 **5792** SEABED SEDIMENT *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*16:33:43*	*Calculated*		*10/03/2016*	*16:33:43*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684479*	*09/29/2016*	*12:42:54*	*Analyzed*	*684479*	*09/29/2016*	*12:42:54*	*CLK*
N	**Solid Metals Digestion**	**50/1.77**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684913*	*10/03/2016*	*07:41:00*	*Analyzed*	*684913*	*10/03/2016*	*07:41:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.50**	**grams**						01	
EPA 7471A		*Prepared:*	*684508*	*09/29/2016*	*14:25:00*	*Analyzed*	*684508*	*09/29/2016*	*14:25:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5972**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528197 **BH14 1.25-1.85** SEABED GEOLOGIC CORE *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*16:33:43*	*Calculated*		*10/03/2016*	*16:33:43*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684479*	*09/29/2016*	*12:42:54*	*Analyzed*	*684479*	*09/29/2016*	*12:42:54*	*CLK*
N	**Solid Metals Digestion**	**50/1.19**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684913*	*10/03/2016*	*07:41:00*	*Analyzed*	*684913*	*10/03/2016*	*07:41:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.07**	**grams**						01	
EPA 7471A		*Prepared:*	*684508*	*09/29/2016*	*14:25:00*	*Analyzed*	*684508*	*09/29/2016*	*14:25:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5152**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684486*	*09/29/2016*	*13:25:18*	*Analyzed*	*684486*	*09/29/2016*	*13:25:18*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528198 **BH14 2.35-2.40** SEABED GEOLOGIC CORE *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*16:33:44*	*Calculated*		*10/03/2016*	*16:33:44*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684479*	*09/29/2016*	*12:42:54*	*Analyzed*	*684479*	*09/29/2016*	*12:42:54*	*CLK*
N	**Solid Metals Digestion**	**50/1.08**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684913*	*10/03/2016*	*07:41:00*	*Analyzed*	*684913*	*10/03/2016*	*07:41:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.35**	**grams**						01	
EPA 7471A		*Prepared:*	*684508*	*09/29/2016*	*14:25:00*	*Analyzed*	*684508*	*09/29/2016*	*14:25:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5293**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684485*	*09/29/2016*	*13:02:53*	*Analyzed*	*684485*	*09/29/2016*	*13:02:53*	*TH2*
N	**Total Solids Start Code**	**Started**								

1528199 **BH14 4.00-5.00** SEABED GEOLOGIC CORE *Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*16:33:44*	*Calculated*		*10/03/2016*	*16:33:44*	*CAL*
	As Received to Dry Weight Basis	**Calculated**								
EPA 200.2 2.8		*Prepared:*	*684479*	*09/29/2016*	*12:42:54*	*Analyzed*	*684479*	*09/29/2016*	*12:42:54*	*CLK*
N	**Solid Metals Digestion**	**50/1.10**	**grams**						01	
EPA 200.2 2.8		*Prepared:*	*684913*	*10/03/2016*	*07:41:00*	*Analyzed*	*684913*	*10/03/2016*	*07:41:00*	*CLK*
N	**Solid Metals Digestion**	**50/1.35**	**grams**						01	
EPA 7471A		*Prepared:*	*684508*	*09/29/2016*	*14:25:00*	*Analyzed*	*684508*	*09/29/2016*	*14:25:00*	*ALB*
N	**Solid Metals Digestion Hg**	**50/0.5034**	**grams**						01	
SM 2540 G-1997		*Prepared:*	*684485*	*09/29/2016*	*13:02:53*	*Analyzed*	*684485*	*09/29/2016*	*13:02:53*	*TH2*
N	**Total Solids Start Code**	**Started**								

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1528710	**BH-6B (Marine BH)**	SPT #1	*Received:* 09/28/2016

Calculation		*Prepared:*		*10/03/2016*	*16:39:35*	*Calculated*		*10/03/2016*	*16:39:35*	*CAL*
	As Received to Dry Weight Basis		**Calculated**							
EPA 200.2 2.8		*Prepared:*	*684913*	*10/03/2016*	*07:41:00*	*Analyzed*	*684913*	*10/03/2016*	*07:41:00*	*CLK*
N	**Solid Metals Digestion**		**50/1.42**	**grams**					01	
EPA 7471A		*Prepared:*	*684665*	*09/30/2016*	*09:40:00*	*Analyzed*	*684665*	*09/30/2016*	*09:40:00*	*ALB*
N	**Solid Metals Digestion Hg**		**50/0.5645**	**grams**					01	
SM 2540 G-1997		*Prepared:*	*684775*	*09/30/2016*	*14:17:56*	*Analyzed*	*684775*	*09/30/2016*	*14:17:56*	*TH2*
N	**Total Solids Start Code**		**Started**							

Qualifiers:

J - Analyte detected below quantitation limit
D - Duplicate RPD was higher than expected
B - Analyte detected in the associated method blank
P - Spike recovery outside control limits due to matrix effects.

We report results on an 'As Received' or wet basis unless marked 'Dry Weight'. Unless otherwise noted, testing was performed at Ana-lab's corporate laboratory that holds the following Federal and State certificates: Texas Department of Health Lead Firm Certificate 2110076, US Department of Agriculture Soil Import Permit S-37592, Texas Commisson on Environmental Quality Drinking Water Laboratory Certificate TX219, Texas Commission on Environmental Quality NELAP T104704201, Oklahoma Department of Environmental Quality Drinking Water Certification Lab ID# D9913, EPA Lab Number TX00063, USEPA Approved Perchlorate Testing Lab, Oklahoma Department of Environmental Quality Laboratory Certificate 8125, Arkansas Department of Environmental Quality Certification #03-070-0, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) # LA030020, US Department of Energy Approved, State of Kansas Department of Health and Environment Waste Water and Solid/Hazardous Waste Cert. E-10365. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.

These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

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Paul Zhang, Ph.D., Quality Director

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Quality Control

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LNG TO POWER

Account	Project
GCT1-G	757120

Report To

Fugro Consultants Inc.
Steve DeGregorio
6100 Hillcroft St.
Houston, TX 77081-1009

Analytical Set **684786** **SM2540 G-1997 /MOD**

ControlBlk

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Total Solids for Dry Wt	684786	-0.0002			grams	116940900

Duplicate

Parameter	Sample	Result	Unknown	Unit	RPD	Limit%
Total Solids for Dry Wt	1528165	80.1	79.6	%	0.626	20.0
	1528182	73.1	73.9	%	1.09	20.0
	1528192	74.0	73.8	%	0.271	20.0

Analytical Set **684794** **SM2540 G-1997 /MOD**

ControlBlk

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Total Solids for Dry Wt	684794	0.0000			grams	116941005

Duplicate

Parameter	Sample	Result	Unknown	Unit	RPD	Limit%
Total Solids for Dry Wt	1528198	78.7	75.8	%	3.75	20.0
	1528567	99.9	99.9	%	0	20.0

Analytical Set **684949** **SM2540 G-1997 /MOD**

ControlBlk

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Total Solids for Dry Wt	684949	-0.0002			grams	116943877

Duplicate

Parameter	Sample	Result	Unknown	Unit	RPD	Limit%
Total Solids for Dry Wt	1527367	79.8	80.2	%	0.500	20.0
	1528710	72.2	70.0	%	3.09	20.0
	1529156	51.7	59.7	%	14.4	20.0

Analytical Set **684562** **EPA 7471A**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Mercury	684405	ND	0.00004340.0002		mg/kg	116937149

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Mercury	0.00499	0.005	mg/kg	99.8	90.0 - 110	116937148
	0.00503	0.005	mg/kg	101	90.0 - 110	116937159
	0.00508	0.005	mg/kg	102	90.0 - 110	116937170
	0.00508	0.005	mg/kg	102	90.0 - 110	116937178

ICL

Parameter	Reading	Known	Units	Recover%	Limits%	File

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ICL

Parameter	Reading	Known	Units	Recover%	Limits%	File
Mercury	0.0197	0.02	mg/kg	98.5	90.0 - 110	116937147

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Mercury	0.00514	0.005	mg/kg	103	90.0 - 110	116937146

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Mercury	684405	0.00941	0.00938	0.010	78.0 - 106	94.1	93.8	mg/kg	0.319	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Mercury	1528165	0.739	0.706	0.00761	0.924	70.1 - 110	78.5	74.9	mg/kg	4.62	25.0
	1528184	0.807	0.849	0.0104	0.916	70.1 - 110	90.7	95.5	mg/kg	5.14	25.0

Analytical Set **684626** **EPA 6020A**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units		File
Antimony, Total	684479	0.00246	0.000494	0.001	mg/kg	*	116938794
	684461	0.00139	0.000494	0.001	mg/kg	*	116938812
Arsenic, Total	684479	ND	0.000869	0.002	mg/kg		116938794
	684461	ND	0.000869	0.002	mg/kg		116938812
Barium	684479	ND	0.00241	0.003	mg/kg		116938794
	684461	ND	0.00241	0.003	mg/kg		116938812
Beryllium, Total	684479	ND	0.000256	0.001	mg/kg		116938794
	684461	ND	0.000256	0.001	mg/kg		116938812
Cadmium, Total	684479	ND	0.000187	0.001	mg/kg		116938794
	684461	ND	0.000187	0.001	mg/kg		116938812
Chromium, Total	684479	0.000787	0.000264	0.001	mg/kg	*	116938794
	684461	0.000759	0.000264	0.001	mg/kg	*	116938812
Cobalt	684479	ND	0.00003260	0.001	mg/kg		116938794
	684461	0.0000379	0.00003260	0.001	mg/kg		116938812
Copper, Total	684479	0.000221	0.000134	0.001	mg/kg		116938794
	684461	0.000163	0.000134	0.001	mg/kg		116938812
Lead, Total	684479	0.0000792	0.00004460	0.001	mg/kg		116938794
	684461	0.0000987	0.00004460	0.001	mg/kg	*	116938812
Manganese, Total	684479	0.000207	0.000139	0.001	mg/kg		116938794
	684461	ND	0.000139	0.001	mg/kg		116938812
Molybdenum	684479	0.000188	0.000186	0.001	mg/kg		116938794
	684461	0.000278	0.000186	0.001	mg/kg		116938812
Nickel, Total	684479	ND	0.000441	0.001	mg/kg		116938794
	684461	ND	0.000441	0.001	mg/kg		116938812
Selenium, Total	684479	ND	0.00194	0.003	mg/kg		116938794
	684461	ND	0.00194	0.003	mg/kg		116938812
Silver, Total	684479	ND	0.00002560	0.001	mg/kg		116938794
	684461	ND	0.00002560	0.001	mg/kg		116938812
Thallium, Total	684479	0.0000578	0.00002470	0.001	mg/kg	*	116938794
	684461	0.0000772	0.00002470	0.001	mg/kg	*	116938812
Vanadium	684479	0.00646	0.000585	0.001	mg/kg	*	116938794
	684461	ND	0.000585	0.001	mg/kg		116938812
Zinc, Total	684479	ND	0.0011	0.005	mg/kg		116938794

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Parameter	PrepSet	Reading	MDL	MQL	Units	File
Zinc, Total	684461	ND	0.0011	0.005	mg/kg	116938812

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Antimony, Total	0.0524	0.05	mg/kg	105	90.0 - 110	116938793
	0.0524	0.05	mg/kg	105	90.0 - 110	116938797
	0.0535	0.05	mg/kg	107	90.0 - 110	116938808
	0.0532	0.05	mg/kg	106	90.0 - 110	116938818
	0.0527	0.05	mg/kg	105	90.0 - 110	116938829
	0.0537	0.05	mg/kg	107	90.0 - 110	116938840
	0.0535	0.05	mg/kg	107	90.0 - 110	116938848
Arsenic, Total	0.0506	0.05	mg/kg	101	90.0 - 110	116938793
	0.050	0.05	mg/kg	100	90.0 - 110	116938797
	0.0509	0.05	mg/kg	102	90.0 - 110	116938808
	0.0512	0.05	mg/kg	102	90.0 - 110	116938818
	0.050	0.05	mg/kg	100	90.0 - 110	116938829
	0.0514	0.05	mg/kg	103	90.0 - 110	116938840
	0.0517	0.05	mg/kg	103	90.0 - 110	116938848
Barium	0.0521	0.05	mg/kg	104	90.0 - 110	116938793
	0.0516	0.05	mg/kg	103	90.0 - 110	116938797
	0.052	0.05	mg/kg	104	90.0 - 110	116938808
	0.0517	0.05	mg/kg	103	90.0 - 110	116938818
	0.052	0.05	mg/kg	104	90.0 - 110	116938829
	0.0526	0.05	mg/kg	105	90.0 - 110	116938840
	0.0525	0.05	mg/kg	105	90.0 - 110	116938848
Beryllium, Total	0.0494	0.05	mg/kg	98.8	90.0 - 110	116938793
	0.049	0.05	mg/kg	98.0	90.0 - 110	116938797
	0.0501	0.05	mg/kg	100	90.0 - 110	116938808
	0.0494	0.05	mg/kg	98.8	90.0 - 110	116938818
	0.0496	0.05	mg/kg	99.2	90.0 - 110	116938829
	0.0499	0.05	mg/kg	99.8	90.0 - 110	116938840
	0.050	0.05	mg/kg	100	90.0 - 110	116938848
Cadmium, Total	0.0502	0.05	mg/kg	100	90.0 - 110	116938793
	0.0505	0.05	mg/kg	101	90.0 - 110	116938797
	0.0503	0.05	mg/kg	101	90.0 - 110	116938808
	0.0495	0.05	mg/kg	99.0	90.0 - 110	116938818
	0.0492	0.05	mg/kg	98.4	90.0 - 110	116938829
	0.0493	0.05	mg/kg	98.6	90.0 - 110	116938840
	0.0494	0.05	mg/kg	98.8	90.0 - 110	116938848
Chromium, Total	0.0476	0.05	mg/kg	95.2	90.0 - 110	116938793
	0.0476	0.05	mg/kg	95.2	90.0 - 110	116938797
	0.0474	0.05	mg/kg	94.8	90.0 - 110	116938808
	0.048	0.05	mg/kg	96.0	90.0 - 110	116938818
	0.0474	0.05	mg/kg	94.8	90.0 - 110	116938829
	0.0474	0.05	mg/kg	94.8	90.0 - 110	116938840
	0.048	0.05	mg/kg	96.0	90.0 - 110	116938848
Cobalt	0.0463	0.05	mg/kg	92.6	90.0 - 110	116938793
	0.0462	0.05	mg/kg	92.4	90.0 - 110	116938797
	0.046	0.05	mg/kg	92.0	90.0 - 110	116938808
	0.0465	0.05	mg/kg	93.0	90.0 - 110	116938818

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Parameter	Reading	Known	Units	Recover%	Limits%	File
Cobalt	0.0463	0.05	mg/kg	92.6	90.0 - 110	116938829
	0.0457	0.05	mg/kg	91.4	90.0 - 110	116938840
	0.046	0.05	mg/kg	92.0	90.0 - 110	116938848
Copper, Total	0.0501	0.05	mg/kg	100	90.0 - 110	116938793
	0.0491	0.05	mg/kg	98.2	90.0 - 110	116938797
	0.050	0.05	mg/kg	100	90.0 - 110	116938808
	0.050	0.05	mg/kg	100	90.0 - 110	116938818
	0.0495	0.05	mg/kg	99.0	90.0 - 110	116938829
	0.0496	0.05	mg/kg	99.2	90.0 - 110	116938840
	0.0498	0.05	mg/kg	99.6	90.0 - 110	116938848
Lead, Total	0.046	0.05	mg/kg	92.0	90.0 - 110	116938793
	0.0467	0.05	mg/kg	93.4	90.0 - 110	116938797
	0.0462	0.05	mg/kg	92.4	90.0 - 110	116938808
	0.0469	0.05	mg/kg	93.8	90.0 - 110	116938818
	0.0461	0.05	mg/kg	92.2	90.0 - 110	116938829
	0.0461	0.05	mg/kg	92.2	90.0 - 110	116938840
	0.0457	0.05	mg/kg	91.4	90.0 - 110	116938848
Manganese, Total	0.0503	0.05	mg/kg	101	90.0 - 110	116938793
	0.0488	0.05	mg/kg	97.6	90.0 - 110	116938797
	0.0504	0.05	mg/kg	101	90.0 - 110	116938808
	0.0498	0.05	mg/kg	99.6	90.0 - 110	116938818
	0.0504	0.05	mg/kg	101	90.0 - 110	116938829
	0.050	0.05	mg/kg	100	90.0 - 110	116938840
	0.0486	0.05	mg/kg	97.2	90.0 - 110	116938848
Molybdenum	0.0499	0.05	mg/kg	99.8	90.0 - 110	116938793
	0.0501	0.05	mg/kg	100	90.0 - 110	116938797
	0.0498	0.05	mg/kg	99.6	90.0 - 110	116938808
	0.050	0.05	mg/kg	100	90.0 - 110	116938818
	0.049	0.05	mg/kg	98.0	90.0 - 110	116938829
	0.0496	0.05	mg/kg	99.2	90.0 - 110	116938840
	0.0496	0.05	mg/kg	99.2	90.0 - 110	116938848
Nickel, Total	0.0468	0.05	mg/kg	93.6	90.0 - 110	116938793
	0.0469	0.05	mg/kg	93.8	90.0 - 110	116938797
	0.0467	0.05	mg/kg	93.4	90.0 - 110	116938808
	0.047	0.05	mg/kg	94.0	90.0 - 110	116938818
	0.0471	0.05	mg/kg	94.2	90.0 - 110	116938829
	0.0466	0.05	mg/kg	93.2	90.0 - 110	116938840
	0.0468	0.05	mg/kg	93.6	90.0 - 110	116938848
Selenium, Total	0.0525	0.05	mg/kg	105	90.0 - 110	116938793
	0.0518	0.05	mg/kg	104	90.0 - 110	116938797
	0.0522	0.05	mg/kg	104	90.0 - 110	116938808
	0.0531	0.05	mg/kg	106	90.0 - 110	116938818
	0.0505	0.05	mg/kg	101	90.0 - 110	116938829
	0.0518	0.05	mg/kg	104	90.0 - 110	116938840
	0.0516	0.05	mg/kg	103	90.0 - 110	116938848
Silver, Total	0.0492	0.05	mg/kg	98.4	90.0 - 110	116938793
	0.0486	0.05	mg/kg	97.2	90.0 - 110	116938797
	0.0491	0.05	mg/kg	98.2	90.0 - 110	116938808
	0.0488	0.05	mg/kg	97.6	90.0 - 110	116938818
	0.048	0.05	mg/kg	96.0	90.0 - 110	116938829

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Parameter	Reading	Known	Units	Recover%	Limits%	File
Silver, Total	0.0484	0.05	mg/kg	96.8	90.0 - 110	116938840
	0.0485	0.05	mg/kg	97.0	90.0 - 110	116938848
Thallium, Total	0.0467	0.05	mg/kg	93.4	90.0 - 110	116938793
	0.0476	0.05	mg/kg	95.2	90.0 - 110	116938797
	0.0467	0.05	mg/kg	93.4	90.0 - 110	116938808
	0.0478	0.05	mg/kg	95.6	90.0 - 110	116938818
	0.0465	0.05	mg/kg	93.0	90.0 - 110	116938829
	0.0467	0.05	mg/kg	93.4	90.0 - 110	116938840
	0.0462	0.05	mg/kg	92.4	90.0 - 110	116938848
Vanadium	0.0473	0.05	mg/kg	94.6	90.0 - 110	116938793
	0.047	0.05	mg/kg	94.0	90.0 - 110	116938797
	0.0474	0.05	mg/kg	94.8	90.0 - 110	116938808
	0.0475	0.05	mg/kg	95.0	90.0 - 110	116938818
	0.0475	0.05	mg/kg	95.0	90.0 - 110	116938829
	0.0478	0.05	mg/kg	95.6	90.0 - 110	116938840
	0.0477	0.05	mg/kg	95.4	90.0 - 110	116938848
Zinc, Total	0.0519	0.05	mg/kg	104	90.0 - 110	116938793
	0.0515	0.05	mg/kg	103	90.0 - 110	116938797
	0.0518	0.05	mg/kg	104	90.0 - 110	116938808
	0.0511	0.05	mg/kg	102	90.0 - 110	116938818
	0.0507	0.05	mg/kg	101	90.0 - 110	116938829
	0.0509	0.05	mg/kg	102	90.0 - 110	116938840
	0.051	0.05	mg/kg	102	90.0 - 110	116938848

Dir. SPKD

Parameter	Sample	DSPK	DSPKD	UNK	Known	Limits%	DSPK%	DSPKD%	Units	RPD	Limit%
Cadmium, Total	1528165	215	206	ND	240	80.0 - 120	89.6	85.8	mg/kg	4.28	20.0
Manganese, Total	1528165	948	933	539	481	80.0 - 120	85.0	81.9	mg/kg	1.59	20.0
	1528173	889	908	554	396	80.0 - 120	84.6	89.4	mg/kg	2.11	20.0

Direct SPK

Parameter	Sample	DSPK	UNK	Known	Limits%	DSPK%	Units	
Cadmium, Total	1528165	215	ND	240	80.0 - 120	89.6	mg/kg	20.0
Manganese, Total	1528165	948	539	481	80.0 - 120	85.0	mg/kg	20.0
	1528173	889	554	396	80.0 - 120	84.6	mg/kg	20.0

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Antimony, Total	0.0518	0.05	mg/kg	104	90.0 - 110	116938790
Arsenic, Total	0.0511	0.05	mg/kg	102	90.0 - 110	116938790
Barium	0.0516	0.05	mg/kg	103	90.0 - 110	116938790
Beryllium, Total	0.0512	0.05	mg/kg	102	90.0 - 110	116938790
Cadmium, Total	0.0518	0.05	mg/kg	104	90.0 - 110	116938790
Chromium, Total	0.0516	0.05	mg/kg	103	90.0 - 110	116938790
Cobalt	0.0515	0.05	mg/kg	103	90.0 - 110	116938790
Copper, Total	0.0513	0.05	mg/kg	103	90.0 - 110	116938790
Lead, Total	0.0516	0.05	mg/kg	103	90.0 - 110	116938790
Manganese, Total	0.0516	0.05	mg/kg	103	90.0 - 110	116938790
Molybdenum	0.0513	0.05	mg/kg	103	90.0 - 110	116938790
Nickel, Total	0.0528	0.05	mg/kg	106	90.0 - 110	116938790
Selenium, Total	0.0517	0.05	mg/kg	103	90.0 - 110	116938790

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Parameter	Reading	Known	Units	Recover%	Limits%	File
Silver, Total	0.051	0.05	mg/kg	102	90.0 - 110	116938790
Thallium, Total	0.0511	0.05	mg/kg	102	90.0 - 110	116938790
Vanadium	0.0509	0.05	mg/kg	102	90.0 - 110	116938790
Zinc, Total	0.0517	0.05	mg/kg	103	90.0 - 110	116938790

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Antimony, Total	684479	2.59	2.56	2.50	89.2 - 110	104	102	mg/kg	1.17	20.0
	684461	2.63	2.59	2.50	89.2 - 110	105	104	mg/kg	1.53	20.0
Arsenic, Total	684479	2.53	2.51	2.50	87.9 - 110	101	100	mg/kg	0.794	20.0
	684461	2.57	2.55	2.50	87.9 - 110	103	102	mg/kg	0.781	20.0
Barium	684479	2.57	2.55	2.50	88.6 - 110	103	102	mg/kg	0.781	20.0
	684461	2.57	2.58	2.50	88.6 - 110	103	103	mg/kg	0.388	20.0
Beryllium, Total	684479	0.989	0.967	1.00	81.5 - 114	98.9	96.7	mg/kg	2.25	20.0
	684461	1.00	1.00	1.00	81.5 - 114	100	100	mg/kg	0	20.0
Cadmium, Total	684479	1.27	1.26	1.25	89.2 - 109	102	101	mg/kg	0.791	20.0
	684461	1.26	1.28	1.25	89.2 - 109	101	102	mg/kg	1.57	20.0
Chromium, Total	684479	2.31	2.32	2.50	84.7 - 112	92.4	92.8	mg/kg	0.432	20.0
	684461	2.31	2.32	2.50	84.7 - 112	92.4	92.8	mg/kg	0.432	20.0
Cobalt	684479	2.23	2.24	2.50	83.8 - 111	89.2	89.6	mg/kg	0.447	20.0
	684461	2.22	2.26	2.50	83.8 - 111	88.8	90.4	mg/kg	1.79	20.0
Copper, Total	684479	2.45	2.45	2.50	85.4 - 109	98.0	98.0	mg/kg	0	20.0
	684461	2.48	2.50	2.50	85.4 - 109	99.2	100	mg/kg	0.803	20.0
Lead, Total	684479	2.35	2.37	2.50	86.4 - 111	94.0	94.8	mg/kg	0.847	20.0
	684461	2.37	2.39	2.50	86.4 - 111	94.8	95.6	mg/kg	0.840	20.0
Manganese, Total	684479	2.42	2.42	2.50	84.6 - 113	96.8	96.8	mg/kg	0	20.0
	684461	2.40	2.43	2.50	84.6 - 113	96.0	97.2	mg/kg	1.24	20.0
Molybdenum	684479	2.59	2.56	2.50	90.1 - 116	104	102	mg/kg	1.17	20.0
	684461	2.60	2.63	2.50	90.1 - 116	104	105	mg/kg	1.15	20.0
Nickel, Total	684479	2.24	2.25	2.50	82.4 - 110	89.6	90.0	mg/kg	0.445	20.0
	684461	2.26	2.29	2.50	82.4 - 110	90.4	91.6	mg/kg	1.32	20.0
Selenium, Total	684479	2.55	2.53	2.50	83.6 - 111	102	101	mg/kg	0.787	20.0
	684461	2.57	2.54	2.50	83.6 - 111	103	102	mg/kg	1.17	20.0
Silver, Total	684479	0.478	0.477	0.500	87.0 - 113	95.6	95.4	mg/kg	0.209	20.0
	684461	0.478	0.483	0.500	87.0 - 113	95.6	96.6	mg/kg	1.04	20.0
Thallium, Total	684479	2.26	2.27	2.50	79.7 - 105	90.4	90.8	mg/kg	0.442	20.0
	684461	2.27	2.29	2.50	79.7 - 105	90.8	91.6	mg/kg	0.877	20.0
Vanadium	684479	2.21	2.24	2.50	86.6 - 110	88.4	89.6	mg/kg	1.35	20.0
	684461	2.25	2.25	2.50	86.6 - 110	90.0	90.0	mg/kg	0	20.0
Zinc, Total	684479	2.51	2.48	2.50	82.9 - 113	100	99.2	mg/kg	1.20	20.0
	684461	2.53	2.54	2.50	82.9 - 113	101	102	mg/kg	0.394	20.0

LDR

Parameter	Reading	Known	Units	Recover%	Limits%	File
Antimony, Total	1.07	1	mg/kg	107	90.0 - 110	116938792
Arsenic, Total	10.6	10	mg/kg	106	90.0 - 110	116938792
Barium	10.5	10	mg/kg	105	90.0 - 110	116938792
Beryllium, Total	10.5	10	mg/kg	105	90.0 - 110	116938792
Cadmium, Total	10.4	10	mg/kg	104	90.0 - 110	116938792
Chromium, Total	9.75	10	mg/kg	97.5	90.0 - 110	116938792
Cobalt	9.46	10	mg/kg	94.6	90.0 - 110	116938792

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LDR

Parameter	Reading	Known	Units	Recover%	Limits%	File
Copper, Total	9.92	10	mg/kg	99.2	90.0 - 110	116938792
Lead, Total	9.78	10	mg/kg	97.8	90.0 - 110	116938792
Manganese, Total	9.91	10	mg/kg	99.1	90.0 - 110	116938792
Molybdenum	10.8	10	mg/kg	108	90.0 - 110	116938792
Nickel, Total	9.42	10	mg/kg	94.2	90.0 - 110	116938792
Selenium, Total	10.7	10	mg/kg	107	90.0 - 110	116938792
Thallium, Total	9.48	10	mg/kg	94.8	90.0 - 110	116938792
Vanadium	9.69	10	mg/kg	96.9	90.0 - 110	116938792
Zinc, Total	10.4	10	mg/kg	104	90.0 - 110	116938792

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Antimony, Total	1528165	98.1	85.2	0.437	109	3.01 - 158	79.4	68.9	mg/kg	14.1	20.0
Arsenic, Total	1528165	140	125	13.6	109	71.2 - 118	103	90.6	mg/kg	12.6	20.0
Barium	1528165	141	129	15.4	109	0.100 - 235	102	92.4	mg/kg	10.0	20.0
Beryllium, Total	1528165	47.9	43.7	0.157	43.5	78.4 - 117	97.4	88.9	mg/kg	9.20	20.0
Cadmium, Total	1528165	59.4	52.9	0.0491	54.3	89.0 - 109	96.8	86.2 *	mg/kg	11.6	20.0
Chromium, Total	1528165	112	99.6	5.78	109	62.8 - 120	86.4	76.3	mg/kg	12.4	20.0
Cobalt	1528165	107	94.5	6.06	109	69.4 - 115	82.1	71.9	mg/kg	13.2	20.0
Copper, Total	1528165	124	109	6.21	109	50.0 - 125	95.8	83.6	mg/kg	13.6	20.0
Lead, Total	1528165	113	102	2.46	109	51.4 - 133	89.9	80.9	mg/kg	10.5	20.0
Manganese, Total	1528165	635	606	499	109	27.2 - 154	111	87.0	mg/kg	23.9 *	20.0
Molybdenum	1528165	128	112	0.294	109	66.9 - 133	104	90.8	mg/kg	13.4	20.0
Nickel, Total	1528165	105	92.6	4.36	109	62.7 - 113	81.8	71.7	mg/kg	13.1	20.0
Selenium, Total	1528165	117	104	0.0171	109	64.2 - 118	95.1	84.5	mg/kg	11.8	20.0
Silver, Total	1528165	22.4	19.9	0.010	21.7	80.5 - 114	91.4	81.2	mg/kg	11.8	20.0
Thallium, Total	1528165	107	95.7	0.0645	109	71.8 - 103	86.9	77.8	mg/kg	11.2	20.0
Vanadium	1528165	141	125	39.9	109	47.8 - 141	82.2	69.2	mg/kg	17.2	20.0
Zinc, Total	1528165	144	129	25.9	109	48.0 - 127	96.0	83.8	mg/kg	13.6	20.0
Antimony, Total	1528173	22.4	20.1	0.271	69.4	3.01 - 158	30.6	27.4	mg/kg	11.0	20.0
Arsenic, Total	1528173	80.2	78.9	10.5	69.4	71.2 - 118	96.4	94.6	mg/kg	1.88	20.0
Barium	1528173	89.5	86.8	16.1	69.4	0.100 - 235	102	97.8	mg/kg	3.75	20.0
Beryllium, Total	1528173	27.2	26.7	0.343	27.8	78.4 - 117	92.9	91.2	mg/kg	1.88	20.0
Cadmium, Total	1528173	34.8	34.0	0.0844	34.7	89.0 - 109	96.2	93.9	mg/kg	2.33	20.0
Chromium, Total	1528173	62.3	60.9	5.93	69.4	62.8 - 120	78.0	76.0	mg/kg	2.51	20.0
Cobalt	1528173	60.9	59.3	7.63	69.4	69.4 - 115	73.7	71.5	mg/kg	3.05	20.0
Copper, Total	1528173	80.5	78.5	14.7	69.4	50.0 - 125	91.0	88.2	mg/kg	3.09	20.0
Lead, Total	1528173	69.1	67.8	4.36	69.4	51.4 - 133	89.5	87.7	mg/kg	2.03	20.0
Manganese, Total	1528173	557	541	504	69.4	27.2 - 154	73.3	51.2	mg/kg	35.6 *	20.0
Molybdenum	1528173	62.6	60.8	0.213	69.4	66.9 - 133	86.3	83.8	mg/kg	2.93	20.0
Nickel, Total	1528173	56.9	55.4	4.15	69.4	62.7 - 113	73.0	70.9	mg/kg	2.88	20.0
Selenium, Total	1528173	64.6	64.0	0.166	69.4	64.2 - 118	89.1	88.3	mg/kg	0.936	20.0
Silver, Total	1528173	13.0	12.8	0.0165	13.9	80.5 - 114	89.5	88.2	mg/kg	1.55	20.0
Thallium, Total	1528173	62.6	61.3	0.0818	69.4	71.8 - 103	86.5	84.7	mg/kg	2.10	20.0
Vanadium	1528173	83.2	81.1	32.1	69.4	47.8 - 141	70.7	67.8	mg/kg	4.20	20.0
Zinc, Total	1528173	113	110	43.8	69.4	48.0 - 127	95.7	91.6	mg/kg	4.43	20.0
Antimony, Total	1528192	40.1	56.1	0.568	83.3	3.01 - 158	60.4	84.9	mg/kg	33.7 *	20.0
Arsenic, Total	1528192	65.3	84.4	3.02	83.3	71.2 - 118	95.2	124 *	mg/kg	26.6 *	20.0
Barium	1528192	76.7	100	12.6	83.3	0.100 - 235	98.0	134	mg/kg	30.8 *	20.0
Beryllium, Total	1528192	25.0	33.0	0.207	33.3	78.4 - 117	94.6	125 *	mg/kg	27.8 *	20.0

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MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Cadmium, Total	1528192	32.3	41.7	0.0437	41.7	89.0 - 109	98.6	127 *	mg/kg	25.4 *	20.0
Chromium, Total	1528192	54.6	71.1	2.73	83.3	62.8 - 120	79.3	105	mg/kg	27.4 *	20.0
Cobalt	1528192	59.4	77.0	11.7	83.3	69.4 - 115	72.9	99.8	mg/kg	31.2 *	20.0
Copper, Total	1528192	76.1	93.9	16.2	83.3	50.0 - 125	91.6	119	mg/kg	25.9 *	20.0
Lead, Total	1528192	61.7	78.2	3.85	83.3	51.4 - 133	88.5	114	mg/kg	25.0 *	20.0
Manganese, Total	1528192	420	462	411	83.3	27.2 - 154	13.8 *	78.0	mg/kg	140 *	20.0
Molybdenum	1528192	60.1	79.8	0.132	83.3	66.9 - 133	91.7	122	mg/kg	28.2 *	20.0
Nickel, Total	1528192	54.1	70.7	4.66	83.3	62.7 - 113	75.6	101	mg/kg	28.7 *	20.0
Selenium, Total	1528192	59.7	78.5	0.119	83.3	64.2 - 118	91.1	120 *	mg/kg	27.3 *	20.0
Silver, Total	1528192	12.1	15.7	0.0145	16.7	80.5 - 114	92.3	120 *	mg/kg	25.9 *	20.0
Thallium, Total	1528192	56.9	73.1	0.0467	83.3	71.8 - 103	86.9	112 *	mg/kg	24.9 *	20.0
Vanadium	1528192	76.7	96.4	53.8	83.3	47.8 - 141	35.0 *	65.1	mg/kg	60.2 *	20.0
Zinc, Total	1528192	101	121	43.0	83.3	48.0 - 127	88.7	119	mg/kg	29.4 *	20.0

Analytical Set **684640** **EPA 6010C**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units		File
Boron	684479	ND	0.00876	0.100	mg/kg		116939172
	684461	ND	0.00876	0.100	mg/kg		116939186
Phosphorus	684479	0.0265	0.016	0.100	mg/kg		116939172
	684461	ND	0.016	0.100	mg/kg		116939186
Tin, Total	684479	0.00963	0.00255	0.050	mg/kg	*	116939172
	684461	ND	0.00255	0.050	mg/kg		116939186

CCV

Parameter	Reading	Known	Units	Recover%	Limits%		File
Boron	5.08	5.00	mg/kg	102	90.0 - 110		116939171
	5.31	5.00	mg/kg	106	90.0 - 110		116939182
	5.32	5.00	mg/kg	106	90.0 - 110		116939192
	5.47	5.00	mg/kg	109	90.0 - 110		116939203
Phosphorus	9.51	10.0	mg/kg	95.1	90.0 - 110		116939171
	9.80	10.0	mg/kg	98.0	90.0 - 110		116939182
	9.89	10.0	mg/kg	98.9	90.0 - 110		116939192
	10.2	10.0	mg/kg	102	90.0 - 110		116939203
	10.4	10.0	mg/kg	104	90.0 - 110		116939214
	10.4	10.0	mg/kg	104	90.0 - 110		116939216
Tin, Total	0.485	0.500	mg/kg	97.0	90.0 - 110		116939171
	0.501	0.500	mg/kg	100	90.0 - 110		116939182
	0.504	0.500	mg/kg	101	90.0 - 110		116939192
	0.514	0.500	mg/kg	103	90.0 - 110		116939203
	0.539	0.500	mg/kg	108	90.0 - 110		116939214
	0.531	0.500	mg/kg	106	90.0 - 110		116939216

ICL

Parameter	Reading	Known	Units	Recover%	Limits%		File
Boron	9.94	10.0	mg/kg	99.4	95.0 - 105		116939152
Phosphorus	24.8	25.0	mg/kg	99.2	95.0 - 105		116939152
Tin, Total	1.00	1.00	mg/kg	100	95.0 - 105		116939152

ICV

Parameter	Reading	Known	Units	Recover%	Limits%		File

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ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Boron	5.01	5.00	mg/kg	100	90.0 - 110	116939153
Phosphorus	10.0	10.0	mg/kg	100	90.0 - 110	116939153
Tin, Total	0.481	0.500	mg/kg	96.2	90.0 - 110	116939153

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Boron	684479	5.06	4.91	5.00	85.5 - 112	101	98.2	mg/kg	3.01	25.0
	684461	5.55	5.24	5.00	85.5 - 112	111	105	mg/kg	5.75	25.0
Phosphorus	684479	19.5	18.5	20.0	82.9 - 117	97.5	92.5	mg/kg	5.26	25.0
	684461	21.2	20.2	20.0	82.9 - 117	106	101	mg/kg	4.83	25.0
Tin, Total	684479	18.6	18.4	20.0	80.5 - 108	93.0	92.0	mg/kg	1.08	25.0
	684461	20.2	19.3	20.0	80.5 - 108	101	96.5	mg/kg	4.56	25.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Boron	1528165	295	269	17.6	217	37.2 - 140	113	103	mg/kg	9.83	25.0
Phosphorus	1528165	1600	1560	511	870	9.75 - 188	111	107	mg/kg	3.74	25.0
Tin, Total	1528165	943	836	ND	870	79.3 - 107	96.2	85.3	mg/kg	12.0	25.0
Boron	1528173	183	181	26.4	139	37.2 - 140	108	107	mg/kg	1.29	25.0
Phosphorus	1528173	1200	1140	511	556	9.75 - 188	119	109	mg/kg	9.10	25.0
Tin, Total	1528173	514	501	ND	556	79.3 - 107	88.9	86.7	mg/kg	2.56	25.0
Boron	1528192	151	186	10.4	167	37.2 - 140	107	134	mg/kg	22.1	25.0
Phosphorus	1528192	702	814	177	667	9.75 - 188	100	122	mg/kg	19.3	25.0
Tin, Total	1528192	491	604	ND	667	79.3 - 107	93.7	115 *	mg/kg	20.6	25.0

Analytical Set **684824** **EPA 6010C**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Boron	684461	0.0156	0.00876	0.100	mg/kg	116941787

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Boron	5.15	5.00	mg/kg	103	90.0 - 110	116941786
	5.24	5.00	mg/kg	105	90.0 - 110	116941797
	5.21	5.00	mg/kg	104	90.0 - 110	116941808
	5.22	5.00	mg/kg	104	90.0 - 110	116941825

ICL

Parameter	Reading	Known	Units	Recover%	Limits%	File
Boron	10.0	10.0	mg/kg	100	95.0 - 105	116941784

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Boron	5.17	5.00	mg/kg	103	90.0 - 110	116941785

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Boron	684461	5.55	5.45	5.00	85.5 - 112	111	109	mg/kg	1.82	25.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Boron	1528165	286	257	20.7	217	37.2 - 140	108	96.4	mg/kg	11.6	25.0
	1528173	180	173	28.2	139	37.2 - 140	105	99.9	mg/kg	4.72	25.0

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Analytical Set **684830** **EPA 7471A**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Mercury	684508	ND	0.000198	0.0002	mg/kg	116942061
	684665	ND	0.000198	0.0002	mg/kg	116942088

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Mercury	0.00523	0.005	mg/kg	105	90.0 - 110	116942057
	0.00511	0.005	mg/kg	102	90.0 - 110	116942068
	0.00511	0.005	mg/kg	102	90.0 - 110	116942079
	0.00516	0.005	mg/kg	103	90.0 - 110	116942087
	0.00508	0.005	mg/kg	102	90.0 - 110	116942090
	0.00511	0.005	mg/kg	102	90.0 - 110	116942096

ICL

Parameter	Reading	Known	Units	Recover%	Limits%	File
Mercury	0.0201	0.02	mg/kg	100	90.0 - 110	116942046

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Mercury	0.00532	0.005	mg/kg	106	90.0 - 110	116942045

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Mercury	684508	0.00894	0.00894	0.010	78.0 - 106	89.4	89.4	mg/kg	0	20.0
	684665	0.00907	0.00885	0.010	78.0 - 106	90.7	88.5	mg/kg	2.46	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Mercury	1528192	0.873	0.789	0.0115	0.862	70.1 - 110	88.9	80.2	mg/kg	10.3	25.0
	1528195	0.742	0.704	0.0056	0.900	70.1 - 110	84.9	80.6	mg/kg	5.30	25.0
	1528710	0.812	0.859	0.128	0.924	70.1 - 110	77.0	82.3	mg/kg	6.64	25.0

Analytical Set **684952** **EPA 6010C**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Total Iron	684479	ND	0.0035	0.025	mg/Kg	116944009
	684461	ND	0.0035	0.025	mg/Kg	116944028

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Total Iron	2.51	2.50	mg/Kg	100	90.0 - 110	116944008
	2.56	2.50	mg/Kg	102	90.0 - 110	116944014
	2.54	2.50	mg/Kg	102	90.0 - 110	116944025
	2.58	2.50	mg/Kg	103	90.0 - 110	116944035
	2.61	2.50	mg/Kg	104	90.0 - 110	116944046
	2.58	2.50	mg/Kg	103	90.0 - 110	116944057

Dir. SPKD

Parameter	Sample	DSPK	DSPKD	UNK	Known	Limits%	DSPK%	DSPKD%	Units	RPD	Limit%
Total Iron	1528165	17900	18400	19600	1920	80.0 - 120 * *	0 *	0 *	mg/Kg	2.75	25.0
	1528173	21700	23000	24900	1580	80.0 - 120 * *	0 *	0 *	mg/Kg	5.82	25.0
	1528192	28800	28400	25600	2000	80.0 - 120 * *	160 *	140 *	mg/Kg	1.40	25.0

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Direct SPK

Parameter	Sample	DSPK	UNK	Known	Limits%	DSPK%	Units	
Total Iron	1528165	17900	19600	1920	80.0 - 120	0 *	mg/Kg	25.0
	1528173	21700	24900	1580	80.0 - 120	0 *	mg/Kg	25.0
	1528192	28800	25600	2000	80.0 - 120	160 *	mg/Kg	25.0

ICL

Parameter	Reading	Known	Units	Recover%	Limits%	File
Total Iron	4.95	5.00	mg/Kg	99.0	95.0 - 105	116944003

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Total Iron	2.50	2.50	mg/Kg	100	90.0 - 110	116944007

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Total Iron	684479	2.52	2.53	2.50	83.5 - 121	101	101	mg/Kg	0.396	25.0
	684461	2.19	2.32	2.50	83.5 - 121	87.6	92.8	mg/Kg	5.76	25.0

LDR

Parameter	Reading	Known	Units	Recover%	Limits%	File
Total Iron	39.6	40.0	mg/Kg	99.0	90.0 - 110	116944005

Analytical Set **685053** **EPA 6020A**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Antimony, Total	684913	ND	0.000806	0.001	mg/kg	116945954
Arsenic, Total	684913	ND	0.000492	0.002	mg/kg	116945954
Barium	684913	ND	0.000369	0.001	mg/kg	116945954
Beryllium, Total	684913	ND	0.0000769	0.001	mg/kg	116945954
Cadmium, Total	684913	ND	0.000223	0.001	mg/kg	116945954
Chromium, Total	684913	ND	0.000409	0.001	mg/kg	116945954
Cobalt	684913	ND	0.0000378	0.001	mg/kg	116945954
Copper, Total	684913	ND	0.000618	0.001	mg/kg	116945954
Lead, Total	684913	ND	0.0000963	0.001	mg/kg	116945954
Manganese, Total	684913	0.000234	0.000173	0.001	mg/kg	116945954
Molybdenum	684913	ND	0.000287	0.003	mg/kg	116945954
Nickel, Total	684913	ND	0.000336	0.001	mg/kg	116945954
Selenium, Total	684913	ND	0.000835	0.003	mg/kg	116945954
Silver, Total	684913	ND	0.000113	0.001	mg/kg	116945954
Thallium, Total	684913	ND	0.000108	0.001	mg/kg	116945954
Uranium	684913	ND	0.0000602	0.001	mg/kg	116945954
Vanadium	684913	ND	0.000605	0.001	mg/kg	116945954
Zinc, Total	684913	0.000907	0.000432	0.005	mg/kg	116945954

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Antimony, Total	0.0478	0.05	mg/kg	95.6	90.0 - 110	116945953
	0.0487	0.05	mg/kg	97.4	90.0 - 110	116945963
	0.0488	0.05	mg/kg	97.6	90.0 - 110	116945973
Arsenic, Total	0.0479	0.05	mg/kg	95.8	90.0 - 110	116945953
	0.0489	0.05	mg/kg	97.8	90.0 - 110	116945963
	0.0496	0.05	mg/kg	99.2	90.0 - 110	116945973
Barium	0.0479	0.05	mg/kg	95.8	90.0 - 110	116945953

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CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Barium	0.0488	0.05	mg/kg	97.6	90.0 - 110	116945963
	0.0487	0.05	mg/kg	97.4	90.0 - 110	116945973
Beryllium, Total	0.0465	0.05	mg/kg	93.0	90.0 - 110	116945953
	0.0478	0.05	mg/kg	95.6	90.0 - 110	116945963
	0.0476	0.05	mg/kg	95.2	90.0 - 110	116945973
Cadmium, Total	0.0487	0.05	mg/kg	97.4	90.0 - 110	116945953
	0.0481	0.05	mg/kg	96.2	90.0 - 110	116945963
	0.0487	0.05	mg/kg	97.4	90.0 - 110	116945973
Chromium, Total	0.0492	0.05	mg/kg	98.4	90.0 - 110	116945953
	0.0493	0.05	mg/kg	98.6	90.0 - 110	116945963
	0.0496	0.05	mg/kg	99.2	90.0 - 110	116945973
Cobalt	0.0491	0.05	mg/kg	98.2	90.0 - 110	116945953
	0.0494	0.05	mg/kg	98.8	90.0 - 110	116945963
	0.0497	0.05	mg/kg	99.4	90.0 - 110	116945973
Copper, Total	0.0481	0.05	mg/kg	96.2	90.0 - 110	116945953
	0.0487	0.05	mg/kg	97.4	90.0 - 110	116945963
	0.0494	0.05	mg/kg	98.8	90.0 - 110	116945973
Lead, Total	0.0494	0.05	mg/kg	98.8	90.0 - 110	116945953
	0.0487	0.05	mg/kg	97.4	90.0 - 110	116945963
	0.0485	0.05	mg/kg	97.0	90.0 - 110	116945973
Manganese, Total	0.0499	0.05	mg/kg	99.8	90.0 - 110	116945953
	0.050	0.05	mg/kg	100	90.0 - 110	116945963
	0.0502	0.05	mg/kg	100	90.0 - 110	116945973
Molybdenum	0.0471	0.05	mg/kg	94.2	90.0 - 110	116945953
	0.0484	0.05	mg/kg	96.8	90.0 - 110	116945963
	0.048	0.05	mg/kg	96.0	90.0 - 110	116945973
Nickel, Total	0.0491	0.05	mg/kg	98.2	90.0 - 110	116945953
	0.0494	0.05	mg/kg	98.8	90.0 - 110	116945963
	0.0495	0.05	mg/kg	99.0	90.0 - 110	116945973
Selenium, Total	0.0486	0.05	mg/kg	97.2	90.0 - 110	116945953
	0.0508	0.05	mg/kg	102	90.0 - 110	116945963
	0.050	0.05	mg/kg	100	90.0 - 110	116945973
Silver, Total	0.049	0.05	mg/kg	98.0	90.0 - 110	116945953
	0.0487	0.05	mg/kg	97.4	90.0 - 110	116945963
	0.0485	0.05	mg/kg	97.0	90.0 - 110	116945973
Thallium, Total	0.0492	0.05	mg/kg	98.4	90.0 - 110	116945953
	0.0485	0.05	mg/kg	97.0	90.0 - 110	116945963
	0.0485	0.05	mg/kg	97.0	90.0 - 110	116945973
Uranium	0.0488	0.05	mg/kg	97.6	90.0 - 110	116945953
	0.0481	0.05	mg/kg	96.2	90.0 - 110	116945963
	0.0485	0.05	mg/kg	97.0	90.0 - 110	116945973
Vanadium	0.0492	0.05	mg/kg	98.4	90.0 - 110	116945953
	0.0495	0.05	mg/kg	99.0	90.0 - 110	116945963
	0.0496	0.05	mg/kg	99.2	90.0 - 110	116945973
Zinc, Total	0.049	0.05	mg/kg	98.0	90.0 - 110	116945953
	0.0495	0.05	mg/kg	99.0	90.0 - 110	116945963
	0.0497	0.05	mg/kg	99.4	90.0 - 110	116945973

Dir. SPKD

Parameter	Sample	DSPK	DSPKD	UNK	Known	Limits%	DSPK%	DSPKD%	Units	RPD	Limit%

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Dir. SPKD

Parameter	Sample	DSPK	DSPKD	UNK	Known	Limits%	DSPK%	DSPKD%	Units	RPD	Limit%
Arsenic, Total	1528192	395	332	3.10	379	80.0 - 120	103	86.8	mg/kg	17.3	20.0

Direct SPK

Parameter	Sample	DSPK	UNK	Known	Limits%	DSPK%	Units	
Arsenic, Total	1528192	395	3.10	379	80.0 - 120	103	mg/kg	20.0

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Antimony, Total	0.051	0.05	mg/kg	102	90.0 - 110	116945937
Arsenic, Total	0.0514	0.05	mg/kg	103	90.0 - 110	116945937
Barium	0.0511	0.05	mg/kg	102	90.0 - 110	116945937
Beryllium, Total	0.0503	0.05	mg/kg	101	90.0 - 110	116945937
Cadmium, Total	0.0502	0.05	mg/kg	100	90.0 - 110	116945937
Chromium, Total	0.0517	0.05	mg/kg	103	90.0 - 110	116945937
Cobalt	0.0516	0.05	mg/kg	103	90.0 - 110	116945937
Copper, Total	0.0511	0.05	mg/kg	102	90.0 - 110	116945937
Lead, Total	0.0513	0.05	mg/kg	103	90.0 - 110	116945937
Manganese, Total	0.0517	0.05	mg/kg	103	90.0 - 110	116945937
Molybdenum	0.0505	0.05	mg/kg	101	90.0 - 110	116945937
Nickel, Total	0.0522	0.05	mg/kg	104	90.0 - 110	116945937
Selenium, Total	0.0519	0.05	mg/kg	104	90.0 - 110	116945937
Silver, Total	0.0516	0.05	mg/kg	103	90.0 - 110	116945937
Thallium, Total	0.0512	0.05	mg/kg	102	90.0 - 110	116945937
Uranium	0.0502	0.05	mg/kg	100	90.0 - 110	116945937
Vanadium	0.0514	0.05	mg/kg	103	90.0 - 110	116945937
Zinc, Total	0.052	0.05	mg/kg	104	90.0 - 110	116945937

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Antimony, Total	684913	2.39	2.38	2.50	89.2 - 110	95.6	95.2	mg/kg	0.419	20.0
Arsenic, Total	684913	2.47	2.42	2.50	87.9 - 110	98.8	96.8	mg/kg	2.04	20.0
Barium	684913	2.44	2.41	2.50	88.6 - 110	97.6	96.4	mg/kg	1.24	20.0
Beryllium, Total	684913	0.950	0.923	1.00	81.5 - 114	95.0	92.3	mg/kg	2.88	20.0
Cadmium, Total	684913	1.25	1.21	1.25	89.2 - 109	100	96.8	mg/kg	3.25	20.0
Chromium, Total	684913	2.43	2.36	2.50	84.7 - 112	97.2	94.4	mg/kg	2.92	20.0
Cobalt	684913	2.46	2.38	2.50	83.8 - 111	98.4	95.2	mg/kg	3.31	20.0
Copper, Total	684913	2.38	2.38	2.50	85.4 - 109	95.2	95.2	mg/kg	0	20.0
Lead, Total	684913	2.47	2.38	2.50	86.4 - 111	98.8	95.2	mg/kg	3.71	20.0
Manganese, Total	684913	2.53	2.43	2.50	84.6 - 113	101	97.2	mg/kg	4.03	20.0
Molybdenum	684913	2.48	2.44	2.50	90.1 - 116	99.2	97.6	mg/kg	1.63	20.0
Nickel, Total	684913	2.45	2.39	2.50	82.4 - 110	98.0	95.6	mg/kg	2.48	20.0
Selenium, Total	684913	2.46	2.39	2.50	83.6 - 111	98.4	95.6	mg/kg	2.89	20.0
Silver, Total	684913	0.482	0.472	0.500	87.0 - 113	96.4	94.4	mg/kg	2.10	20.0
Thallium, Total	684913	2.36	2.27	2.50	79.7 - 105	94.4	90.8	mg/kg	3.89	20.0
Uranium	684913	2.41	2.34	2.50	80.0 - 120	96.4	93.6	mg/kg	2.95	20.0
Vanadium	684913	2.41	2.36	2.50	86.6 - 110	96.4	94.4	mg/kg	2.10	20.0
Zinc, Total	684913	2.44	2.38	2.50	82.9 - 113	97.6	95.2	mg/kg	2.49	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Antimony, Total	1528192	50.5	49.4	0.112	74.0	3.01 - 158	63.7	62.3	mg/kg	2.21	20.0

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MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Arsenic, Total	1528192	61.5	57.5	2.61	74.0	71.2 - 118	74.5	69.4 *	mg/kg	7.03	20.0
Barium	1528192	86.9	81.8	10.9	74.0	0.100 - 235	96.1	89.6	mg/kg	6.94	20.0
Beryllium, Total	1528192	29.6	27.4	0.209	29.6	78.4 - 117	93.0	86.0	mg/kg	7.78	20.0
Cadmium, Total	1528192	38.5	35.5	0.0361	37.0	89.0 - 109	97.1	89.6	mg/kg	8.12	20.0
Chromium, Total	1528192	69.2	64.6	3.49	74.0	62.8 - 120	83.1	77.3	mg/kg	7.25	20.0
Cobalt	1528192	78.5	73.5	12.8	74.0	69.4 - 115	83.1	76.7	mg/kg	7.91	20.0
Copper, Total	1528192	77.7	71.8	14.1	74.0	50.0 - 125	80.4	72.9	mg/kg	9.73	20.0
Lead, Total	1528192	77.5	71.9	2.97	74.0	51.4 - 133	94.2	87.1	mg/kg	7.81	20.0
Manganese, Total	1528192	464	455	414	74.0	27.2 - 154	63.2	51.8	mg/kg	19.8	20.0
Molybdenum	1528192	64.4	60.0	0.316	74.0	66.9 - 133	81.0	75.5	mg/kg	7.11	20.0
Nickel, Total	1528192	70.4	65.9	4.67	74.0	62.7 - 113	83.1	77.4	mg/kg	7.09	20.0
Selenium, Total	1528192	56.0	51.7	0.201	74.0	64.2 - 118	70.5	65.1	mg/kg	8.02	20.0
Silver, Total	1528192	14.9	13.7	0.019	14.8	80.5 - 114	94.2	86.6	mg/kg	8.40	20.0
Thallium, Total	1528192	70.9	66.4	0.0588	74.0	71.8 - 103	89.6	83.9	mg/kg	6.56	20.0
Uranium	1528192	78.0	73.7	0.242	74.0	80.0 - 120	98.3	92.9	mg/kg	5.69	20.0
Vanadium	1528192	133	124	72.1	74.0	47.8 - 141	77.0	65.6	mg/kg	16.0	20.0
Zinc, Total	1528192	99.6	93.7	35.1	74.0	48.0 - 127	81.5	74.1	mg/kg	9.59	20.0

Analytical Set **685064** **EPA 6010C**

Duplicate

Parameter	Sample	Result	Unknown	Unit	RPD		Limit%
Boron		0.0338	ND	mg/kg		*	15.0
Phosphorus		0.040	ND	mg/kg		*	15.0

Analytical Set **685065** **EPA 6010C**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units		File
Boron	684913	0.0242	0.00876	0.100	mg/kg	*	116946275
Phosphorus	684913	0.0436	0.016	0.100	mg/kg	*	116946275
Tin, Total	684913	0.0095	0.00255	0.050	mg/kg	*	116946275

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Boron	5.05	5.00	mg/kg	101	90.0 - 110	116946274
	5.13	5.00	mg/kg	103	90.0 - 110	116946282
Phosphorus	10.0	10.0	mg/kg	100	90.0 - 110	116946274
	9.71	10.0	mg/kg	97.1	90.0 - 110	116946282
Tin, Total	0.493	0.500	mg/kg	98.6	90.0 - 110	116946274
	0.494	0.500	mg/kg	98.8	90.0 - 110	116946282

ICL

Parameter	Reading	Known	Units	Recover%	Limits%	File
Boron	9.95	10.0	mg/kg	99.5	95.0 - 105	116946271
Phosphorus	25.1	25.0	mg/kg	100	95.0 - 105	116946271
Tin, Total	1.01	1.00	mg/kg	101	95.0 - 105	116946271

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Boron	5.04	5.00	mg/kg	101	90.0 - 110	116946272
Phosphorus	10.1	10.0	mg/kg	101	90.0 - 110	116946272
Tin, Total	0.493	0.500	mg/kg	98.6	90.0 - 110	116946272

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LCS Dup

Parameter	PrepSet	LCS	LCSD		Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Boron	684913	5.05	4.98		5.00	85.5 - 112	101	99.6	mg/kg	1.40	25.0
Phosphorus	684913	19.5	19.0		20.0	82.9 - 117	97.5	95.0	mg/kg	2.60	25.0
Tin, Total	684913	2.29	2.26		2.50	80.5 - 108	91.6	90.4	mg/kg	1.32	25.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Boron	1528192	165	155	13.7	148	37.2 - 140	95.8	89.4	mg/kg	6.84	25.0
Phosphorus	1528192	700	669	163	592	9.75 - 188	84.8	79.9	mg/kg	5.94	25.0
Tin, Total	1528192	64.5	60.8	ND	74.0	79.3 - 107	81.5	76.9 *	mg/kg	5.91	25.0

Analytical Set **685068** **EPA 6010C**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units		File
Total Iron	684913	0.0114	0.0035	0.025	mg/Kg	*	116946338
	684912	ND	0.0035	0.025	mg/Kg		116946346

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Total Iron	2.68	2.50	mg/Kg	107	90.0 - 110	116946336
	2.64	2.50	mg/Kg	106	90.0 - 110	116946348
	2.64	2.50	mg/Kg	106	90.0 - 110	116946358

Dir. SPKD

Parameter	Sample	DSPK	DSPKD	UNK	Known	Limits%	DSPK%	DSPKD%	Units	RPD	Limit%
Total Iron	1528165	18900	18900	17500	2210	80.0 - 120 * *	63.3 *	63.3 *	mg/Kg	0	25.0
	1528173	24400	24600	23600	1370	80.0 - 120 * *	58.4 *	73.0 *	mg/Kg	0.816	25.0
	1528192	29800	30000	29100	1520	80.0 - 120 * *	46.1 *	59.2 *	mg/Kg	0.669	25.0

Direct SPK

Parameter	Sample	DSPK	UNK	Known	Limits%	DSPK%	Units	
Total Iron	1528165	18900	17500	2210	80.0 - 120	63.3 *	mg/Kg	25.0
	1528173	24400	23600	1370	80.0 - 120	58.4 *	mg/Kg	25.0
	1528192	29800	29100	1520	80.0 - 120	46.1 *	mg/Kg	25.0

ICL

Parameter	Reading	Known	Units	Recover%	Limits%	File
Total Iron	4.93	5.00	mg/Kg	98.6	95.0 - 105	116946329

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Total Iron	2.51	2.50	mg/Kg	100	90.0 - 110	116946333

LCS Dup

Parameter	PrepSet	LCS	LCSD		Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Total Iron	684913	2.43	2.40		2.50	83.5 - 121	97.2	96.0	mg/Kg	1.24	25.0
	684912	2.47	2.50		2.50	83.5 - 121	98.8	100	mg/Kg	1.21	25.0

LDR

Parameter	Reading	Known	Units	Recover%	Limits%	File
Total Iron	39.3	40.0	mg/Kg	98.2	90.0 - 110	116946331

Analytical Set **685089** **EPA 6020A**

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Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Cadmium, Total	684912	ND	0.000187	0.001	mg/kg	116947035
Manganese, Total	684912	ND	0.000139	0.001	mg/kg	116947035
Uranium	684912	ND	0.00002030	0.001	mg/kg	116947035

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Cadmium, Total	0.0497	0.05	mg/kg	99.4	90.0 - 110	116947034
	0.0501	0.05	mg/kg	100	90.0 - 110	116947045
	0.0483	0.05	mg/kg	96.6	90.0 - 110	116947056
	0.049	0.05	mg/kg	98.0	90.0 - 110	116947067
	0.0486	0.05	mg/kg	97.2	90.0 - 110	116947075
Manganese, Total	0.0499	0.05	mg/kg	99.8	90.0 - 110	116947034
	0.0507	0.05	mg/kg	101	90.0 - 110	116947045
	0.0504	0.05	mg/kg	101	90.0 - 110	116947056
	0.0506	0.05	mg/kg	101	90.0 - 110	116947067
	0.0499	0.05	mg/kg	99.8	90.0 - 110	116947075
Uranium	0.0507	0.05	mg/kg	101	90.0 - 110	116947034
	0.0503	0.05	mg/kg	101	90.0 - 110	116947045
	0.0492	0.05	mg/kg	98.4	90.0 - 110	116947056
	0.0492	0.05	mg/kg	98.4	90.0 - 110	116947067
	0.0495	0.05	mg/kg	99.0	90.0 - 110	116947075

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Cadmium, Total	0.0512	0.05	mg/kg	102	90.0 - 110	116947030
Manganese, Total	0.0522	0.05	mg/kg	104	90.0 - 110	116947030
Uranium	0.051	0.05	mg/kg	102	90.0 - 110	116947030

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Cadmium, Total	684912	1.24	1.24	1.25	89.2 - 109	99.2	99.2	mg/kg	0	20.0
Manganese, Total	684912	2.47	2.48	2.50	84.6 - 113	98.8	99.2	mg/kg	0.404	20.0
Uranium	684912	2.36	2.39	2.50	80.0 - 120	94.4	95.6	mg/kg	1.26	20.0

LDR

Parameter	Reading	Known	Units	Recover%	Limits%	File
Cadmium, Total	10.0	10	mg/kg	100	90.0 - 110	116947033
Manganese, Total	10.0	10	mg/kg	100	90.0 - 110	116947033
Uranium	ND	10	mg/kg	0	90.0 - 110	116947033

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Cadmium, Total	1528165	52.1	50.0	0.0945	53.0	89.0 - 109	94.0	90.2	mg/kg	4.12	20.0
Manganese, Total	1528165	642	619	532	106	27.2 - 154	99.1	78.4	mg/kg	23.4 *	20.0
Uranium	1528165	111	106	0.661	106	80.0 - 120	99.4	94.9	mg/kg	4.64	20.0
Cadmium, Total	1528173	52.5	54.2	0.102	56.8	89.0 - 109	95.6	98.7	mg/kg	3.19	20.0
Manganese, Total	1528173	689	675	541	114	27.2 - 154	135	122	mg/kg	9.93	20.0
Uranium	1528173	110	114	0.851	114	80.0 - 120	99.2	103	mg/kg	3.60	20.0

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100% Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification; ICV - Initial Calibration Verification; LDR - Linear Dynamic Range Standard

Chain of Custody

Matrix: Geological Core Samples/Ocean Seabed Sediment BOX 1/2

Sampler Number		Code	Description	Quantity
1528165	1	5635	Seabed Sediment	1 Bag
173	2	5636	Seabed Sediment	1 Bag
174	3	5637	Seabed Sediment	1 Bag
175	4	5829	Seabed Sediment	1 Bag
176	5	5838	Seabed Sediment	1 Bag
177	6	5839	Seabed Sediment	1 Bag
178	7	5640	Seabed Sediment	1 Bag
179	8	5641	Seabed Sediment	1 Bag
180	9	5642	Seabed Sediment	1 Bag
181	10	5643	Seabed Sediment	1 Bag
182	11	5830	Seabed Sediment	1 Bag
183	12	5831	Seabed Sediment	1 Bag
184	13	5832	Seabed Sediment	1 Bag

Date	Time	Relinquished		Received	
		Printed Name: Lisbia Teresa Jarquin	*Affiliation:* Eco Ingenieros Consultant	*Printed Name:* HORACIO LAPIOS	*Affiliation:* EDP Project Manager
21 Sept 2016	8:30am		ECO INGENIEROS S.A. DE C.V.		ENERGIA DEL PACIFICO, LTDA. DE C.V.
		Printed Name Affiliation client		*Printed Name:* DHL	*Affiliation:*
9/27/16	1455	DHL	321926 7785	Kathy Tarver	Ana-Lab

Method of Shipment ☐ UPS ☐ BUS ☐ Fed Ex ☐ Lone Star ☑ Hand Deliver ☑ Other

005057 ☐ CF
005661 ☑ CF 0.0
21.2°C 003688 ☐ CF

CF ☐ 003688
CF ☐ 005661
CF ☐ 005057

Chain of Custody

Matrix: Geological Core Samples/Ocean Seabed Sediment *BOX 2/2*

Sampler Number		Code	Description	Quantity
1528 185	14	5833	Seabed Sediment	1 Bag
186	15	5644	Seabed Sediment	1 Bag
187	16	5786	Seabed Sediment	1 Bag
188	17	5787	Seabed Sediment	1 Bag
189	18	5788	Seabed Sediment	1 Bag
190	19	5789	Seabed Sediment	1 Bag
191	20	5645	Seabed Sediment	1 Bag
192	21	5646	Seabed Sediment	1 Bag
193	22	5790	Seabed Sediment	1 Bag
194	23	5834	Seabed Sediment	1 Bag
195	24	5791	Seabed Sediment	1 Bag
196	25	5792	Seabed Sediment	1 Bag
197	26	BH14 1.25-1.85	Seabed Geologic Core	1 Bag
198	27	BH14 2.35-2.40	Seabed Geologic Core	1 Bag
199	28	BH14 4.00-5.00	Seabed Geologic Core	1 Bag

Date	Time	Relinquished		Received	
		Printed Name: Lisbia Teresa Jarquin	Affiliation: Eco Ingenieros Consultant	Printed Name: HORACIO LARIOS	Affiliation: EDP Project Manager
21/Sept 2016	8:30am		ECO INGENIEROS S.A. DE C.V.		ENERGIA DEL PACIFICO, LTDA. DE C.V.
		Printed Name Affiliation Client		Printed Name: DHL	Affiliation:
9/27/16	1455	DHL	321926 7785	Kathy Tarver	Ana-Lab

Method of Shipment ☐ UPS ☐ BUS ☐ Fed Ex ☐ Lone Star ☑ Hand Deliver ☑ Other

20.9°C 005057 ☐ CF____
005661 ☑ CF 0.0
003688 ☐ CF____

ECO INGENIEROS
LÍDERES EN CONSULTORÍA AMBIENTAL

San salvador, september 21st 2016.

Mr. Horacio Larios
Project Manager
"LNG To Power Project"
ENERGÍA DEL PACIFICO

Dear Sir:

Receive a warm greeting from our behalf. The purpose of this letter is to accompany the submission of 28 Geologic Core Samples / Ocean Seabed Sediment Samples, returned from the laboratory by your request, corresponding to "LNG TO POWER" project, located in the municipality of Acajutla, Sonsonate, Republic of El Salvador.

Thanking you in advance for your attention.

Sincerely,

ECO INGENIEROS S.A. DE C.V.

LISBIA TERESA JARQUÍN
PROJECT CONSULTANT
"ECO INGENIEROS S.A. DE C.V."

Paseo General Escalón, No.101 Avenida Norte, Centro Comercial Campestre, Col. Escalón, San Salvador,
PBX 2264-0211
E-mail: l.jarquin@eco-ingenieros.com

Energía del Pacífico

September 21th, 2016

To Whom It May Concern.

This shipment contains 28 Geologic Core Samples spread over 2 boxes which were retrieved offshore in 2 to 18 meters of water, in the vicinity of the Port of Acajutla, located in the Sonsonate Department. The area from which the samples were retrieved is approximately bounded on the south by the Port of Acajutla's piers and extends approximately 3.5 kilometers to the north. The area is bounded to the east by the coastline and extends approximately 2.5 kilometers to the west.

These samples are being shipped to the United States for the purposes of laboratory testing as required by the Energía del Pacífico LNG-To-Power infrastructure project.

Thank you,

Horacio Larios.
Project Manager.
Energía del Pacífico, Ltda. de C.V.

Edificio Avante, Oficina 709, Calle Llama del Bosque,
Antiguo Cuscatlán, La Libertad, El Salvador.
(503) 2133-0700

Energía del Pacífico

Factura

Factura No: 20160921

Fecha
21-sep-16

Remitente	**Destinatario**
Energia del Pacifico Edificio Avante, Oficina 709 Calle Llama del Bosque Antiguo Cuscatlan, La Libertad El Salvador	Ana-Lab Corporation 2600 Dudley Rd. Kilgore, Texas 75663 Phone: 903 984-0551
	Contacto Skeeter Ludwick

Unidades	Descripción del Producto	Unidad Medida	Valor Unit.	Sub Total US$
1	*Bandeja plástica para transportar material de lecho marino (Ocean seabed sediment samples)* Incluye : 13 Muestras de lecho marino.	1	$ 100.00	$ 100.00
1	*Bandeja plástica para transportar material de lecho marino (Ocean seabed sediment samples)* Incluye : 15 Muestras de lecho marino.	1	$ 100.00	$ 100.00
TOTAL				TOTAL $200.00

Incoterm: FOB

Pais de Origen: EL SALVADOR

Firma y Sello del Remitente

Observaciones:
Enviada para análisis de laboratorio

757120 CoC Print Group 001 of 002

Recipient's Copy Piece 1 of 1

EXPRESS WORLDWIDE WPX DHL

2016-09-22 WSI 3.20.00 / *90-1411*

From : ENERGIA DEL PACIFICO LTDA. DE C.V.
Cesar Galdamez
Edificio Avante, Oficina 709
Calle Llama del Bosque, Antiguo
Cuscatlan, La Libertad
SAN SALVADOR AVENIDA BERNAL SAS
El Salvador
Contact: Ph : 50325552741

Origin: **SAL**

To : ANA LAB CORPORATION
Skeeter Ludwick
2600 Dudley Rd Kilgore
75663 KILGORE TX
United States Of America
Contact:
Ph :9039840551

US-TXK-TXK

C

Day Time

Pce/Shpt Weight Piece
12.00/24.0 kgs 2 / 2

Contents:Bandeja plástica para transportar material de lecho marino (Ocean seabed sediment samples)

WAYBILL 32 1926 7785

(2L)US75663+48000001

(J) JD01 4600 0036 5954 9186

2112

(Para usarse en Texas)

DHL EXPRESS

TERMS AND CONDITIONS OF CARRIAGE

("Terms and Conditions")

El presente es un resumen de nuestros principales términos y condiciones. Los términos y condiciones completos se exhiben y están a disposición en los Centros de Servicio de DHL.

ACERCA DE NUESTROS TERMINOS Y CONDICIONES

1. Nuestro Contrato con Usted
Estos términos y condiciones, conjuntamente con aquellos que están a disposición en nuestros Centros de Servicio, constituyen todos los términos del contrato suscrito entre usted como para cualquier otra persona que tenga interés sobre el envío. Nuestros términos y condiciones también protegen a cualquier persona que contratamos para recolectar, transportar o entregar su envío. Ningún empleado de DHL o persona alguna están autorizados para modificar nuestro términos y condiciones o hacer ofrecimientos en nuestro nombre.

2. ¿Qué significa 'Envío'
Envío' significa todos los documentos o paquetes que viajan bajo una guía aérea El Remitente certifica que los detalles del envío son completos y exactos.

3. Envios Internacionales
Usted nos contrata como representante para efectuar desaduanizaciones e ingresos y certifica que DHL es el destinatario, con el único fin de designar un Agente de Aduanas para que realice la desaduanización e ingreso.

4. Envíos que no aceptamos
No aceptamos como envío nada que
- esté restringido por IATA (International Air Transport Association)o por ICAO (International Civil Aviation Organization
- decidamos no poder transportarlo en forma segura o legal. En nuestros Centros de Servicio usted podrá obtener información completa sobre los envíos que actualmente no aceptamos. Usted certifica que su envío no está restringido por nada de lo antes citado.

5. Inspección y Cobro
Usted conviene en que nosotros podemos abrir e inspeccionar su envío por cualquier motivo y en todo momento. Nuestro precio se fija en base al peso, real o volumétrico lo que resulte superior.

6. Si usted nos solicita facturar al destinatario o a un tercero
Usted conviene en pagar todo los costos de embarque, así como los aranceles y tributos correspondientes al envío, en caso el destinatario o tercero no lo haga.

7. Reclamos:
Si desea hacer un reclamo por un envío dañado o perdido (incluyendo entrega errada):
- presente un reclamo por escrito - su reclamo debe ser recibido por nosotros dentro de 30 días, contados desde la fecha en que aceptamos su envío.
- sírvase enviar o presentar su reclamo a la oficina de DHL más cercana a usted.

POR LO QUE DEBEMOS RESPONDER

8. Alcance de Nuestra Responsabilidad
[Con sujeción a las condiciones 11 y 13). En lo que respecta a cualquier envío, nuestra responsabilidad por toda pérdida o daño, sinimportar la causa del mismo,
se limitará a lo. que resulte menor de las siguientes tres cantidades:
- U.S. $100; ó - el monto real de cualquier pérdida o daño sufrido por usted; ó - el valor real de envío. Esto no incluye el valor comercial o especial que pudiese tener para usted o cualquier otra persona.

9. Qué queremos decir con 'valor real
Es el valor menor de los siguientes montos, determinado en el momento y lugar que aceptamos el envío.
Documentos
- el costo que represente reparar o sustituir el documento; ó
- el costo que represente reconstruir o reconstituir el documento.
Paquetes
- el costo que represente reparar o sustituir el paquete; ó
- el valor de reventa o justo del mercado para el paquete. El valor real de un paquete no puede ser mayor al costo original pagado por usted, más un 10 por ciento.

Proteccion del Valor del Envio

10. Recomendamos que usted adquiera un protección para el envío
Podemos proporcionarle una protección por hasta US$5 millones, pero sírvase observar que nuestro protección no cubre daños emergentes ni tampoco pérdidas o daños causados por demoras en tranporte. Si usted omite marcar SI en la casilla Protección del Envío, que consta al anverso de este guía aéreas, asume todos los riesgos de pérdida o daño.

POR LO QUE NO DEBEMOS RESPONDER

11. Envios Demorados
Haremos todo lo posible por entregar su envío de acuerdo a nuestros horarios normales de reparto, pero los mismos no son garantizados y no forman parte de este contrato. No somos responsables por las demoras.

12. Circunstancias Fuera de Nuestro Control
No somos responsables si se pierde, daña o entrega erróneamente un envío debido a circunstancias fuera de nuestro control, lo cual incluye:
- 'Desastres Naturales', como por ejemplo, terremoto, ciclón, huracán o inundación.
- 'Fuerza Mayor', como por ejemplo, guerra, accidente aviatorio o embargo.
- cualquier defecto o característica que tenga que ver con la naturaleza del envío, aún si hubiera sido de nuestro conocimiento cuando lo aceptamos.
- cualquier acción u omisión de alguna persona ajena a DHL, como por ejemplo:
- del remitente del envoi
- del destinatario
- de una tercera parte interesada
- de la Aduana u otros funcionarios del gobierno
- del Servicio Postal, de otro transportador o de un tercero a quien contratamos para dar servicio a los lugares que no atendemos directamente. No somos responsables, aunque el remitente no haya solicitado o tenido conocimiento sobre un convenio con terceros. Tampoco respondemos por daños eléctricos o magnéticos ni por borraduras de imágenes electrónicas, fotográficas o grabaciones.

13. Daños Emergentes
No somos responsables por lo siguiente, ya sea que surja por contrato o cualquier otra forma de acción civil, incluyendo negligencia y aunque haya sido nuestra culpa.
-daños emergentes o especiales, o pérdida.
-otras pérdidas indirectas.
Nivelaciones otros contratos. Los daños emergentes o pérdidas incluyen pero no se limitan a ingresos perdidos, utilidades, intereses o mercados y uso del contenido.

14. CONVENIO DE VARSOVIA
Si el transporte de un envío comprende un destino final o parada en un país distinto al de salida, se podrá aplicar el Convenio de Varsovia. Para efectos de este contrato rige ese Convenio y en la mayoría de los casos, adicionalmente limita nuestra responsabilidad por pérdidas o o daños a ese envío.

757120 CoC Print Group 001 of 002

Recipient's Copy Piece 1 of 1

EXPRESS WORLDWIDE WPX DHL

2016-09-22 WSI 3.20.00 / "99-1411"

From : ENERGIA DEL PACIFICO LTDA. DE C.V.
Cesar Galdamez
Edificio Avante, Oficina 709
Calle Llama del Bosque, Antiguo
Cuscatlan, La Libertad
SAN SALVADOR AVENIDA BERNAL SAS
El Salvador

Origin
SAL

Contact: Ph : 50325552741

To : ANA LAB CORPORATION
Skeeter Ludwick
2600 Dudley Rd Kilgore,
75663 KILGORE TX
United States Of America

Contact:
Ph :9039840551

209C

US-TXK-TXK

C

Day Time

Pce/Shpt Weight Piece
12.00/24.0 kgs **1 / 2**

Contents:Bandeja plástica para transportar material de lecho marino (Ocean seabed sediment samples)

WAYBILL 32 1926 7785

(2L)US75663+48000001

(J) JD01 4600 0036 5954 9185

LOOSE Pieza Suelta

(Favor de doblar aquí)

DHL EXPRESS

TERMS AND CONDITIONS OF CARRIAGE
("Terms and Conditions")

El presente es un resumen de nuestros principales términos y condiciones. Los términos y condiciones completos se exhiben y están a disposición en los Centros de Servicio de DHL.

ACERCA DE NUESTROS TERMINOS Y CONDICIONES

1. ¿Nuestro Contrato con Usted
Estos términos y condiciones, conjuntamente con aquellos que están a disposición en nuestros Centros de Servicio, constituyen todos los términos del contrato suscrito entre usted como para cualquier otra persona que tenga interés sobre el envío. Nuestros términos y condiciones también protegen a cualquier persona que contratemos para recolectar, transportar o entregar su envío. Ningún empleado de DHL o persona alguna están autorizados para modificar nuestro términos y condiciones o hacer ofrecimientos en nuestro nombre.

2. ¿Qué significa 'Envío'
Envío' significa todos los documentos o paquetes que viajan bajo una guía aérea El Remitente certifica que los detalles del envío son completos y exactos.

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- el costo que represente reparar o sustituir el documento; ó
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Paquetes
- el costo que represente reparar o sustituir el paquete; ó
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- del remitente del envoí
- del destinatario
- de una tercera parte interesada
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-otras pérdidas indirectas.
-violación de otros contratos. Los daños emergentes o pérdidas incluyen pero no se limitan a ingresos perdidos, utilidades, intereses o mercados y uso del contenido.

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CHAIN OF CUSTODY

04.11 000002 1529710

FUGRO

Project Name:	ACAJUTLA LNG (02.81160003)	Client:	Energia del Pacifico S.A.
Project Number:	~~04.1015.0240~~ SD	Project Location:	Acajutla, El Salvador
Project Engineer:	~~GOURI MOHAN~~	Sheet	of

No.	Sample Identification: Description \ Boring	Sample No.	Depth ( )	Sample Container (Size/Material)	Sample Type	USDA Regulated Yes or No*	Test Type A	B	C	D	E	F	Remarks
1	BH-6B (Marine BH)	SPT #1	1.1-1.65m	BAG	SOIL								
2													SEE ANALYSIS
3													ON ATTACHED
4													sheets
5													
6													
7													
8													
9													
10													
11													
12													
13													
14	005057 ☐ CF												
15	005661 ☑ CF DLO												
16	003688 ☐ CF												
17													
18													

Relinquished by: Print Name	Signature	Phone No.	Date	Time	Received by: Print Name	Signature	Phone No.
DAVID SACKETT		805 732-7720	21 Sept 16	0845	S. DEGREGORIO		9-21-16 0845

A METALS
B
C
D
E
F

9/29/16 0820 LSO

LSO 23352496

19.4°C

Christi Parker Ana-Lab

DeGregorio, Steve FCL 1528710

From: Skeeter Ludewig <skeeter@ana-lab.com>
Sent: Tuesday, September 27, 2016 1:07 PM
To: DeGregorio, Steve FCL
Subject: C: GCT1 Q: 116691

Bill says to send you this E-mail

Thanks

Skeeter

-------- Forwarded Message --------
Subject:RE: Invenergy / Energia del Pacifico Proyect Sedimentation samples
Date: Fri, 23 Sep 2016 19:31:09 +0000
From: Larios, Horacio <HLarios@invenergyllc.com>
To: DeGregorio, Steve FCL <SDeGregorio@fugro.com>, tvarvel@ana-lab.com <tvarvel@ana-lab.com>, skeeter@ana-lab.com <skeeter@ana-lab.com>
CC: McKinnon, Don <dpmckinnon@dillon.ca>, Wright, Jessica <jwright@dillon.ca>, Rob Willis <rwillis@dillon.ca>, Sackett, Dave FMGI <DSackett@fugro.com>, Mazzini, Felipe <FMazzini@invenergyllc.com>

Hi Again Tracy, Skeeter

1. The tracking information for our sediment samples is as follows:

Track DHL Express Shipments

Here's the fastest way to check the status of your shipment. No need to call Customer Service – our online results give you real-time, detailed progress as your shipment speeds through the DHL network.

Result Summary

Waybill: 3219267785
Departed Facility in PANAMA CITY PANAMA
› Sign up for shipment notifications

Friday, September 23, 2016 at 04:36
Origin Service Area:
› SAN SALVADOR - SAN SALVADOR - EL SALVADOR
Destination Service Area:
› SHREVEPORT, LA - KILGORE - USA

Estimated Delivery:
Tuesday, September 27, 2016
By End of Day
2 Pieces

2. Below is the Standard Metals Analysis Suite we would like to perform/get a quote for and estimated delivery of results from sample arrival.

Standard Metals Analysis Suite: (to include) - this is industry norm here in Canada, considered as a comprehensive suite of metals parameters.
Iron
Antimony
Arsenic
Barium
Berylium
Boron
Cadmium
Chromium (Total)
Cobalt
Copper
Lead
Manganese
Mercury
Molybdenum
Nickel
Phosphorus
Selenium
Silver
Thallium
Tin
Uranium
Vanadium
Zinc

3 Please let me know if I can follow up with you today or first thing Monday.

Thank you

Saludos Cordiales / Best Regards,

Horacio Larios, PE
Desk +1 312.582.1552, +503 2133 0705
Cell +503 7862 3884

This electronic message and all contents contain information which may be privileged, confidential or otherwise protected from disclosure. The information is intended to be for the addressee(s) only. If you are not an addressee, any disclosure, copy, distribution or use of the contents of this message is prohibited. If you have received this electronic message in error, please notify the sender by reply e-mail and destroy the original message and all copies.

This electronic message and all contents contain information which may be privileged, confidential or otherwise protected from disclosure. The information is intended to be for the addressee(s) only. If you are not an addressee, any disclosure, copy, distribution or use of the contents of this message is prohibited. If you have received this electronic message in error, please notify the sender by reply e-mail and destroy the original message and all copies.

From: Larios, Horacio
Sent: Thursday, September 22, 2016 11:53 AM
To: 'DeGregorio, Steve FCL' <SDeGregorio@fugro.com>; 'tvarvel@ana-lab.com' <tvarvel@ana-lab.com>; 'skeeter@ana-lab.com' <skeeter@ana-lab.com>
Cc: McKinnon, Don <dpmckinnon@dillon.ca>; 'Wright, Jessica' <jwright@dillon.ca>; Rob Willis <rwillis@dillon.ca>; 'Sackett, Dave FMGI' <DSackett@fugro.com>; Mazzini, Felipe <FMazzini@invenergyllc.com>; Schroeder, Joel <JSchroeder@invenergyllc.com>; Bettadapur, Chandra <CBettadapur@invenergyllc.com>
Subject: Invenergy / Energia del Pacifico Proyect Sedimentation samples

Hi Tracy,

Thank you for speaking with me this afternoon. I would like to rehash our conversation for the situational awareness of my team as well:

1. We, the Invenergy/EDP team, have shipped 28 marine sediment samples from El Salvador to your lab to the attention of Skeeter Ludwick, (tracking number to follow)

2. In the interest of time, FUGRO will be contracting with you directly and will subsequently invoice Invenergy for metals testing on the samples.

    a. It is my understanding that labs such as yours normally provide "menu's" with pricing on sets of sedimentation metals analysis. Could you kindly forward such pricing and estimated delivery time for my and my environmental consultants (Dillon who are copied on this note), review?

        i. Otherwise we could get on a brief conference call to discuss the project's needs and perhaps a little more background. (We performed metals testing locally on these batches and found above NOAA levels of arsenic, copper and mercury)

    b. I originally thought that we needed 100 grams for each metals test so I sent you everything that I have (what was left over from and initial lab analysis performed in El Salvador). My original thought was that if we deem that we do not have sufficient sample to conduct a "full suite" of testing we could prioritize. But after speaking on the phone with you it sounds like this should not be a problem -- To be confirmed after you take a look at the bags that I sent you).

Kindly let me know if you have any questions or comments

Thank you Tracy,

Saludos Cordiales / Best Regards,

Horacio Larios, PE
Desk +1 312.582.1552, +503 2133 0705
Cell +503 7862 3884

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From: DeGregorio, Steve FCL [mailto:SDeGregorio@fugro.com]
Sent: Thursday, September 22, 2016 5:46 AM
To: Larios, Horacio <HLarios@invenergyllc.com>
Subject: RE: Certificates

Horacio,

Please disregard the last email I sent you. To save time you should send the samples directly to Ana-Lab. It is silly to send the samples to me and then have me forward them to Ana-Lab.

Here is the information you will need.

Send the samples directly to:

Ana-Lab Corporation
2600 Dudley Rd.
Kilgore, Texas 75663
Contact person: Skeeter Ludwick
Phone: 903 984-0551
Fax: 903 984-5914

Please confirm that you received this email and that you will send the samples directly to Ana-Lab.

Regards,

Steve De Gregorio
Analytical Services Manager/Chemist

Fugro Consultants, Inc.
6100 Hillcroft
Houston, TX 77081
Office: 713.369.5400 Direct: 713.778.6836
sdegregorio@fugro.com / www.fugroconsultants.com

From: Larios, Horacio [mailto:HLarios@invenergyllc.com]
Sent: Wednesday, September 21, 2016 2:41 PM
To: Sackett, Dave FMGI <DSackett@fugro.com>
Cc: DeGregorio, Steve FCL <SDeGregorio@fugro.com>; McDonald, Sean FMGI <SMcDonald@fugro.com>; Cesar Galdamez <cgaldamez@energiadelpacifico.com>; José Carlos Melhado <cmelhado@edp.com.sv>
Subject: RE: Certificates

Thank you Dave.

Hi Steve,

I just tried calling you.

I am about to send the samples via DHL or UPS but I wanted to confirm that I should be sending these to the Attendion of Jeff Locke in Houston and to Ana-Lab directly.

Many thanks

Saludos Cordiales / Best Regards,

Horacio Larios, PE
Desk +1 312.582.1552, +503 2133 0705
Cell +503 7862 3884

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From: Sackett, Dave FMGI [mailto:DSackett@fugro.com]
Sent: Wednesday, September 21, 2016 9:39 AM
To: Larios, Horacio <HLarios@invenergyllc.com>
Cc: DeGregorio, Steve FCL <SDeGregorio@fugro.com>; McDonald, Sean FMGI <SMcDonald@fugro.com>
Subject: FW: Certificates

Horacio
As discussed here are the certs for Ana-Lab. Please feel free to contact Steve in our Houston lab to discuss, his contact details are:

Steve De Gregorio
Analytical Services Manager/Chemist

Fugro Consultants, Inc.
6100 Hillcroft
Houston, TX 77081
Office: 713.369.5400 Direct: 713.778.6836
sdegregorio@fugro.com / www.fugroconsultants.com

From: DeGregorio, Steve FCL
Sent: Wednesday, September 21, 2016 6:36 AM
To: Sackett, Dave FMGI <DSackett@fugro.com>
Subject: FW: Certificates

Ana-Lab's certifications

From: Tracey Varvel [mailto:tvarvel@ana-lab.com]
Sent: Tuesday, September 20, 2016 2:25 PM
To: DeGregorio, Steve FCL <SDeGregorio@fugro.com>
Subject: Certificates

Steve,

Please see attached files.

Thanks,

Tracey Varvel
QA Manager
Ana-Lab Corporation
www.ana-lab.com
Office (903) 984-0551

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, may contain information that is privileged, proprietary and/or confidential. If you received this message in error, please advise the sender immediately by reply e-mail and do not retain any paper or electronic copies of this message or any attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

Airbill No. Z3352496

SHIP TO:
BILL PEERY
ANA-LAB CORP.
2600 DUDLEY RD.
KILGORE, TX 75663
9039840551

From:
STEVE DE GREGORIO
FUGRO CONSULTANTS, INC.
6100 HILLCROFT
TECH BLDG
HOUSTON, TX 77081
3619926990

19.4°C

B GGG **LSO PRIORITY NEXT DAY**
10:30 IN MOST CITIES
LATER IN REMOTE CITIES

PRINT DATE: 9/28/2016
QUICKCODE: WEIGHT: 4.00LBS
REF 1: 04.11000002 1D00V.0000

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and addresses can be read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
3. To locate a drop box near you, click on **Find A Drop Box** from the home page main menu.
4. To schedule a pickup, click on **Request Pickup**.

WARNING: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your Lone Star Overnight account number.
This label is valid for use for 3 months from the date printed. Use of expired labels may result in delayed billing and / or additional research charges.

LIMIT OF LIABILITY: We are not responsible for claims in excess of $100 for any reason unless you: 1) declare a greater value (not to exceed $25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 8:30 AM DELIVERIES OR RESIDENTIAL DELIVERIES.

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com LELAP-accredited #02008

Employee Owned Integrity Caring Continual Improvement

Project Result Summary

Report To

Fugro Consultants Inc.
Steve DeGregorio
6100 Hillcroft St.
Houston, TX 77081-1009

Account GCT1 - G

Project 758393

Corrected Report

Solid & Chemical Materials

	1531229 12/31/99 0:00	1531230 12/31/99 0:00	1531231 12/31/99 0:00	1531232 12/31/99 0:00	1531233 12/31/99 0:00
	5635	5636	5637	5829	5838
Gravimetrics					
SM2540 G-1997 /MOD, %					
Total Solids for Dry Wt	79.6	70.0	65.1	65.5	68.7
Metals					
EPA 6010C, mg/kg					
Boron (7440-42-8)	22.1	37.7	30.4	30.1	22.3
Phosphorus (7723-14-0)	642	730	518	449	393
Tin, Total (7440-31-5)	<12.1	<11.3	<18.4	<12.0	<13.9
EPA 6010C, mg/Kg					
Total Iron (7439-89-6)	22000	33700	37200	35700	39000
EPA 6020A, mg/kg					
Lead, Total (7439-92-1)	3.09	6.23	7.11	7.04	5.52
Zinc, Total (7440-66-6)	32.5	62.6	69.0	70.7	67.2
Barium (7440-39-3)	19.3	23.0	24.1	24.6	24.3
Cobalt (7440-48-4)	7.61	10.9	13.9	15.7	16.3
Arsenic, Total (7440-38-2)	17.1	15.0	9.83	9.53	7.64
Chromium, Total (7440-47-3)	7.26	8.47	6.59	4.34	4.99
Selenium, Total (7782-49-2)	<0.725	<0.679	<1.11	<0.721	<0.834
Thallium, Total (7440-28-0)	0.081	0.117	0.210	0.118	0.102
Nickel, Total (7440-02-0)	5.48	5.93	5.58	4.76	5.52
Beryllium, Total (7440-41-7)	0.197	0.490	0.453	0.513	0.378
Molybdenum (7439-98-7)	0.369	0.304	0.424	0.261	0.240
Manganese, Total (7439-96-5)	668	773	661	756	818
Antimony, Total (7440-36-0)	0.549	0.387	0.565	0.328	0.376
Silver, Total (7440-22-4)	0.0126	0.0236	0.0418	0.0313	0.0227
Copper, Total (7440-50-8)	7.80	21.0	33.2	33.9	27.9
Cadmium, Total (7440-43-9)	0.119	0.121	0.117	0.129	0.136
Uranium	0.830	1.22	0.742	0.672	0.464
Vanadium (7440-62-2)	50.1	45.9	68.8	61.8	75.8
EPA 7471A, mg/kg					
Mercury (7439-97-6)	0.00956	0.0277	0.0447	0.0374	0.0246

	1531234 12/31/99 0:00	1531235 12/31/99 0:00	1531236 12/31/99 0:00	1531237 12/31/99 0:00	1531238 12/31/99 0:00
	5839	5640	5641	5642	5643
Gravimetrics					
SM2540 G-1997 /MOD, %					
Total Solids for Dry Wt	62.2	69.6	71.4	81.2	69.5
Metals					

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	1531234 12/31/99 0:00	1531235 12/31/99 0:00	1531236 12/31/99 0:00	1531237 12/31/99 0:00	1531238 12/31/99 0:00
	5839	5640	5641	5642	5643
Metals					
EPA 6010C, mg/kg					
Boron (7440-42-8)	26.5	25.3	25.5	14.8	20.3
Phosphorus (7723-14-0)	397	402	469	706	327
Tin, Total (7440-31-5)	<10.7	<13.4	<12.9	<8.51	<9.04
EPA 6010C, mg/Kg					
Total Iron (7439-89-6)	37000	39100	41000	16300	33800
EPA 6020A, mg/kg					
Lead, Total (7439-92-1)	6.05	6.68	6.86	1.15	4.58
Zinc, Total (7440-66-6)	64.1	70.4	72.5	17.7	61.2
Barium (7440-39-3)	24.4	24.0	25.1	17.7	18.8
Cobalt (7440-48-4)	13.7	15.5	16.5	5.37	15.3
Arsenic, Total (7440-38-2)	7.04	7.59	8.61	7.07	5.17
Chromium, Total (7440-47-3)	4.02	4.54	5.34	3.82	3.84
Selenium, Total (7782-49-2)	<0.645	<0.805	<0.772	<0.510	<0.542
Thallium, Total (7440-28-0)	0.0809	0.0833	0.0986	0.016	0.0567
Nickel, Total (7440-02-0)	4.53	5.03	5.57	3.42	5.22
Beryllium, Total (7440-41-7)	0.416	0.422	0.431	0.124	0.311
Molybdenum (7439-98-7)	0.195	0.201	0.246	0.167	0.173
Manganese, Total (7439-96-5)	712	693	710	336	665
Antimony, Total (7440-36-0)	0.312	0.329	0.308	0.200	0.161
Silver, Total (7440-22-4)	0.0273	0.0329	0.0245	0.00531	0.0233
Copper, Total (7440-50-8)	31.8	32.9	31.5	8.68	26.3
Cadmium, Total (7440-43-9)	0.104	0.0938	0.0899	0.0347	0.0822
Uranium	0.576	0.509	0.559	0.527	0.353
Vanadium (7440-62-2)	61.7	73.6	77.6	19.2	69.5
EPA 7471A, mg/kg					
Mercury (7439-97-6)	0.0342	0.0322	0.0367	<0.0212	0.0174

	1531239 12/31/99 0:00	1531240 12/31/99 0:00	1531241 12/31/99 0:00	1531243 12/31/99 0:00	1531244 12/31/99 0:00
	5830	5831	5832	5833	5644
Gravimetrics					
SM2540 G-1997 /MOD, %					
Total Solids for Dry Wt	73.9	76.2	74.5	77.3	71.0
Metals					
EPA 6010C, mg/kg					
Boron (7440-42-8)	23.1	17.5	18.7	15.3	27.2
Phosphorus (7723-14-0)	350	283	262	266	349
Tin, Total (7440-31-5)	<11.7	<8.20	<10.3	<9.29	<10.1

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	1531239 12/31/99 0:00 5830	1531240 12/31/99 0:00 5831	1531241 12/31/99 0:00 5832	1531243 12/31/99 0:00 5833	1531244 12/31/99 0:00 5644
Metals					
EPA 6010C, mg/Kg					
Total Iron (7439-89-6)	35500	35600	33400	34700	31700
EPA 6020A, mg/kg					
Lead, Total (7439-92-1)	5.07	4.17	4.38	3.61	4.97
Zinc, Total (7440-66-6)	64.5	58.4	57.6	59.1	63.0
Barium (7440-39-3)	20.8	16.9	22.0	16.9	24.4
Cobalt (7440-48-4)	15.6	15.9	14.4	16.9	13.6
Arsenic, Total (7440-38-2)	5.89	4.11	3.07	3.51	5.21
Chromium, Total (7440-47-3)	3.46	3.29	3.33	3.71	3.61
Selenium, Total (7782-49-2)	<0.705	<0.492	<0.617	<0.558	<0.607
Thallium, Total (7440-28-0)	0.0617	0.0483	0.0573	0.0505	0.0646
Nickel, Total (7440-02-0)	4.71	5.39	4.95	5.90	4.45
Beryllium, Total (7440-41-7)	0.376	0.283	0.310	0.256	0.421
Molybdenum (7439-98-7)	0.183	0.120	0.131	0.150	0.201
Manganese, Total (7439-96-5)	610	598	505	539	490
Antimony, Total (7440-36-0)	0.235	0.152	0.197	0.173	0.179
Silver, Total (7440-22-4)	0.0286	0.0197	0.0268	0.0185	0.0383
Copper, Total (7440-50-8)	31.3	26.0	32.8	25.9	40.4
Cadmium, Total (7440-43-9)	0.0903	0.0514	0.0874	0.0578	0.163
Uranium	0.399	0.294	0.333	0.250	0.446
Vanadium (7440-62-2)	72.3	66.9	75.3	82.1	76.6
EPA 7471A, mg/kg					
Mercury (7439-97-6)	0.0184	0.0201	0.014	0.0197	0.0234

	1531245 12/31/99 0:00 5786	1531246 12/31/99 0:00 5787	1531247 12/31/99 0:00 5788	1531248 12/31/99 0:00 5789	1531250 12/31/99 0:00 5645
Gravimetrics					
SM2540 G-1997 /MOD, %					
Total Solids for Dry Wt	68.8	70.2	74.6	74.8	77.9
Metals					
EPA 6010C, mg/kg					
Boron (7440-42-8)	29.4	29.9	19.7	17.2	16.2
Phosphorus (7723-14-0)	327	375	316	251	243
Tin, Total (7440-31-5)	<11.2	<13.0	<10.5	<8.28	<12.0
EPA 6010C, mg/Kg					
Total Iron (7439-89-6)	28600	30100	35100	30100	35300

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	1531245 12/31/99 0:00	1531246 12/31/99 0:00	1531247 12/31/99 0:00	1531248 12/31/99 0:00	1531250 12/31/99 0:00
	5786	5787	5788	5789	5645
Metals					
EPA 6020A, mg/kg					
Lead, Total (7439-92-1)	5.20	5.43	3.86	2.66	7.24
Zinc, Total (7440-66-6)	60.9	67.2	58.0	43.2	52.1
Barium (7440-39-3)	27.8	26.6	17.7	15.2	13.6
Cobalt (7440-48-4)	14.0	14.1	15.7	13.8	17.3
Arsenic, Total (7440-38-2)	5.01	5.27	5.03	5.11	4.25
Chromium, Total (7440-47-3)	3.40	3.38	3.90	2.83	4.07
Selenium, Total (7782-49-2)	<0.673	<0.779	<0.629	<0.496	<0.719
Thallium, Total (7440-28-0)	0.0834	0.0793	0.0651	0.0299	0.0299
Nickel, Total (7440-02-0)	4.32	4.22	4.92	6.18	7.82
Beryllium, Total (7440-41-7)	0.449	0.453	0.332	0.262	0.236
Molybdenum (7439-98-7)	0.208	0.171	0.155	0.158	0.155
Manganese, Total (7439-96-5)	532	587	576	529	582
Antimony, Total (7440-36-0)	0.203	0.215	0.160	0.110	0.136
Silver, Total (7440-22-4)	0.0462	0.0373	0.0228	0.0084	0.0125
Copper, Total (7440-50-8)	38.4	38.6	25.3	13.0	14.5
Cadmium, Total (7440-43-9)	0.147	0.111	0.0741	0.044	<0.240
Uranium	0.574	0.454	0.373	0.274	0.315
Vanadium (7440-62-2)	73.0	72.8	79.9	48.7	78.6
EPA 7471A, mg/kg					
Mercury (7439-97-6)	0.0254	0.0224	0.0212	0.00977	0.0108

	1531251 12/31/99 0:00	1531252 12/31/99 0:00	1531253 12/31/99 0:00	1531254 12/31/99 0:00	1531255 12/31/99 0:00
	5646	5790	5834	5791	5792
Gravimetrics					
SM2540 G-1997 /MOD, %					
Total Solids for Dry Wt	73.8	73.3	64.0	90.5	76.6
Metals					
EPA 6010C, mg/kg					
Boron (7440-42-8)	14.1	15.1	30.5	10.5	11.7
Phosphorus (7723-14-0)	240	292	580	451	211
Tin, Total (7440-31-5)	<13.6	<13.3	<11.6	<8.38	<9.22
EPA 6010C, mg/Kg					
Total Iron (7439-89-6)	34700	40400	39700	17600	42200

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	1531251 12/31/99 0:00	1531252 12/31/99 0:00	1531253 12/31/99 0:00	1531254 12/31/99 0:00	1531255 12/31/99 0:00
	5646	5790	5834	5791	5792
Metals					
EPA 6020A, mg/kg					
Lead, Total (7439-92-1)	4.02	4.94	12.1	1.19	2.89
Zinc, Total (7440-66-6)	47.6	63.3	80.5	22.1	57.0
Barium (7440-39-3)	14.8	18.6	31.9	13.9	12.4
Cobalt (7440-48-4)	17.3	16.8	11.4	6.04	18.8
Arsenic, Total (7440-38-2)	3.54	4.53	10.2	6.66	3.88
Chromium, Total (7440-47-3)	4.73	4.49	6.38	2.17	4.26
Selenium, Total (7782-49-2)	0.272	<0.799	<0.697	<0.503	<0.554
Thallium, Total (7440-28-0)	0.0797	0.132	0.118	0.032	0.0322
Nickel, Total (7440-02-0)	6.33	6.15	4.91	2.99	8.55
Beryllium, Total (7440-41-7)	0.283	0.295	0.477	0.135	0.213
Molybdenum (7439-98-7)	0.428	0.311	0.284	0.299	0.129
Manganese, Total (7439-96-5)	561	589	594	263	587
Antimony, Total (7440-36-0)	<0.206	0.558	0.519	0.370	0.294
Silver, Total (7440-22-4)	0.0257	0.0312	0.0505	0.0101	0.0101
Copper, Total (7440-50-8)	19.1	26.3	38.0	15.5	14.6
Cadmium, Total (7440-43-9)	0.0489	<0.266	0.125	<0.168	<0.184
Uranium	0.328	0.377	0.827	0.398	0.285
Vanadium (7440-62-2)	97.7	87.2	57.0	28.7	76.0
EPA 7471A, mg/kg					
Mercury (7439-97-6)	<0.0236	<0.0237	0.0298	<0.019	<0.0218

	1531256 12/31/99 0:00	1531257 12/31/99 0:00	1531258 12/31/99 0:00	1531259 12/31/99 0:00	
	BH14 1.25-1.85	BH14 2.35-2.40	BH14 4.00-5.00	BH-6B (Marine BH)	
Gravimetrics					
SM2540 G-1997 /MOD, %					
Total Solids for Dry Wt	78.4	75.8	79.8	70.0	
Metals					
EPA 6010C, mg/kg					
Boron (7440-42-8)	6.63	7.69	4.12	49.4	
Phosphorus (7723-14-0)	176	228	262	743	
Tin, Total (7440-31-5)	<13.4	<15.3	<14.3	<12.6	
EPA 6010C, mg/Kg					
Total Iron (7439-89-6)	32500	27400	37500	57000	

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Metals	1531256 12/31/99 0:00 BH14 1.25-1.85	1531257 12/31/99 0:00 BH14 2.35-2.40	1531258 12/31/99 0:00 BH14 4.00-5.00	1531259 12/31/99 0:00 BH-6B (Marine BH)	
EPA 6020A, mg/kg					
Lead, Total (7439-92-1)	2.69	3.54	3.65	4.59	
Zinc, Total (7440-66-6)	36.9	56.3	47.6	48.9	
Barium (7440-39-3)	118	78.4	128	27.6	
Cobalt (7440-48-4)	8.48	9.93	9.79	20.6	
Arsenic, Total (7440-38-2)	0.652	0.790	0.835	10.1	
Chromium, Total (7440-47-3)	1.10	6.79	13.3	14.6	
Selenium, Total (7782-49-2)	<0.804	<0.916	<0.855	0.333	
Thallium, Total (7440-28-0)	0.107	0.137	0.0643	0.128	
Nickel, Total (7440-02-0)	2.18	5.09	8.46	10.3	
Beryllium, Total (7440-41-7)	0.427	0.544	0.570	0.794	
Molybdenum (7439-98-7)	0.123	0.133	0.122	0.860	
Manganese, Total (7439-96-5)	454	398	474	1060	
Antimony, Total (7440-36-0)	0.402	0.478	0.348	0.287	
Silver, Total (7440-22-4)	0.0122	0.0156	0.0148	0.0349	
Copper, Total (7440-50-8)	68.5	56.6	30.7	24.0	
Cadmium, Total (7440-43-9)	<0.268	0.0892	<0.284	0.0864	
Uranium	0.265	0.219	0.353	2.46	
Vanadium (7440-62-2)	40.9	68.5	57.6	73.9	
EPA 7471A, mg/kg					
Mercury (7439-97-6)	<0.0247	0.0702	<0.0249	0.183	

Paul Zhang, Ph.D., Quality Director

Appendix 5Y–

Description of the Artisanal Fishing Sector

Energía del Pacífico

Project: LNG to Power
Appendix 5Y: Description of the Artisanal Fishing Sector

December 2016 – 16-3489

ECO INGENIEROS
LÍDERES EN CONSULTORÍA AMBIENTAL

DILLON CONSULTING

LNG to Power Project
Appendix 5Y: Description of the Artisanal Fishing Sector

December 2016
Project Reference: 16-3489

Prepared for:
ENERGÍA DEL PACÍFICO S.A. DE C.V.
El Salvador

Preparado por:
DILLON CONSULTING LIMITED
Canada

ECO INGENIEROS, S.A. DE C.V.
El Salvador

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1.0 DESCRIPTION OF THE ARTISANAL FISHING SECTOR

1.1 Introduction

Traditionally small-scale fishing is carried out by low-income people living in coastal areas of the country, who find in this activity their main source of income and food security. Artisanal fishing accounts for 50% of El Salvador's total fish production, and it is estimated that the country has 13,000 marine fishermen with 5,700 vessels, as well as 34 cooperatives and two federations who bind these cooperatives together, being El Salvador one of the Latin American countries where fishermen have a greater sense of partnership, despite some weaknesses that persist.

Artisanal fishing is a type of fishing activity that uses traditional techniques with little technological development. The activity takes place in estuarine and open sea areas, practiced by small boats in coastal areas not more than 10 miles away, within what is called territorial sea, with boats from 18 to 25 feet in length and outboard motor; The gear used are: gillnets, nets and longlines. The most demanded shellfish are: coastal shrimp and its accompanying fauna, snapper, sea bass, corvina, mackerel, shark whose catch has increased since 1999, and shells or curiles that are manually extracted from estuaries and mangroves.

The instruments usually used by fishermen to catch their prey are jackal tail baits that are placed on six, seven or ten hooks depending on the size of the fish, 20 pound nylon rope and monofilament fishing nets are also used. The usual hours to go out to open sea are eleven in the morning and four in the afternoon, this depends on the orders that the fishermen receive.

1.2 Actual Situation

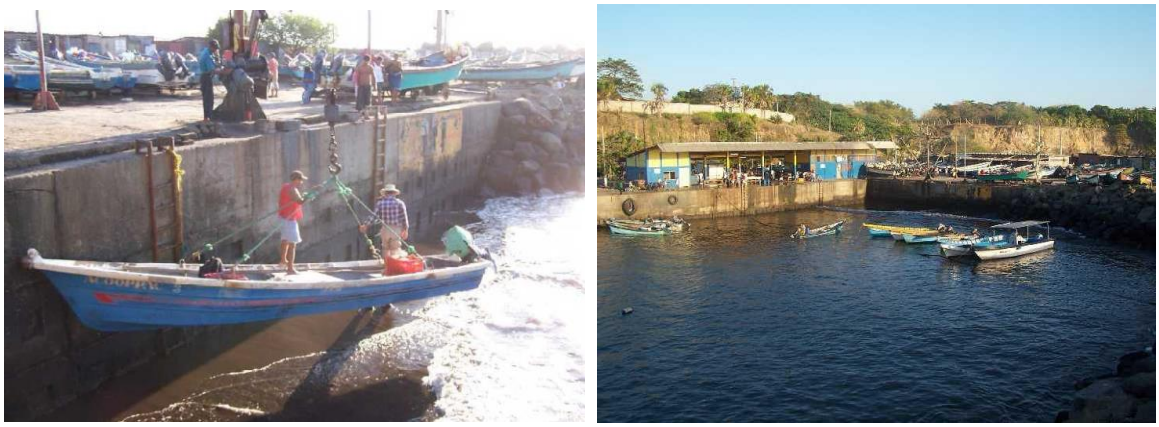
Acajutla is a place where job opportunities are very scarce, and being a coastal city, a good percentage of its residents are engaged in artisanal fishing. The activities are mainly done at the artisanal pier of Acajutla, which name is because all the work done by fishermen is handmade, they do not use machinery. Trade occurs within and outside the pier; Usually when the fishermen come back from open sea with their fishing, a buyer is expecting them to buy all the product. These buyers sell it to other people who take it to the market or they have their specific customers who are usually business owners, especially restaurants.

In recent years artisanal fishermen have commented that they have been affected by the red tide, earthquakes, abuses from industrial fishing boats and lack of support, which they qualify as apathy from the authorities to give them real help.

According to the study *"Development of Artisanal Fishing in El Salvador",* this sector suffers from underdevelopment in the aspects of techniques and fishing control, processing of products and fishermen organization, which translates into low productivity. However, the deterioration of profitability in recent years has reached an alarming level. The rescue of artisanal fishers from poverty is one of the social tasks to be undertaken by the Government, according to the same study.

Within the same study, the limitations of artisanal fishing are presented, fishing is deteriorating in the area for various environmental and economic reasons. There has been a serious decline in coastal fishery resources due to the natural disasters that have recently affected the country, as well as the frequent earthquakes that have apparently altered the dynamics of marine resources and the deterioration of the environment in fishing areas. In addition, the pressure of overexploitation that is gradually affecting the availability of coastal resources, as well as the increase in gasoline costs, can not go unnoticed.

Photo 1.1 – Acajutla Artisanal Pier



Source: http://acajutlateespera.blogspot.com/

Photo 1.2 – Commerce at the Artisanal Pier

Source: http://acajutlateespera.blogspot.com/

The municipality of Acajutla is one of the main ports in the fishing of various kinds of seafood, and has an important productive sector dedicated to artisanal fishing, this sector is organized through several cooperatives, as well as groups that agglutinate almost all artisanal fishermen in the municipality.

The characteristics of each of these groups are described below:

1.1.1 Asociación Cooperativa de Producción Pesquera del Puerto de Acajutla (ACOOPPAC)

It is one of the oldest cooperatives of Acajutla, formally constituted on May 27, 1971, and has been a source of work for the entire fishing community of Acajutla and its surroundings.

The cooperative currently consists of 57 associates, who work 3 days a week, with an average daily income of $ 15.00, which generates a weekly entry of $ 45.00 per associate.

Currently they have several fishing zones, according to interviews held with their members in 2014, and corroborating in 2016, one of them is the area known as "El Pedrero", as they commonly call the place near the pier, they also carry out fishing activities near the area where the installation of the underground pipeline is planned, despite being a restricted area for this type of activities, for safety reasons, so they are constantly removed from this area. However they also use it as part of the route to get to more distant fishing areas.

According to the security department of the Port of Acajutla (CEPA)[1], fishermen are removed from this area daily, although there is no problem with passing on to other fishing areas.

[1] Información obtenida mediante entrevista con el Sr. José Acosta, Jefe de Seguridad del Puerto de Acajutla.

Because the pipeline of the project is underground, it does not interfere with the fishermen's routes, there would only be certain limitations which would be temporary, probably during the construction stage of the maritime terminal and installation of the before mentioned pipeline.

Photo 1.3 – Artisanal Fishermen

Source: http://www.lapagina.com.sv

According to inquiries made in the field and interviews with experts in the area such as Lic. Oscar Molina (marine biologist in charge of the study of marine biology) and CENDEPESCA, Acajutla fishermen are constantly changing places for fishing. The members of ACOOPPAC use the "cimbra" method to fish for scale fish scale and sharks. They go as far as "Punta Remedios - Los Cobanos" to the Southeast (most common route) or "Playa Metalío" to the northwest, to look for their product.

Usually they travel in a southeast direction, to reach this fishing point of interest, once the terminal and the pipeline of the project have been constructed, there would be no major limitations with their fishing route, the affectation would only be during the construction phase of the same. The overall total fishing area is 143,075 Km^2, as seen in Figure 1.1.

As far as fishing in the high seas goes, the boats usually fish in zones with depths between 10 m and 50 m, all along the coast.

170000 180000 190000 200000 210000

1520000 1510000 1500000 1490000

TACUBA
CONCEPCION DE ATACO
SAN FRANCISCO MENENDEZ
JUJUTLA
GUAYMANGO
SAN PEDRO PUXTLA
SANTA CATARINA MASAHUAT
SANTO DOMINGO DE GUZMAN
NAHUIZALCO
IZALCO
SONZACATE
SAN ANTONIO DEL MONTE
CALUCO
NAHUILINGO
ACAJUTLA
SONSONATE
CUISNAHUAT
SANTA ISABEL ISHUATAN
TEOTEPEQUE

SITIO DEL PROYECTO / PROJECT SITE

OCÉANO PACÍFICO / PACIFIC OCEAN

Energía del Pacífico

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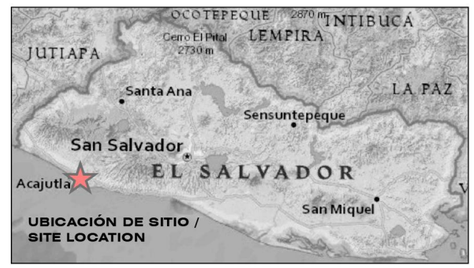
LNG TO POWER PROJECT

ZONAS DE PESCA GENERALES / GENERAL FISHING AREAS

FIGURA 1.1 / FIGURE 1.1

- SITIO DEL PROYECTO / PROJECT SITE
- VIAS / ROADS
- ZONAS DE PESCA GENERALES / GENERAL FISHING AREAS
- LÍMITES MUNICIPALES / MUNICIPAL BOUNDARIES



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N W E S

FUENTE / REFERENCE
MISIÓN DE MAPEO / MAPPING MISSION (SRTM)
LANDSAT-8 IMAGEN MOSAICO / LANDSAT-8 IMAGE MOSAIC (2014-01-30)

MAPA CREADO POR / MAP CREATED BY: PFM
MAPA REVISADO POR / MAP CHECKED BY: MW
PROYECCIÓN DE MAPA / MAP PROJECTION: UTM ZONE 16 WGS84

ARCHIVO / FILE:
I:\GIS\163489 Acajutla\GIS\MXDs\Reporting - 2016\5-47 - General Fishing Areas.mxd

PROYECTO / PROJECT: 14-9114
ESTADO / STATUS: FINAL / FINAL
FECHA / DATE: 12/7/2016

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1.1.2 Asociación Cooperativa de Rederos y Langosteros (ACPPRA DE R.L.)

This cooperative is primarily dedicated to net fishing, especially lobster fishing. It is smaller and has a lower level of organization than ACOOPPAC. They currently have 34 associates, who work 6 days a week, with average daily income of $ 15.00, which generates a weekly income of $ 90.00 per associate.

According to information provided by the cooperative, daily fishing makes a total of 10lbs of lobster, 20lbs of mixed fish revolts, and a smaller quantity of crab, total daily fishery adds up to $ 93.00 per day, where they must subtract their operating expenses that are: $ 18.00 of gasoline, $ 5.00 of use of the pier, $ 5 of oil and $ 5.00 of maneuver. With a total profit of $ 60.00 per day, which must be distributed between groups of 4 (boat, nets, vogue and captain).

ACPPRA members use the fishing nets and the main products they seek are lobsters, oysters, crabs and fish in smaller quantities, which can be found near the coast, but in some cases, they may also travel far to seek for their product. When they fish near the coast, they do not use their boats, they simply swim and use tires to stay afloat, so they do not use fuel unless they know that they are going more towards the more distant fishing areas near "Punta Remedios-Los Cóbanos ". Their fishing zones are always between the area marked in the previous figure 1.1. Their route to fishing areas could be temporarily affected, during the construction phase of the project.

Photo 1.4 – Net fishermen working

Source: http://www.lapagina.com.sv

1.1.3 Asociación Cooperativa de Producción Pesquera Tiburoneros de Alta Mar (ACPETAMAR)

ACPETAMAR de R.L. Was established on March 9, 2006, its members are people engaged in fishing, nowadays in addition to fishing, they have a plant for the processing of fishery products. The cooperative currently has 29 registered members. The cooperative members started marine fishing with shark, but nowadays they have incorporated dorado and tuna into the catch, which is why they are also known as "Doraderos", given that among their main products the fish known as the dorado (Mahi mahi) is found.

80% of the partners are dedicated to fishing and the rest are dedicated to the process and commercialization. There are 5 women in total, who work in fish processing and marketing. They process everything they fish. The company's facilities (administrative offices and processing plant) are located in Acajutla, department of Sonsonate. For the implementation of innovations in marketing, the cooperative and its members have been supported by MAG through its agencies and international cooperation agencies. For example, PREMODER has provided funding to enable them to make the initial investments, such as for the processing plant.

Something that makes this cooperative distinctive from the others, is that their fishing zones are more distant, offshore, where they can find the products of greater size.

Among the products, they fish and/or sell are:

- Dorado (Mahi mahi)
- Pargo
- shark
- Lenguado
- Corvina
- Shrimp
- Yellowfin tuna

Photo 1.5 – Products fished by ACPETAMAR

Source: http://www.wordpress.com/productos/

In addition, they have two boats owned by the cooperative; The equipment available for fishing is expanded because among the associates there are 8 boats. They store few product, but it's just to have it ready for sale.

Buyers pay the product at 60 days or 30 days. However, Walmart, one of its main buyers has a payment mechanism of 48 hours, but charges 2% commission.

1.1.4 Asociación Cooperativa De Producción Agropecuaria Y Pesquera Camaroneros De Acajutla (ACOOPESCA)

This cooperative is the most recent, it was created in July 2015, currently has 16 members officially registered. Like the cooperatives of ACOOPAC and ACCPRA, they maintain quite similar characteristics of fishing, as well as fishing routes. However, ACOOPESCA's main fishing product is shrimp, which are marketed in the locality or have buyers waiting for them when carrying the product.

1.1.5 Independent Fishermen

1.1.5.1 Tuberos

Independent fishermen who fish in the area and do not belong to the cooperatives were identified, they are called "tuberos", use pneumatic floats and swim up to 3 km in the sea to manually obtain products, mainly oysters and lobsters. This group of people located in an area close to the project, so their activities could be affected by it. At least 51 tubers have been identified, which were reported through citizen participation activities.

The tuberos get their name because they use floats or "rim tubes" and they swim in the sea, don't have boats. They can fish offshore by mooring to the buoys of CENERGICA and floating. They also fish lobsters to the south of the pier. As far as revenue is concerned, a tuber will usually fish for three to four days a week and earn an estimated $ 4.00 per day, and approximately $ 12.00 to $ 16.00 a week. These are estimated amounts since they also fish for their own consumption. Their fishing zones could be reduced temporarily during the construction phase of the project, so they would have to change it.

Photo 1.6 – Independent fishers

Source: Pictures taken by the consulting team.

1.1.5.2 Oyster Catchers

Oyster catchers, like the fishermen, are independent fishermen who fish in the area and do not belong to cooperatives, and do not have boats. They also use pneumatic floats, but the difference is that the oysterers as their name calls them, is that their main fishery product is the oysters, which are extracted primarily from the oyster bank located north of the pier, so they will not be affected by the project.

To date, at least 6 oysters have been identified, which were reported through the various activities of public consultation.

1.1.5.3 Fishermen from Other Areas

Likewise, it is known of the existence of a group of fishermen coming from other areas of the country, specifically the department of La Libertad. The fishermen originating from Acajutla do not like the intrusion of this group in their fishing zones since they are not originally from that locality. At least one group of 25 people from the municipality of La Libertad, who use a truck to reach Acajutla, were identified. They visit other areas on the coast between La Libertad and Acajutla. They visit the area once a month, in the northern area of the pier, so they will not be affected by the project.

1.3 Fishing Areas

Figure 1.2 shows the fishing zones closest to the Project, as can be seen today, fishermen invade areas considered as restricted by the port authorities.

Figure 1.3 shows the port access and dock areas of the Port of Acajutla, which are considered as restricted areas for fishing activities, and are constantly monitored by the port authority and CEPA security team. Nowadays artisanal fishermen invade these areas as good for fishing, especially in the area known as "El Pedrero" as they commonly call the place near the craft pier, or also cross them as part of their route to other fishing areas at open sea, towards the area of Metalío, or more commonly in direction towards Punta Remedios to the Southeast.

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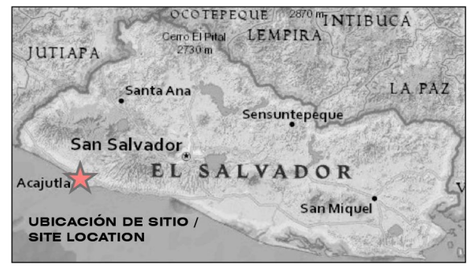
AREA DE PESCA APROXIMADA PARA REDEROS, LANGOSTEROS Y OSTREROS / APPROXIMATE FISHING AREAS FOR NETTERS, LOBSTERS AND OYSTERCATCHERS

FIGURA 1.2 / FIGURE 1.2

- RUTA ACTUAL PARA PESCA / ACTUAL FISHING ROUTE
- PESQUERIA CON REDES / NET FISHING AREA
- PESQUERIA DE OSTRAS / OYSTER FISHING AREA
- PESQUERIA DE LANGOSTAS / LOBSTER FISHING AREA
- SITIO DEL PROYECTO / PROJECT SITE
- SITIO DE ACOPIO TEMPORAL / TEMPORARY LAYDOWN AREA



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N W E S

FUENTE / REFERENCE
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MAPA CREADO POR / MAP CREATED BY: PFM
MAPA REVISADO POR / MAP CHECKED BY: JF
PROYECCIÓN DE MAPA / MAP PROJECTION: UTM ZONE 16 WGS84

ARCHIVO / FILE:
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PROYECTO / PROJECT: 14-9114
ESTADO / STATUS: FINAL / FINAL
FECHA / DATE: 12/7/2016

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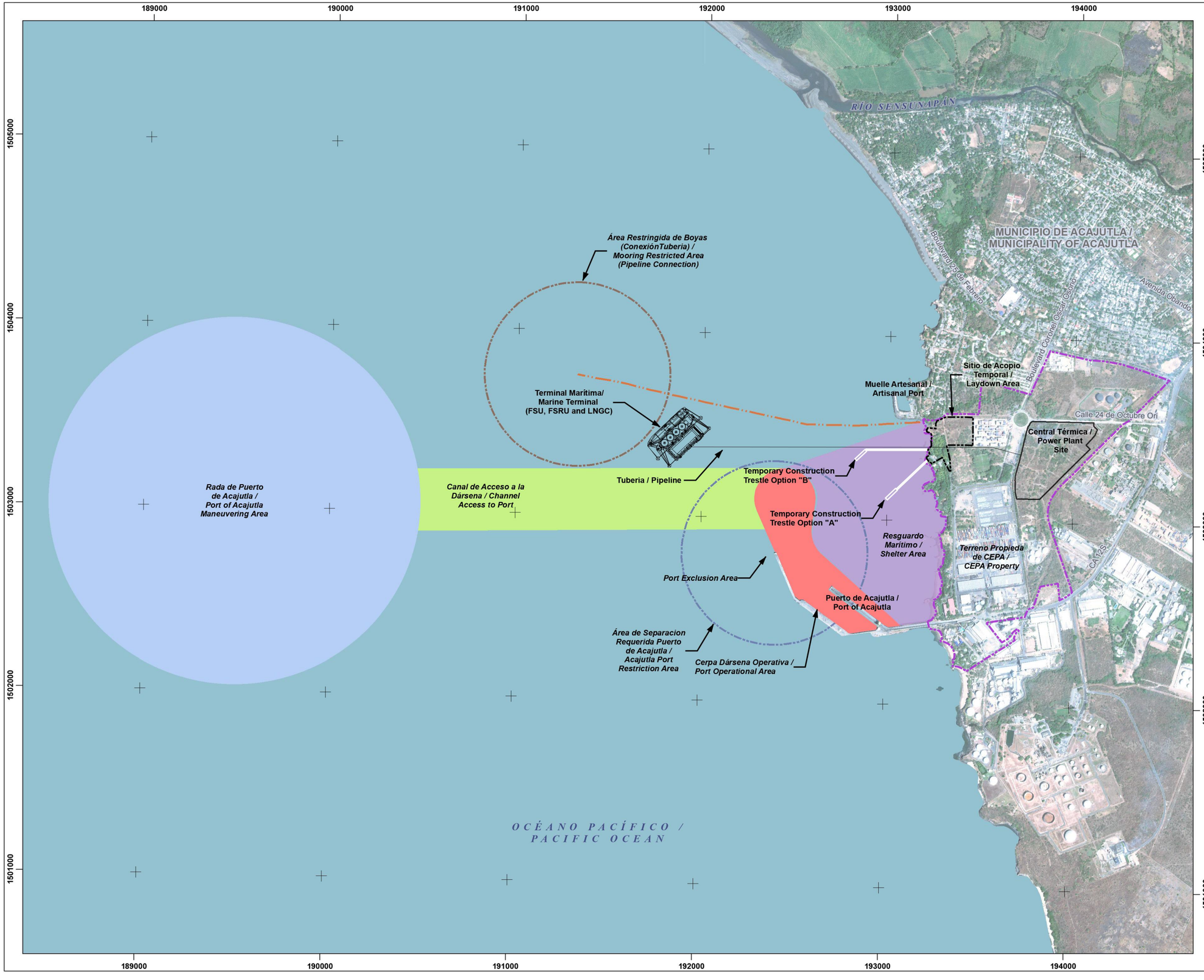

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LNG TO POWER PROJECT

ELEMENTOS MARÍTIMOS (ACTUAL) (OPERACIONES) / MARITIME ELEMENTS (EXISTING)

FIGURA 1.3 / FIGURE 1.3

- TUBERIA ACTUAL / PIPELINE EXISTING
- ÁREA DE SEPARACION REQUERIDA PUERTO DE ACAJUTLA / ACAJUTLA PORT RESTRICTION AREA
- ÁREA RESTRINGIDA DE BOYAS (CONEXIÓN TUBERIA) / MOORING RESTRICTED AREA (PIPELINE CONNECTION)
- TERRENO PROPIEDAD DE CEPA / CEPA PROPERTY
- CANAL DE ACCESO A LA DÁRSENA / CHANNEL ACCESS TO DOCK
- RADA DE PUERTO DE ACAJUTLA / PORT OF ACAJUTLA MANEUVERING AREA
- RESGUARDO MARÍTIMO / MARITIME SHELTER
- CERPA DÁRSENA OPERATIVA / PORT OPERATIONAL AREA
- SITIO DEL PROYECTO / PROJECT SITE
- SITIO DE ACOPIO TEMPORAL / TEMPORARY LAYDOWN AREA

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N W E S

FUENTE / REFERENCE
VISIÓN DEL MUNDO 2 IMÁGENES DE ALTA RESOLUCIÓN / WORLDVIEW 2 HIGH RESOLUTION IMAGERY (2014-02-12)

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PROYECTO / PROJECT: 14-9114
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Appendix 5Z–

Health in the Municipality of Acajutla

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Health in the municipality of Acajutla

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Energía del Pacífico
LNG to Power Project
Health in the municipality of Acajutla

September 2014
Projecto Ref: 14-9114

Prepared for:
ENERGÍA DEL PACÍFICO S.A. DE C.V.
El Salvador

Prepared by:

DILLON CONSULTING LIMITED
Canada

ECO INGENIEROS SA DE CV
El Salvador

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1.0 Health in the Municipality of Acajutla

1.1 National Health Care Model

The Ministry of Health (MINSAL), in accordance with the National Health Policy, has promoted a Reform process, which is based on the model of integral care with a family and community approach, based on the strategy of Primary Care in Integral Health (APSI). This model seeks the complete approach of the individual (throughout his/her life cycle), family and community; As well as their social determinants, in order to reduce inequity in the management and delivery of health services.

In this sense, health services have been organized in Integral and Integrated Networks of Health Services (RIISS), which are made up of all those institutions that provide health services of MINSAL that carry out their work in a defined population. The provision of RIISS services is grouped into three levels of different complexity:

- ***First Level of Attention*:** First Level of Attention: Community Health Family Teams (Family ECOS), Specialized Community Health Teams (Specialized ECOS), Rural Nutrition and Health Centers (CRNS), Maternal Waiting Houses and Health Homes, as members of Community Units in Family Health (UCSF), intermediate and specialized.
- ***Second Level of Attention*:** Hospitals of Municipal jurisdiction (Basic Hospital) and Departamental Hospitals.
- ***Third Level*:** Regional Hospitals and Specialized Hospitals.

***a) The family and specialized ECOS*:**

They constitute the basic component and gateway to the RIISS for the implementation of the Model of integrated health care at the community level. Family ECOS in the rural and urban areas are made up of doctors, nurses, health promoters and other services, with nominal responsibility of an average population of 600 families for the rural area and1800 for the urban area.

Specialized ECOS are made up of specialists in pediatrics, obstetrics and gynecology, internal medicine or family medicine. In addition, it counts on personnel of nursing, nutrition, psychology, physiotherapy, clinical laboratory, education in health and auxiliary of statistics. With a reference average population of 6000 family for the rural area and 8000 families for the urban area. These have a specialized diagnostic and therapeutic capacity: clinical laboratory, ultrasonography, electrocardiogram and physiotherapy equipment. ECOS-Specialized have hourly extension on weekends and holidays, and in some cases, 24-hour care with support from FOSALUD. For every 1,800 families is provided with a dentist and administrative human resources; as well as provided with an environmental sanitation inspector.

The model incorporates social participation and intersectoral work, fosters co-responsibility and social comptrollership. It is made possible through the formation and operation of the Local Health Committees, which participate in the realization of community assemblies, participatory community diagnosis and dialogue tables.

b) Community Health Family Units (CHFU):

They are the establishments where health services are provided and are classified in:

CHFU Basic: It is the technical and administrative infrastructure, home of the Family ECOS or where comprehensive basic health services are provided, whose offer is: health promotion, disease prevention, healing, rehabilitation and environmental health; And procedures of: small surgery, injections, cures and vaccination. Their hours of service are eight hours a day.

CHFU Intermediate: It is the technical and administrative infrastructure, which can host the Family ECOS and whose offer includes in addition to the one identified in CHFU Basic, provides services of dentistry, clinical laboratory, environmental health, among others.

CHFU Specialized: It is the technical and administrative infrastructure, home of the Family and Specialized ECOS, whose services offer includes those provided by the Basic and Intermediate CHFU, support services, consultation and specialized services of internal medicine, pediatrics, obstetrics- As well as nutrition, physiotherapy, psychology, among others.

CHFU Intermediate and CHFU Specialized: They have hourly extension services on weekends and holidays, and depending on the demand they have 24-hour services with support from the Solidarity Fund for Health (FOSALUD).

Table 1.1 - MINSAL Network of Establishments at the national level

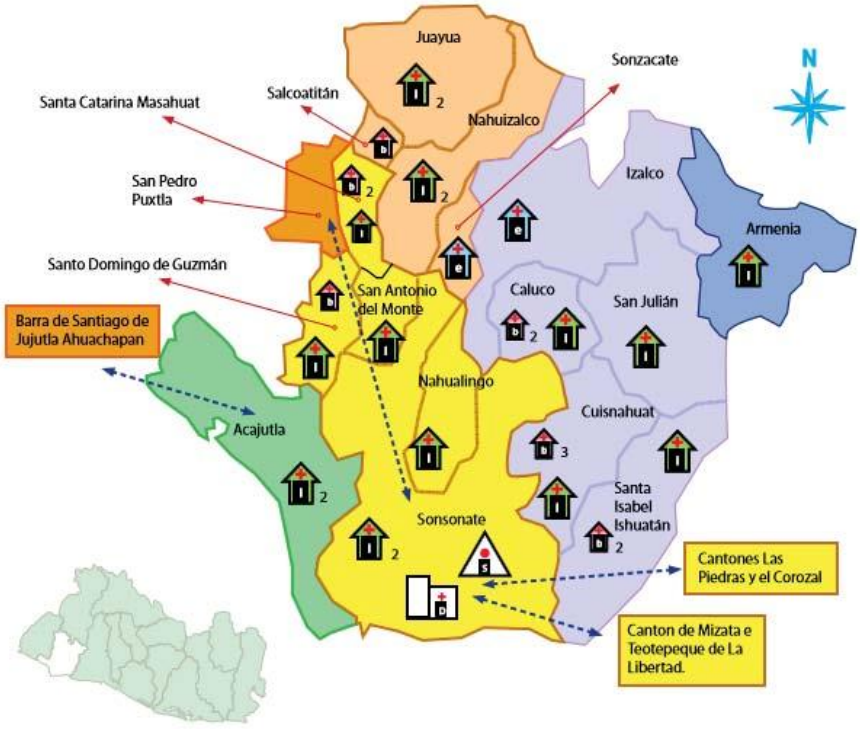
National Hospitals	30
Community Family Health Units	708
Family ECOs	482
Specialized ECOs	38

Source: Address of the First Level of Attention of MINSAL. Accountability Report 2013 - 2014

1.2 Infrastructure and Installed Capacity of the Department of Sonsonate

The health services network of Sonsonate is made up of SIBASI[1], 1 Departmental Hospital, 2 UCSF Specialized, 17 UCSF Intermediate and 24 UCSF Basic. They are distributed in 5 micro-networks, which are: Sonsonate, Sonzacate, Acajutla, Izalco, Lourdes Colón.

Figure 1.1 - Distribution of the Public Health Services Network of Sonsonate.



Simbologia		
SIBASI	1	
HOSPITAL DEPARTAMENTAL	1	
UCSF ESPECIALIZADAS	2	
UCSF INTERMEDIAS	17	
UCSF BASICAS	11	
ECOS Familiares	15	
ECOS Especializados	2	

- Micro red Sonsonate
- Micro red Sonzacate
- Micro red Acajutla
- Micro red Izalco
- Micro red Lourdes Colón
- Municipios de Ahuachapán vinculados a la Red de Acajutla y Sonsonate

Source: Image taken from work report. Ministry of Health 2010 – 2011

[1] SIBASI- Sistema Básico de Salud Integral (Basic System of Integral Health)

1.3 Infrastructure and Installed Capacity of the Municipality of Acajutla

The Micro-Network of Public Health Services of Acajutla is composed by the following:

a) ***Basic Family Health Community Units (BFHCU):***

- Villa Centenario
- Costa Azul

b) ***Community Intermediate Family Health Units (CIFH):***

- Acajutla
- Metalío

There is no specialized CHFU for the municipality of Acajutla, and the Referral Hospital is the National Hospital of Sonsonate "Dr. Jorge Mazzini Villacorta".

c) **Hospital Nacional de Sonsonate *"Dr. Jorge Mazzini Villacorta":*** Provides specialized services of:

- Pharmacy.
- Clinical Laboratory.
- Statistics and Medical Documents.
- Radiodiagnóstico.
- Social work.
- Wound Clinic.
- Respiratory Therapy.
- Physiotherapy.
- External Consultation,
- Hospitalization for Surgery,
- Hospitalization for Medicine,
- Hospitalization for Pediatrics,
- Hospitalization for Gineco-obstetrics,
- Colposcopy,
- Psychology,
- Psychiatry,
- Emergencies,
- Operating Room

Photo 1.1 - Hospital Nacional de Sonsante

Likewise, the municipality has the presence of other types of private health services, social insurance, and NGOs or non-profit organizations:

Figure 1. 2 - Main Medical Units of the ISSS in Sonsonate

a) **Medical Unit for ISSS[2] insured:** There is 1 Medical Unit of the ISSS which provides Psychological, Obstetric, Gynecological, Dentistry, Pediatric, Minor Operations, Vector Control,
Family Planning services.

b) **ISSS Business Clinic CEPA: I**n addition to the Medical Unit of the ISSS, the Salvadoran Institute of Social Security (ISSS) and the Autonomous Executive Port Commission (CEPA) have an ISSS Business Clinic for workers who are part of the Port of Acajutla, Sonsonate. In these medical facilities about 957 workers have access to personalized general medical consultations, as well as medical services such as small surgery, cures and injections, sampling of exams, respiratory therapies, among others.

There are also educational workshops to promote personal self-care in the workplace, preventive health campaigns, as well as registration and renewal of ISSS cards.

c) **Nursing Business:** Also within the Acajutla Industrial Zone, the following companies, FERTICA, ALMAPAC, ALCASA, and DUKE ENERGY, each have a small infirmary for minor emergencies

d) **Agape NGO Clinic:** It is a non-profit foundation who aids vulnerable people of limited resources, among the services provided are Assistance to malnourished children, vaccine application, Prenatal care, Post-Partum and Puerperium. The municipality of Acajutla has 3 health clinics AGAPE in Canton Punta Remedios.

e) **Club de Leones Clinic:** This clinic offers general and dental medicine in the complex of the restaurant La Cueva, operated by the Lions Club of Acajutla. For 20 years, it has aided patients in this municipality and neighboring populations, who do not have the necessary economic resources to pay for a private doctor. The medical clinic was reactivated in 2013 and subsists with the cooperation of the patients and with the funds that the Club de Leones of Acajutla obtains from different activities that they develop. Their services are from Monday to Friday from 8:00 a.m. to 3:30 p.m. and Saturday from 8:00 a.m. to 12:00 p.m. This service attends monthly to

[2] Instituto Salvadoreño del Seguro Social, estamos comprometidos a brindar de manera integral atención a la salud y prestaciones económicas a los trabajadores que cotizan o derechohabientes.

approximately 100 patients coming from nearby cantons and from the same city, mainly from the rural area.

Photo 1. 3 – Club de Leones Clinic

f) **Municipal Hall Clinic:** It is located inside the facilities of the Municipality, and carries out Medical Brigades, the last one was carried out the 4 of July of 2014, which consisted of magnetic resonance exams with high technology from Cuba and Germany, thanks to the management with the NGO "2 Prosperity".

g) **Port's Captain Nursing:** Provides minor healing services.

h) **Private Medical Offices:** There are 6 private doctor's offices that provide various health services and various specialties.

i) **Private Laboratories:** There are 4 private laboratories, diagnostic centers and X-rays located in the urban area of Acajutla.

j) **Pharmacies:** The municipality has 8 pharmacies in total, the one at the UCSFI has a store of medicines that is currently providing supplies for two months; Besides the pharmacy of the ISSS of Acajutla, Club of Lions and Clinic Assistance of the Mayor. Also, there are 4 private pharmacies in the urban area and central area of the Municipality.

1.3.1 Unidad de Salud Familiar Comunitaria (UCSFI) of Acajutla

It is the closest to the project, it is located on the avenue Pedro de Alvarado and the Boulevard 25 of February, in front of the Municipality of Acajutla.

a) **Services provided:**

x External consultation
x Dentistry
x Clinical laboratory

x Gynecology
x Small surgery
x Inhaloterapia
x Cures and injections
x Vaccination
x Maternal and child care
x Family Planning
x Cervicovaginal cytology test
x Health promotion
x Control of vectors x Basic sanitation x Clinical laboratory
x Pharmacy
x Ambulance.

b) **Coverage:** City of Acajutla, Punta Remedio, San Julián, El Coyol, Valle Nuevo, El Salamo, Morro Grande.

Table 1.2 - Approximated distances of establishments from the different communities

Municipality	Cantón or neighbor-hoood	Caserios	Distance in Km.	Access to establishment	
				Travel Time	
				Vehicle	Bus
ACAJUTLA	Cantón el Coyol	Santa Rosa, Atalayita, lot. Atalayita, Guadal canal, Monterrico,	12 Km.	90 Minutes	180 Minutes
	Cantón el Salamo	Los Santos, El Ángel, Las Vegas, Los Justos, El Centro, Los Marroquines, Los Alfaros, Los Ilarios.	14 Km.	20 Minutes	200 Minutes
	Cantón San Julián	Obelisco, El Zope, San Emilio, Nueva Acajutla, Sta. Isabel, Colima, Kilo 5, Mesa Verde, Nueva Sta. Marta, Sta.	11 Km.	5 Minutes	90 Minutes
	Cantón Punta Remedios		14 Km.	25 Minutes	120 Minutes
	Cantón Morro Grande Abajo	Morro Grande Abajo, la Joya, La Ocrera, San Carlos.	15 Km.	25 Minutes	120 Minutes
	Cantón Valle Nuevo	Valle nuevo, copapacho, la encantada.	12 Km.	20 Minutes	240 Minutes
	Cantón el Suncita	El Suncita, San Pedro Belén, Las Marías, Copinula, El Milagro,	11 Km.	15 Minutes	60 Minutes

c) **Number and type of health personnel**: 4 doctors, 12 nurses, 17 health promoters, and 5 sanitation inspectors.

d) **Local capacities:** The unit has the support of 16 promoters' offices distributed in different communities, and 20 community premises that are used to attend health days by the rural mobile team.

e) **Hours of Service:** Work 24 hours, with support from FOSALUD[3] for the schedule extended.

f) **Description of the infrastructure:** Reconstructed in 2004, it occupies an area of approximately half a block. The building consists of: 5 doctor's offices,
Laboratory, dentistry, vaccination, inhalation, cures and injections, family planning, maternal infant area, oral rehydration, patient preparation area, nurses station, waiting room, Office of Environmental Sanitation, health promotion area, Pharmacy, archive, nursing office, address, secretary, medicine warehouse, general warehouse, sanitary services, area of purification apparatus, cafeteria, parking.

1.4 Sanitary Conditions of the Municipality

The sanitary conditions of Acajutla show a similar profile to the rest of the department, in which poverty constitutes the main problem that causes and originates the insalubrity; This phenomenon is more serious in rural areas.

In 2001, the municipality had only two health units to meet the public demand for this service. As in all the other municipalities of Sonsonate, the demographic and social conditions of Acajutla affect the epidemiological profile, which is characterized by a high incidence of acute respiratory infections (ARI), gastrointestinal and parasitic diseases and, in general, infectious diseases, nutritional deficiencies and deficiencies in the provision of basic services (safe water, solid waste, excreta and wastewater, etc.), even though in recent years diseases have been The HIV / AIDS pandemic, influenza, rotavirus, dengue and others.

1.4.1 Epidemiological Background

Tabla 1.3 Historial de Enfermedades Epidémicas en los Últimos años

Table 1.3 – History of Epidemic Diseases in the Recent Years	
PERIOD	**EPIDEMIC DISEASES**
1990	Cholera Epidemic
1995	Conjuntivitis Epidemic
2000	Dengue Epidemic
2003	Pneumonia Epidemic
2005-2006	Rotavirus Diarrhea Outbreak
2008	Cases of animal rabies
2009	Influenza pandemic to h1n1

Source: Historical Background Health Unit.

[3]Fondo Solidario para la Salud (FOSALUD) nació como parte de una reforma fiscal desarrollada en El Salvador en el año 2004. La idea fundamental fue la creación de un "fondo" que fuera alimentado por medio de impuestos a productos considerados nocivos para la salud y que sirviera para mejorar y ampliar la atención médica brindada a la población en las unidades de salud.

According to data provided by the Ministry of Public Health and Social Welfare (MSPAS), the incidence rates of classical dengue and dengue hemorrhagic fever in Acajutla in 2003 would have been slightly higher than those recorded in most other municipalities of Sonsonate, but lower than the average rates reported for the whole country. Similarly, Acajutla had a higher malaria incidence rate than several other municipalities in the department, but lower than the national average.

1.4.2 Main Causes of Morbidity and Mortality

1.4.2.1 Morbidity

Morbidity is defined as the number of individuals who are considered sick or who are victims of illness in a given space and time. Morbidity is an important statistical data to understand the evolution or regression of a disease, the reasons for its emergence and the possible solutions.

In this sense, we present some statistical data about the main causes of morbidity in the municipality of Acajutla as well as the department of Sonsonate to which the municipality belongs. As we can see, the main causes of morbidity for Sonsonate are diseases of respiratory origin, firstly cases of acute rhino pharyngitis with 43,716 consultations for December 2013, as can be seen in table 1.4. Similarly, for the municipality of Acajutla the main causes of morbidity are diseases of respiratory origin, first having acute pharyngitis with 6,796 consultations for December 2013, as can be seen in table 1.6. Respiratory diseases are followed by both Sonsonate and Acajutla, urinary tract infections, and intestinal-type diseases, such as diarrhea and gastroenteritis of presumed infectious origin.

The same pattern of previous morbidity led by respiratory and intestinal diseases (diarrhea) is presented specifically in the infant population of Acajutla, children under 1 year and pre-school children from 1 to 4 years of age as can be seen in Tables 1.7 and table 1.8 respectively. Morbidity data at the national level are also quite similar as shown in Table 1.12.

Table 1.4 – Total Population - Año 2013

Place	Total habitants
Department: Sonsonate	447,130
Municipality: Acajutla	52,479

Source: SIBASI Sonsonate - a partir del VI Censo de Población y V de Vivienda 2007. General Directorate of Statistics and Census of El Salvador

Table 1.5 - Most frequent morbidity, Department of Sonsonate				
Morbidity List by Sex - Specific Causes. Period from 01/01/2013 to 12/31/2013 First Time Consultations				
No.	Group of Causes	Men consultation	Women consultation	Total
1	Acute rhinopharyngitis [common cold] (J00)	18,896	24,818	43,716
2	Acute pharyngitis, unspecified (J02.9)	17,305	23,988	41,293
3	Other acute infections of multiple sites of the upper respiratory tract (J06. 8)	12,227	18,015	30,242
4	Urinary tract infection, site not specified (N39.0)	4,246	17,066	21,312
5	Diarrhea and gastroenteritis of presumed infectious origin (A09)	4,847	6,205	11,052
6	Intestinal parasites, not otherwise specified (B82.9)	3,019	4,763	7,782
7	Headache due to stress (G44.2)	920	6,274	7,194
8	Acute bronchitis, unspecified (J20.9)	3,314	3,367	6,681
9	Acute vaginitis (N76.0)	0	6,663	6,663
10	Otitis media, unspecified (H66.9)	2,248	3,293	5,541

Source: SIBASI Sonsonate a partir del Sistema de Morbimortalidad y estadísticas vitales del Ministerio de Salud (SIMMOW)

Table 1.6 - Morbidity more frequent municipality of Acajutla				
Morbidity List by Sex - Specific Causes. Period from 01/01/2013 to 12/31/2013 First Time Consultations				
No.	**Group of Causes**	**Men**	**Women**	**Total**
1	Acute pharyngitis, unspecified (J02.9)	3,024	3,772	6,796
2	Acute rhinopharyngitis [common cold] (J00)	2,414	3,084	5,498
3	Urinary tract infection, site not specified (N39.0)	834	2,929	3,763
4	Other acute infections of multiple sites of the upper respiratory tract (J06.8)	1,112	1,629	2,741
5	Diarrhea and gastroenteritis of presumed infectious origin (A09)	930	1,115	2,045
6	Otitis media, unspecified (H66.9)	470	698	1,168
7	Headache (R51)	173	742	915
8	Acute Vaginitis (N76.0)	0	882	882
9	Fever, unspecified (R50.9)	423	413	836
10	Intestinal parasites, not otherwise specified (B82.9)	327	506	833
11	Other causes	7,616	14,041	21,657

Source: SIBASI Sonsonate a partir del Sistema de Morbimortalidad y estadísticas vitales del Ministerio de Salud (SIMMOW)

The main cause of morbidity in children younger than 1 year of age as well as for pre-school children 1 to 4 years of age are acute respiratory infections and in second, diarrhea and gastroenteritis, also for both age groups.

Table 1.7 - Main causes of morbidity in the child population (less than 1 year)			
PERIOD FROM JANUARY TO SEPTEMBER 2013			
	Health Unit of Acajutla		
No. order	**CAUSE**	**CASES**	**RATE***
1	ACUTE RESPIRATORY TRACT INFECTION	1531	463
2	DIARRHEA ENTERITIS AND GASTROENTERITIS	121	168
3	BACTERIAL CONJUNCTIVITIS	97	134
4	AMIBIASI	7	9
5	CHICKENPOX	5	7
	TOTAL:	1761	

Table 1.8 - MAIN CAUSES OF MORBIDITY IN PRE-AGE AGE (1 TO 4 YEARS)			
PERIOD FROM JANUARY TO SEPTEMBER 2013			
Health Unit of Acajutla			
No. Order	**CAUSE**	**CASE**	**RATE ***
1	ACUTE RESPIRATORY TRACT INFECTION	3867	1240
2	DIARRHEA ENTERITIS AND GASTROENTERITIS	208	66
3	BACTERIAL CONJUNCTIVITIS	86	27
4	AMIBIASIS	52	16
5	GIARDIASIS	81	26
6	CHICKENPOX	31	10
7	BITE BY ANIMAL RABIES TRANSMITTERS	17	5
7	VIRAL HEPATITIS A	2	1
8	CLASSIC DENGUE	11	4
	TOTAL	4355	

Source: Reporte Epidemiológico Semanal Enero-Septiembre 2013

Table 1.9 Most frequent respiratory diseases, Department of Sonsonate				
Morbidity List by Sex - Specific Causes. Period from 01/01/2013 to 12/31/2013 First Time Consultations				
No.	**Group of Causes**	**Men consultation**	**Women consultation**	**Total**
1	Acute rhinopharyngitis [common cold] (J00)	18,896	24,818	43,716
2	Acute pharyngitis, unspecified (J02.9)	17,305	23,988	41,293
3	Other acute infections of multiple sites of the upper respiratory tract (J06.8)	12,227	18,015	30,242
4	Acute bronchitis, unspecified (J20.9)	3,314	3,367	6,681
	TOTAL:	51,742	70,188	121,932

Source: SIBASI Sonsonate a partir del Sistema de Morbimortalidad yestadísticas vitales del Ministerio de Salud (SIMMOW)

Table 1.10 - Most Frequent Respiratory Diseases, municipality of Acajutla				
Lista de Morbilidad por Causas Específicas por Sexo. Período del 01/01/2013 al 31/12/2013 Consultas de Primera Vez				
No.	**Group of Causes**	**Men consultation**	**Women consultation**	**Total**
1	Acute pharyngitis, unspecified (J02.9)	3,024	3,772	6,796
2	Acute rhinopharyngitis [common cold] (J00)	2,414	3,084	5,498
3	Other acute infections of multiple sites of the upper respiratory tract (J06.8)	1,112	1,629	2,741
	TOTALES:	6,550	8,485	15,035

Source: SIBASI Sonsonate a partir del Sistema de Morbimortalidad y estadísticas vitales del Ministerio de Salud

At the level of the Western Health Region4 (the region to which the department of Sonsonate and Acajutla belong), the main pathologies of epidemiological interest according to the Ministry of Health are, firstly, Acute Respiratory Infections (IRAS), and Second are diarrhea, which correspond simultaneously to the diseases with greater incidence in the Region.

[4] The Western Zone of the Country is made up of the departments of Sonsonate, Santa Ana and Ahuachapán.

Table 1.11 Main pathologies of epidemiological interest in the western region of El Salvador				
All over the country, January to December 2012				
No.	**Pathology**	**Year 2011**	**Year 2012**	**Variation**
1	ARI	322,913	310,289	-3.9%
2	Diarrhea	20,435	22,622	10.7%
3	Pneumonia	7,336	5,272	-28.1%
4	Suspected Dengue	2,681	4,597	71.5%
5	Suspected Severe Dengue	302	679	124.8%
6	Confirmed Dengue	584	2,066	253.8%
7	Confirmed Dengue Grave	58	309	432.8%
8	Eruptive febrile illness	283	189	-33.2%
9	Poisoning with Pesticides	541	570	5.4%
10	Bites by animal rabies transmitter	3,117	2,798	-10.2%
11	Bacterial Conjunctivitis	10,586	11,148	5.3%
12	Whooping cough	21	81	285.7%
13	Pulmonary tuberculosis	252	258	2.4%
14	Extrapulmonary Tuberculosis	86	76	-11.6%

Source: Programa De Fortalecimiento De Capacidades Para La Gestión De La Política De Recursos Humanos En Salud,Ministerio De Salud Región Occidental De Salud, 2012.

Nationally as well as for the municipality of Acajutla and the department of Sonsonate, the main cause of morbidity are respiratory-type diseases, but diseases of the digestive system and diarrhea are also found within the first 10 causes of morbidity.

Table 1.12 - Ten first causes of morbidity El Salvador				
Entire Country, January to December 2012				
No.	**Group of causes**	**Men consultation**	**Women consultation**	**Total**
1	Acute upper respiratory infections (J006) and (J30.0-J39.9)	664,605	975,512	1,640,117
2	Urinary System Diseases	68,690	243,651	312,341
3	Digestive System Diseases	84,221	193,387	277,608
4	Skin and Subcutaneous Tissue Diseases	109,704	158,038	267,742
5	Diseases of the Osteomuscular System and Conjunctive tissue	70,111	166,353	236,464
6	Trauma of different anatomical sites	136,118	89,276	225,394
7	And female genitalia Inflammatory Diseases of Pelvic Organs	0	210,749	210,749
8	Acute lower respiratory tract infections	91,214	113,298	204,512
9	Diarrhea	88,662	115,303	203,965
10	Diseases of the Circulatory System	37,996	115,979	153,975
	Other causes	885,50	1,924,10	2,809,60
	Total	2,236,8	4,305,65	6,542,47

Source: MSPAS, Health Indicators.

1.4.2.1.1 Morbidity Conclusions

The main cause of morbidity in Acajutla has been for more than a decade, acute respiratory infections, according to the "Territorial Development Plan for the Region of Sonsonate"[5] the ARI[6] affected in 2003 to 23% of the population, incidence which is among the highest in the Territorial Unit after the municipality of Sonsonate. The cases of diarrhea followed this year, which were approximately 3% of the population, a figure that is also among the highest in the Territorial Unit and Region. As we can check with all previous statistics, 2013 also repeats the same pattern.

According to the report "*Education in Environmental Sanitation in the Urban and Suburban Zone of* the *City of Acajutla in the Year 2013*"7, the population of the city of Acajutla is aware that the problem of environmental pollution is something that is causing great damage in human life, plant life and animal life. In the city of Acajutla the situation is of concern because it directly affects the health of all citizens in the urban and suburban areas of the city due to the fact that water, soil and air present some degree of contamination and as a result ther are respiratory diseases, gastrointestinal and others.

Studies by the Ministry of the Environment8 reveal that the main cause of air pollution at the national level comes primarily from substances emanating from vehicular transport, second from the combustion of garbage, and the combustion of firewood kitchens In rural areas. In San Salvador, 51% of the substances that pollute the air are emitted by vehicles according to the Vice Ministry of Transport.

The high concentrations of airborne substances are seen in the high rates of acute respiratory infections reported by Public Health, as well as the contamination of soils and water by the garbage, is reflected in the rates of gastrointestinal diseases.

1.4.2.2 Mortality

From a demographic point of view, mortality research aims to establish the evolution and structure of deaths occurring in a population and in a given geographic space over time. Likewise, mortality rates are closely related to development, generally in the least developed countries the mortality and birth rate is higher, while in the more developed the mortality and birth rate is lower. That is why one of the "Millennium Development Goals (MDGs)[9] for El Salvador is the eradication of child mortality.

[5] Fifth Report: Synthesis of the Territorial Development Plan for the Municipality of Acajutla, May 2008.
[6] Acute Respiratory Infections
[7] Research developed in settlements near the urban, industrial and tourist zone, such as Colonia Alvarado and Playa Los Cóbanos, in the city of Acajutla. With which it was tried to determine the causes and factors that generate the environmental contamination. June 2013.
[8] Estrategia Nacional de Saneamiento Ambiental, MARN, junio de 2013.
[9] The Millennium Development Goals (MDGs) are a set of very precise goals that are taken as a compromise between nations, and that allow focusing attention on specific aspects of development.

Of the total of 2,937 deaths that occurred for the whole department of Sonsonate from January to December of the year 2013, a total of 344 that correspond to 11.71%, occurred within the municipality of Acajutla. Of these the main cause of general mortality for the municipality of Acajutla are chest wounds by firearm and the second cause is chronic renal failure. At national level these two causes are also repeated among the first 3 causes of mortality.

Table 1.13 - General Mortality - Year 2013		
Place	**Total deaths**	**Rate x 100,000 hab.**
Departament of Sonsonate	2937	656.9
Acajutla Municipality	344	655.5

Source: SIBASI Sonsonate a partir del Sistema de Morbimortalidad y estadísticas vitales del Ministerio de Salud (SIMMOW)

Table - 1.14 Infant Mortality - Year 2013	
Place	Rate for every 1000 living newborn
Departament of Sonsonate	13.5
Acajutla Municipality	11.4

Source: SIBASI Sonsonate a partir del Sistema de Morbimortalidad y estadísticas vitales del Ministerio de Salud (SIMMOW)

Table 1.15 - Ten first causes of general mortality of Acajutla			
PERIOD FROM JANUARY TO SEPTEMBER 2013			
No. Order	CAUSE	CASES	RATE *
1	TORAX PENETRATING WOUND FROM FIREARMS	25	6
2	CHRONIC RENAL FAILURE	15	4
3	CRANEOENCEFALIC TRAUMA	14	4
4	SEPTIC SHOCK	14	4
5	CANCER	10	3
6	ACUTE MYOCARDIAL HEART ATTACK	8	2
7	VASCULAR BRAIN ACCIDENT	6	2
8	BLEEDING OF UPPER DIGESTIVE TUBE ALCOHOLISM	5	1
9	AIDS	5	1
10	SUBTOTAL	3	0.7
	OTHER CAUSES	105	
		47	
	TOTAL	152	39

Source: Municipal Death Penalty Records 2013

Table 1.16 - MAIN CAUSES OF MORTALITY IN THE CHILDREN'S POPULATION (LESS THAN 1 YEARS)			
PERIOD OF JANUARY TO SEPTEMBER 2013, Acajutla			
No. Order	**CAUSE**	**CASES**	**RATE ***
1	SEPSIS	1	1.8
2	ACUTE FETAL SUFFERING	1	1.8
	TOTAL	2	3.3

Source: Town Hall Mortality Records

Table 1.17 TEN FIRST CAUSES OF GENERAL MORTALITY EL SALVADOR				
PERIOD FROM JANUARY TO DECEMBER 2011				
No. Order	CAUSE	TOTAL	MEN	WOMEN
1	PENETRANT WOUND FOR FIREARMS (X95)	2,767	2,419	348
2	ACUTE MYOCARDIAL HEART ATTACK (I21)	2,104	1,095	1,009
3	RENAL INSUFFICIENCY (N18)	1,665	1,108	557
4	HEART FAILURE (I50)	1,409	698	711
5	PNEUMONIA (J18)	1,271	656	615
6	ACCIDENT OF MOTOR VEHICLE OR WITHOUT ENGINE, TYPE OF VEHICLE NOT SPECIFIED (V89)	1,067	839	228
7	DIABETES MELLITUS (E14)	909	330	579
8	ACUTE BLEEDING VASCULAR ACUTE AS HEMORRHAGIC OR ISCHEMIC (I64)	567	270	297
9	MENTAL AND BEHAVIORAL DISORDERS DUE TO THE USE OF ALCOHOL (F10)	538	517	21
10	MALIGNANT STOMACH TUMOW	466	255	211

Source: Ministerio de Economía, Dirección General de Estadísticas y Censos (DIGESTYC) Registro de Defunciones.

1.4.2.2.1 Mortality Conclusions

As for the municipality of Acajutla, at the national level, penetrating gunshot wounds are also the main cause of mortality. El Salvador has maintained high levels of violence and delinquency for several years, and the municipality of Acajutla is no exception. Homicides and, more recently, extortion are two of the crimes that are most affecting the insecurity of the population, so it should not be surprising that firearm deaths leads the 10 primary causes. According to data from the National Civil Police for 2010, the municipality of Acajutla ranked No. 14 among the 25 most violent municipalities at the national level.

Similarly, chronic renal failure is among the first 3 causes of mortality in both the municipality of Acajutla and the National level. According to data from the World Health Organization (WHO), El Salvador has the highest rate of death due to chronic kidney disease (CKD) in the world, with 51.8 deaths per 100,000

inhabitants. It has been attributed several causes from contamination by agrochemicals, diabetes and hypertension. However, the association of nephrologists in El Salvador believes that MINSAL should focus its research on other causes, such as people living near the coast and dehydrating in the strenuous days of work in cane fields and other crops.

1.4.3 Road Accidents

El Salvador presents upsetting statistics on road safety, and the municipality of Acajutla is no exception. Within the framework of the project "Encouragement of coexistence and citizen security in Sonsonate", the National Road Safety Committee (CONASEVI) has furthered analyzed of road accidents in three of the most important municipalities in the department: Sonsonate, Sonzacate and Acajutla.

Table 1.18 Accidents and victims of traffic Acajutla, Sonsonate and Sonzacate, Transit Subdivision of the PNC

ACAJUTLA		SONSONATE		SONSONATE		TOTAL	TOTAL
VICTIMS	ACCIDENTS	VICTIMS	ACCIDENTS	VICTIMS	ACCIDENTS	VICTIMS	ACCIDENTS
99	122	146	321	30	61	27	504

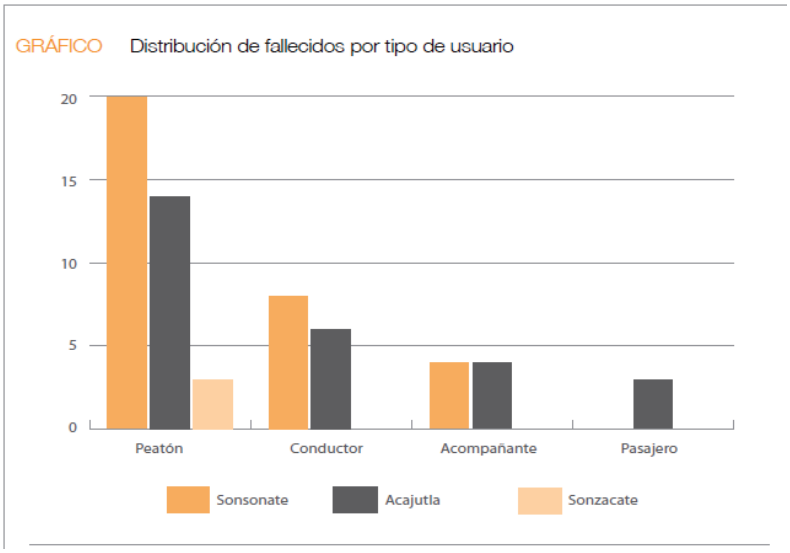
Source: Characterization Of Road Safety In Municipalities Of Sonsonate, Sonzacate y Acajutla, January to December, 2008.

835 traffic accidents occurred in the department of Sonsonate, of which 471 caused property damage and 364 personal injuries to 595 victims. In all three municipalities, a total of 504 accidents, of which 320 caused material damages and 184 personal injuries to 275 victims. The three municipalities account for 60% of the accidents that occurred in the department. Proportionally, the accidents that occurred in Acajutla caused more victims (in 80% of cases) than in Sonzacate (50%) and Sonsonate (45%).

10% of the total deaths in national traffic accidents (1,204) as well as 6% of the total number of people injured in the country's traffic accidents occurred in the department of Sonsonate. The mortality of road mainly affects men, specifically adults (87%). Minors (13%) and people over 60 are other vulnerable age groups.

In nearly half of the accidents (43%) occurred in Sonsonate, Sonzacate and Acajutla, the type of vehicle involved was not determined. One of the reasons could be the fact that many drivers flee the scene of the accident. Of the vehicles identified, the highest percentage corresponds to private vehicles (26%), followed by a high number of buses (11%). This last finding is particularly worrying considering that at the national level collective transport vehicles represent only 3% of the vehicle fleet.

Figure 1.3 Distribution of Deaths by Type of User



Source: Delegación Departamental de la PNC en Sonsonate, 2008

The following table shows that the accident rate is related to:

X **Sonsonate:** Christmas celebrations, Cultural celebrations, Holy Week (to corroborate)

X **Sonzacate:** N / A

X **Acajutla:** Period of Zafra (Nov-March)

Table 1.19 Months and Road accidents

Months	Acajutla	Sonsonate	Sonzacate	TOTAL
January	8	34	10	52
February	10	28	0	38
March	8	32	8	48
April	14	21	3	38
May	13	23	3	39
June	10	27	9	46
July	13	21	4	38
August	5	30	4	39
September	9	24	3	36
October	14	18	8	40
November	7	28	2	37
December	11	35	7	53
Total	122	321	61	504

Source: Subdireccion de Transito PNC

Table 1.20 Road Mortality

% of deaths in the Department of Sonsonate

No.	UNITS	08	%
01	SONSONATE	32	25.4
02	ACAJUTLA	27	21.4
03	ARMENIA	23	18.25
04	IZALCO	28	14.30
05	NAHUIZALCO	13	10.30
06	JUAYUA	5	4.0
07	SONZACATE	3	2.4
08	NAHUILINGO	2	1.6
09	SALCOATITLAN	1	0.8
10	SAN JULIAN	1	0.8
11	SANTO DOMINGO	1	0.8
	TOTAL	**126**	**100.0**

National: 1,204 deaths.

10% of the total deaths registered at national level, occurred in Sonsonate.

49% of the total deaths registered in the department of Sonsonate, occurred specifically in Sonsonate (32) and Acajutla (27).

Department with high mortality:

- National: 2 death x 6 injured
- Sonsonate: 1 death x 3 injured

Source: Subdireccion de Transito PNC

Table 1.21 Injured – Road Morbidity

% of injured in the Department of Sonsonate

No.	UNITS	08	%
01	SONSONATE	114	
02	ACAJUTLA	72	
03	ARMENIA		
04	IZALCO		
05	NAHUIZALCO		
06	JUAYUA		
07	SONZACATE	27	
08	NAHUILINGO		
09	SALCOATITLAN		
10	SAN JULIAN		
11	SANTO DOMINGO		
	TOTAL	**469**	

National: 7,512 injured.

6% of the total injured registered at national level, occurred in Sonsonate.

45% of the total injured registered in the department of Sonsonate, occurred specifically in Sonsonate (114) and Acajutla (72) and Sonzacate (27).

Source: Subdireccion de Transito PNC

1.4.4 Reproductive Health

With respect to reproductive health, Acajutla presents intermediate percentages of all contraceptive use in relation to the total population, and of condom use in relation to other methods of family planning. At the same time, this has contributed to a higher incidence of HIV among pregnant and young women. The department of Sonsonate occupies the second place, after San Salvador, in cases of HIV / AIDS; In 2003, 29 cases were reported for a cumulative total of 774 cases. In Acajutla, the prevalence of HIV in sex workers is similar to that of San Salvador, which is 3.7%.

For the MDG 6[10], two goals were established. The first is to halt and begin to reduce, by 2015, the spread of HIV / AIDS; The second is to have stopped and begun to reduce, for the same year, the incidence of dengue and other serious diseases. Among the indicators established to monitor the evolution of the first one is the percentage of use of all contraceptives in relation to the total population, understood as a first great approximation to the use of prophylactic methods of sexual health and reproduction by the population. By 2004, about one in seven of the inhabitants of Acajutla used some of them.

However, the percentage of condom use - until now the only truly proven means of avoiding HIV / AIDS - in comparison to other family planning methods was barely 2.5% (see table). To a large extent, the cited figure paints not a very encouraging picture of active containment of the epidemic in the municipality. At the same time, it suggests the need to face the challenge of increasing the penetration of educational awareness and awareness-raising campaigns aimed at diffusing how the contraction of this sexually transmitted disease can be prevented. As regards the prevalences associated with dengue and tuberculosis, they share in common the fact that in 2003 there was a relatively low number of cases verified in the municipality (see table), which in fact does not constitute a major problem for the public health for Acajutla.

Table 1.22 MDG Goal Indicators 6: Combat HIV / AIDS, Malaria and Other Diseases, Municipality of Acajutla.

INDICATORS	MUNICIPALITY OF ACAJUTLA	DEPARTMENT OF SONSONATE	TOTAL COUNTRY	
			2004	GOAL 2015
MDG 6: Halt and begin to reduce, by 2015, the spread of HIV / AIDS.				
I2MMDG 6: Rate of condom use with respect to contraceptive prevalence (a)	*2.5*	*No data*	*No data*	*Halt and reduce*
I5MMDG 6: Prevalence rate of contraceptives (b)	*14.3*	*No data*	*No data*	*Halt and reduce*

Source: Monitoring and Evaluation Unit, Ministry of Public Health and Social Assistance. (B) Central Laboratory / Epidemiology Unit, Ministry of Public Health and Social Assistance.

[10] MDG 6, corresponds to "Millennium Development Goal # 6 of the UNDP Human Development Report 2003", which speaks of halting and beginning to reduce the spread of HIV / AIDS by the year 2015, Malaria And Other Diseases.

Table 1.23 Use of family planning methods in the department of Sonsonate		
Municipality	**% Use of all contraceptives in relation to the total population**	**% Use of condoms in relation to other family planning methods**
Acajutla	14.3	2.5
Armenia	14.6	0.4
Caluco	9.4	1.7
Cuisnahuat	12.3	3.5
Izalco	10.3	13
Juayúa	19.8	0.8
Nahuizalco	11.7	18.6
Nahuilingo	11.1	0
Salcoatitán	10.3	5.9
San Antonio del Monte	4.1	1.2
San Julián	15.9	0.9
Santa Catarina Masahuat	11.7	2.9
Santa Isabel Ishuatán	22.3	3
Santo Domingo Guzmán	12.9	0.9
Sonsonate	2.4	
Sonzacate	24.9	3

Source: Monograph on Human Development and the Millennium Development Goals, United Nations Program United Nations Development Program, 2006

1.4.1 Preventive Health

In the area of preventive health, one of the problems that most affect the health situation of the population is child malnutrition. For the same year, the MSPAS reported 671 cases of acute malnutrition24 and 23 cases of chronic malnutrition25, for a total of 694 cases of malnutrition in children under five in the municipality. This would correspond to 24% of all cases of malnutrition in children under five years registered in Sonsonate in 2003.

1.5 Situation of Risk and Emergencies

1.5.1 History of Disasters

Disasters pose great challenges for the health sector because they generate damages to the people and facilities of the sector, they force to increase or intensify the offer of services to attend and assist those affected. The priority is always the preservation of the greatest number of human lives, for which an arduous work of intra and intersectoral coordination is required.

Disasters in general have a negative impact on development due to its impact on human, psychological, social, economic, political, ecological and other aspects, and especially on individual and public health. Phenomena such as Hurricane Mitch, the 2001 earthquakes, the latest epidemics and tropical storms; have made evident the need to promote and strengthen local health systems and social organization in the field of emergencies and disasters.

Acajutla is traditionally a high risk sector because of the geographic location in which it is located. The majority of colonies and ''caserios'' are on a riverside and coastal zone. There are vulnerable areas mainly in the rainy season. There are phenomena such as floods, tropical storms, hurricanes, strong winds and waves. There is the potential risk of a tsunami. The vulnerability of Acajutla is not only due to climatic phenomena but also because it is an industrial municipality. Risks of emanations and spills of toxic substances that affect the population and the environment.

In the history of Acajutla we can remember epidemics that came into the country mainly because of the maritime exchange of people, such as the epidemic of hemorrhagic conjunctivitis in 1995, spills, toxic fumes, hurricanes like FIFI in 1975 and tropical storms like Stan in 2005. The following is a table with the history of the most serious emergencies that the municipality has suffered.

Table 1.24 History of the Most Serious Emergencies or Disasters in Acajutla

No.	DATES	EMERGENCIES OR DISASTERS
1	1932	Flood
2	1975	Hurricane Fifi
3	1990	Epidemic of Cholera
4	1995	Epidemic of Hemorrhagic Conjunctivitis
5	1995	Chlorine gas spill
6	1996	Toxic spill at CEPA
7	1998	Tropical Storm Mitch
8	2000	Dengue epidemic
9	1986,2001	Earthquakes
10	2003	Pneumonia Epidemic
11	2005	Hurricane Adrian and Stan Storm
12	2005 y 2006	Rotavirus Epidemics
13	2006	Dichlorobenzene effusion
14	2008	Ammonia gas leak
15	2009	Pandemic Influenza A H1N1

Source: Local Health Emergency Plan of the Acajutla Health Unit.

1.5.2 Vulnerability Appreciation

Acajutla is traditionally a high risk sector because of the geographic location in which it is located. The majority of colonies and ''caserios'' are on a riverside and coastal zone. There are vulnerable areas mainly in the rainy season.

There are phenomena such as floods, tropical storms, hurricanes, strong winds and waves. There is the potential risk of a tsunami. The vulnerability of Acajutla is not only due to climatic phenomena but also because it is an industrial municipality. Risks of emanations and spills of toxic substances that affect the population and the environment.

The following table presents an analysis of the threats, the possible elements exposed, the vulnerability factors and possible damages, identified by the Health Unit of Acajutla to deal in extreme cases.

Table 1.25 Assessment of the Vulnerability of Settlements in Acajutla				
THREAT	**DESCRIPTION OF THE THREAT**	**ITEAM EXPOSED**	**VULNERABILITY FACTORS**	**PROBABLE DAMAGE**
FLOOD	Rising water level in a river, lake coastal marine region or other places subjected to heavy rains and with difficulties of absorption or runoff, causing damage to people.	People living in the affected areas. Destruction of material goods.	Location of human settlements in vulnerable areas.	Human and material. Escape from rodents and ophidians by flooding of their natural habitat that can generate public health problems. Damage to crops that may affect nutrition and family economy.
TSUNAMI	Large series of sea waves, generated by the sudden displacement of water bodies, as a result of earthquakes, volcanic eruptions or submarine detachments, capable of propagating thousands of kilometers.	People, housing, roads and industries. Destruction by the hit of the wave. They cause the greatest number of deaths. The numbers of injured are low. Death by suffocation by submersion. The most affected are children under five and adults over 65..<	Abundant in settlements in coastal areas. Urban area at the sea shore. Allocation of industrial areas handling substances with hazardous chemicals. At the moment there is no effective early warning system. Infrastructure, equipment and Inputs from the Health Unit of Acajutla.	Human lives, damage to the environment, damage to the industrial zone.
TOXIC SUBSTANCES SPILLS AND EMANTATIONS	It is an industrial disaster (anthropic). Exposure to toxic substances such as hydrocarbons, gases and liquids.	People living near the disaster due to spills or emanations. Damage to the environment. People traveling on the road between Sonsonate and Acajutla.	There is little distance between settlements and the industrial area. Limited experience in occupational and industrial security. On the road that takes to Puerto de Acajutla circulate indiscriminate and transport with unfulfilled international transport standard. People who do not own housing use the vacant lots around the industries without realizing the danger it represents.	Intoxicated people. Chemical burns irritation of nostrils and eyes. Pollution of the environment. Fires. Major economic losses due to road congestion.

EARTHQUAKE	Shaking of the earth's surface, produced by the sudden release, in the form of waves, of accumulated energy, generated by the deformation of the crust.	People, physical infrastructure.	Vulnerability increases depending on the type of housing, time of the day when the phenomenon occurs and the density population. Houses built with precarious materials. Proximity to the sea with risk of tsunami. Large industrial zone near urban development could lead to pipes and exhaust of substances.	Dead people, injured. May have a lethality of 85% fire, chemical spills. Failure in water supply basic sanitation. Mental health disorders
EPIDEMICS	Emergence in a community or region of a number of cases too large or unexpected for that disease at that time and in that place.	CEPA workers and the population of Acajutla.	Port area with lots of commercial and labor activity. Boats of different countries of the world that bring crew and tourists, who may be sick. At the moment, there is no equipment for a comprehensive approach to these people. There is no isolation area of these patients in the strain facilities. Health personnel have not applied some vaccines that can immunize against some of these diseases.	Damage to humans. Damage to the health system. Damage to the national economy.
HURRICANES	Large-scale closed system, in the atmosphere, with low pressure and rotating strong winds. Hurricanes are large atmospheric swirls with winds of more than 120 km per hour, they tend to develop in depressions of the tropics and move in a erratically towards higher latitudes.	Population of the coastal zone of Acajutla. Urban zone. Physical infrastructure.	Precarious housing conditions in areas close to beaches.	Dead and injured. Material damage. Floods. Damage to network infrastructure Electrical installations.

TRAFFIC ACCIDENTS	Temporary damage, permanent or death to the person or property resulting from collisions, non-voluntary motor vehicle accidents.	People, passer-by. Material goods.	Wide roads suitable for extreme speeds. Little police surveillance. Heavy Trucks with industrial material. Human settlements, schools, companies on the side of the road. Very few footbridges and little use of them by the population. Culture of disrespect towards the pedestrian. Culture of omnipotence and daring of young people.	Damage such as polytrauma, disability and death. Damage to material goods.
FIRES	Situation caused by the production of large-scale fire and disordered form in areas that are vulnerable.	CEPA workers and the population of Acajutla.	Occasional electric voltage changes that can cause short circuits. Reheating of an equipment.	Second and third degree burns in people. Smoke poisoning. Damage to heritage.

Source: Local Health Emergency Plan of the Acajutla Health Unit.

1.5.1 High Risk Human Settlements

Settlements at high risk for different threats can be divided into urban, rural and industrial areas. These communities are presented below.

- **Urban Area:** Barrio la Playa, Barrio las Atarrayas, Barrio los Coquitos, la Coquera Community, Barrio el Campamento, and el Huisco Community, areas that are located by the sea are at risk of floods, tidal waves and tsunamis.

- **Rural Area**: Caserío el Venado, Los Cóbanos en Cantón. Punta Remedios, risk of flood, el Suncita Beach, Cantón El Suncita, risk of surge and tsunamis. Hacienda La Atalayita belongs to Cantón Santa Rosa El Coyol, risk of flood.

- **Industrial Zone:** In areas like El obelisco, el Zope, La Alvarado with risks of spills and toxic fumes.

The following table, prepared for the Local Health Emergency Plan of the Acajutla Health Unit, has listed the main communities and the main threats to which they are exposed, and which, due to the appreciation of their vulnerability, may require the intervention of the Health Unit in an emergency.

Table 1.26 Vulnerability Appreciation for Settlements in Acajutla

No.	COMMUNITY	POPULATION	PRINCIPAL THREATS	CUALITATIVE VULNERABILITY APPRECIATION
1	Barrio La Playa	1206	Flood and Tsunami	High
2	La coquera Community	1000	Flood and Tsunami	High
3	Barrio Las Atarrayas	805	Flood and Tsunami	High
4	Barrio Los Coquitos	325	Flood and Tsunami	High
5	Del Huisco Community	85	Flood and Tsunami	High
6	Caserio El Venado	1116	Flood	Medium
7	El Suncita Beach	432	Flood	Medium
8	Industrial Zone	1500	Chemical Spill	High
9	Urban Area Acajutla	32497	Chemical Spill	High
10	Urban Area Acajutla	32497	Disease from other countries	High

Source: Local Health Emergency Plan of the Acajutla Health Unit.

1.6 Access to Basic Services

Access to basic services includes all the assets and resources that the municipality has, the basic

services that exist to guarantee that the living conditions are worthy for the inhabitants residing in the territory. The quality of the provision of these services is decisive for a society that wants to implement a dignified and healthy environment. The following table presents information related to coverage and access to water services (in-house), garbage collection and households with sanitation and sewage:

Table 1.27 Access to Basic Services within the Municipality of Acajutla

No.	ASPECTS	HOUSEHOLDS		TOTAL	COVERAGE	BENEFITED POPULATION
		URBAN	RURAL			
1	Water Supply Systems.	2	3	5		
2	Houses with home water connection.	4,400	691	5,091	59.64%	26,146
3	Houses without home water connection.	270	3,175	3,445	40.36%	22,225
4	Active Wells.	130	1,600	1,730	20.2%	6,920
5	Houses Refurbished with water from wells.	130	1,600	1,730	20.2%	6,920
6	Houses Refurbished with water from other sources.	197	1,038	1,235	14.46%	41,125
7	Houses with Latrine.	4,638	2,523	7,161	83.89%	38,328
8	Houses without Latrine.	32	1,343	1,375	16.11%	8,218
9	Waste Collection Systems.	1	0	1	63.63%	28,044
10	Public Waste.	2	2	2	---------	---------
11	Houses Covered with Garbage Collection Systems.	4,548	884	5,432	63.63%	28,044
12	Houses with other Waste Disposal Systems.	122	2,982	3,104	36.37%	15,502
13	% Households with Sanitation Sewage	-	-	-	44.90%	-

Source: Local Health Emergency Plan of the Acajutla Health Unit, 2007.

By 2007, at the municipal level only 59.64% of households had access to water services in the home; 86.43% correspond to the urban area and 13.57% to the rural area. In other words, Acajutla presents a relatively low coverage of drinking water especially for the inhabitants of the rural area.

With respect to basic sanitation, more than 50% of households lack sewage networks and existing or planned treatment systems. Only 44.9% of households can access sewerage sanitation; 68.8% of households in the urban area have this service and only 19.1% in rural areas. On the other hand, the proportion of households that have access to garbage collection service is 63.63%, the majority is in urban areas.

1.7 Existent Health Programs

1.7.1 National Comprehensive Health Care Programs Ministry of Health (MINSAL)

Within the framework of the Health Policy Building Hope, MINSAL (Ministry of Public Health) develops programs to care for the population, which establish the provision of health services to the person in the life cycle. These programs are implemented from the central level of the Ministry from where the guidelines and regulations for their execution are dictated, based on the primary health care strategy. These programs are:

- National Program of Attention to the Childhood.
- National Program of Attention to Adolescents.
- National Program of Attention to Women.
- National Program of Attention to Male Adult.
- National Program for the Elderly Care.

Consequently, the actions and strategies framed in them, are coordinated and integrated prioritizing strategic components such as:

- Integral attention to Sexual and Reproductive Health
- Comprehensive care for life-cycle diseases (including Programs for the care of infectious and chronic no communicable diseases)
- Comprehensive health care for victims of violence.
- Control of untreated infections (Leprosy, Leptospirosis, Rabies, among others)
- Food and Nutrition Security
- Mental Health
- Oral Health
- External Cause Injuries
- Comprehensive Environmental Care (Including vector control programs)
- Epidemiological surveillance.
- Investigation

These strategic components are derived from the rest of National Programs, which are made operational at all levels of attention, from the local level; Through Community Health Teams (ECOS) and Community Family Health Units, among these:

- National ITS/ HIV-AIDS Program
- National Tuberculosis Program

Appendix 5AA–

No Objection Resolution Secretary of Culture

Apéndice 5AB
Resolución Secretaría de Cultura

DIRECCION NACIONAL DE PATRIMONIO CULTURAL

RESOLUCIÓN TR-SO-005-2014

San Salvador, 12 de noviembre de 2014
A 107 Ref. 1061-2014

Señor
Alejandro Gustavo Alle
Presente.-

Atención: Arqta. Leonora Margarita Ferrer Morán
Profesional Responsable

En atención a su solicitud presentada para que se realice una Inspección técnica y posteriormente obtener autorización para la realización del proyecto denominado: "LNG-to-Power" ubicado en la Zona Industrial, Nuevo Muelle, Puerto Acajutla, del Departamento de Sonsonate, al respecto esta Dirección Nacional de Patrimonio Cultural, es del criterio que:

CONSIDERANDO:

I. Que de conformidad con la Constitución de la República de El Salvador, Artículo 1 inciso 3, establece que "es obligación del Estado asegurar a los habitantes el goce de la cultura" y el articulo 63 "La riqueza artística, antropológica, histórica y arqueológica del país forma parte del tesoro cultural salvadoreño, el cual queda bajo la salvaguarda del Estado y sujeto a leyes especiales para su conservación".

II. Que en base a los artículos 1, 2 y 3 inciso 2, de la Ley Especial de Protección al Patrimonio Cultural de El Salvador, son bienes culturales, todos aquellos monumentos de carácter arquitectónico, urbano, jardines históricos, plazas, conjuntos históricos, vernáculos y etnográficos, centros históricos, sitios históricos y zonas arqueológicas.;

III. Que de acuerdo al Artículo 83 del Reglamento de la Ley Especial de Protección al Patrimonio Cultural de El Salvador. Para poder restaurar o demoler total o parcialmente un bien cultural inmueble, el propietario deberá solicitar una autorización de la Dirección Nacional de Patrimonio Cultural.

IV. Que por medio de Decreto Nº 8, de fecha 25 de Junio de 2009, publicado en el Diario Oficial, Tomo Nº 383 de Reformas al Reglamento Interno del Órgano Ejecutivo, se constituye la Secretaría de Cultura de la Presidencia.

V. Que según **ACUERDO NÚMERO** quince de fecha uno de junio de dos mil catorce, publicado en el Diario Oficial Número **NOVENTA Y NUEVE,** Tomo **CUATROCIENTOS TRES,** se nombro al **Dr. RAMON DOUGLAS RIVAS,** como **SECRETARIO DE CULTURA DE LA PRESIDENCIA.**

VI. Que de conformidad al **ACUERDO NÚMERO** Cero cero cuarenta y nueve de fecha diecinueve de agosto de dos mil catorce, el Secretario de Cultura de la Presidencia **DR. RAMON DOUGLAS RIVAS,** en uso de sus facultades legales RESUELVE: Nombrar al Director Nacional de Patrimonio Cultural, **LIC. WOLFGANG EFFENBERGER LOPEZ,** como la persona responsable de firmar resoluciones y otras medidas de protección y conservación del patrimonio cultural como son: el rescate, investigación, conservación, protección, promoción, fomento, desarrollo, difusión y valoración del Patrimonio o Tesoro Cultural Salvadoreño, en el marco de la ley Especial de Protección al Patrimonio Cultural de El Salvador, y su Reglamento.

RECIBIDO 20-11-14

VII. Que la Direccion de Arqueología, la Direccion de Patrimonio Cultural Edificado y la Sección de Paleontología, luego de la visita de inspección técnica realizada en fecha 23 de octubre del año en curso, determinan en sus informes que es factible la realización del proyecto "LNG-to-Power" en dicho inmueble.

POR TANTO, esta Dirección Nacional de Patrimonio Cultural, en base a los informes técnicos emitidos por la Dirección de Arqueología, la Direccion de Patrimonio Cultural Edificado y la Sección de Paleontología, **RESUELVE,** dar **FACTIBILIDAD** para la realización del proyecto "LNG-to-Power", condicionado a cumplir con lo siguiente:

1. Se deberá informar a la Direccion Nacional Patrimonio Cultural(DNPC) la fecha de inicio de los trabajos de remoción de suelos, descapote, elaboración de fosas sépticas o pozos, con el fin de corroborar la presencia o ausencia de bienes culturales muebles o inmuebles de interés arqueológico o paleontológico.

2. Si en el transcurso de los trabajos de construcción, se encontrasen objetos de interés arqueológico o paleontológico, deberá notificarse a la DNPC en un plazo no mayor a cinco días después de producido el hallazgo, según lo establecen los **artículos 67 y 68** del Reglamento de la Ley Especial de Protección al Patrimonio Cultural de El Salvador.

3. En caso de hallazgo fortuito de naturaleza arqueológica o paleontológica, deberán suspenderse las obras o trabajos en el sitio o lugar donde se hubiere verificado el hallazgo, hasta que se realice una inspección técnica por peritos de la Direccion Nacional de Patrimonio Cultural.

4. En caso de hallazgo fortuito de naturaleza arqueológica o paleontológica, y tras haber realizado la inspección técnica correspondiente, la DNPC podrá establecer las medidas de protección que estime necesarias, las cuales pueden incluir, la realización de estudios arqueológicos o paleontológicos, siguiendo la normativa establecida para tal efecto.

5. Los informes emitidos por la Dirección de Arqueología, la Direccion de Patrimonio Cultural Edificado y la Sección de Paleontología, deberán ser acatados, ya que forman parte integral de la presente Resolución.

6. Es requisito que el propietario del inmueble, presente una **Declaración Jurada** autenticada por un Notario, donde se compromete a cumplir con las disposiciones relacionada, y que el referido proyecto no afecte al Medio Ambiente y la Salud Pública, y por tanto está condicionado a la obtención de los permisos correspondientes por parte de las instituciones con competencia de ley sobre esas materias, si así lo requiere.

7. La presente Resolución deja sin efecto cualquier otra que sobre el particular se haya emitido en fecha anterior.

8. Que la presente Resolución deberá ser notificada tal como lo establece el **Art. 23** del Reglamento de la Ley Especial de Protección al Patrimonio Cultural de El Salvador.

NOTIFIQUESE.

SECRETARIA DE CULTURA DE LA PRESIDENCIA DIRECCIÓN NACIONAL DE PATRIMONIO CULTURAL DE EL SALVADOR EN LA AMÉRICA CENTRAL

Lic. Wolfgang Effenberger
Director Nacional de Patrimonio Cultural

C.C. **Lic. Eunice Echeverría,** Directora del Museo de Historia Natural de El Salvador
Ing. Susana de Murgas, V.M.D.U. Región Occidental.
Archivo C: /Mis Documentos/VENTANILLA UNICA Y TRIPARTITO/ZONA OCCIDENTAL LUIS/SONSONATE LUIS/ Resolución TR- SO-005-2014.

SECRETARÍA DE CULTURA DE LA PRESIDENCIA
DIRECCIÓN NACIONAL DE PATRIMONIO CULTURAL
DIRECCIÓN DE ARQUEOLOGÍA

INFORME INMEDIATO DE INSPECCIÓN

FECHA DE INGRESO A DIRECCIÓN ARQUEOLOGÍA: 15 DE OCTUBRE DE 2014	N° DE EXPEDIENTE: TR-SO-005-2014 **A 107.1 Ref. 371/2014**

NOMBRE DE PROYECTO: "LNG-to-Power"

UBICACIÓN: Zona Industrial, Nuevo Muelle, Puerto Acajutla, Departamento de Sonsonate.

COLINDANCIAS: **COLINDANTES TERRENO PARA PLANTA: Norte:** Terrenos de CEPA, Cenérgica; **Sur:** Terrenos de CEPA, Puma, Texaco, ETESAL; **Este:** Terrenos de CEPA, Duke Energy, ETESAL**; Oeste:** Terrenos de CEPA, OPSAL, Patio de Contenedores. **COLINDANTES TERRENO PARA TUBERÍA: Norte:** Terrenos de CEPA, terreno baldío y estacionamiento OPSAL; **Sur:** Terrenos de CEPA, jardines, residencias de los empleados y zona recreativa del puerto; **Este:** Terrenos de CEPA, terreno de la Central Térmica propuesta**; Oeste:** Terrenos de CEPA, Océano Pacífico.

COORDENADAS DE INMUEBLE: N 13º34'59'' W 89º49'43''

PROPIETARIO: Alejandro Gustavo Alle

REPRESENTANTE LEGAL:

PROFESIONAL RESPONSABLE: Arq. Leonora Margarita Ferrer Morán

ÁREA TOTAL DE INMUEBLE: 126,431.09 m^2 (Planta) ; 8,396.36 m^2 (Tubería)	ÁREA A DESARROLLAR: 36,952.56 m^2
FECHA DE INSPECCIÓN: 23 de Octubre de 2014	TECNICO RESPONSABLE DE LA INSPECCIÓN: Oscar Antonio Camacho Mayorga

DESCRIPCIÓN VISITA DE INSPECCIÓN:
Se realizó la visita de inspección en compañía de 1 técnico de la Sección de Paleontología del MUHNES, 1 técnico de la Dirección de Patrimonio Cultural Edificado y 1 técnico de la Dirección de Arqueología, todos de la Secretaria de Cultura de la Presidencia. El recorrido se basó en los planos presentados por el solicitante, resultando en el terreno donde se pretende construir la Planta y donde se utilizará para colocar la tubería. El terreno posee una topografía irregular (semiplano). Durante los recorridos se pudo observar que tanto el terreno donde se pretende construir la Planta, ha servido de lugar para colocar ripio de los alrededores. El área donde pasará la Tubería está alterada por la influencia de construcciones modernas, pasando a unos 300 metros de distancia aproximadamente de los restos del Edificio de Aduana del Antiguo Muelle. Dicha Tubería pasará justo a la par del actual muelle artesanal. Durante Los recorridos no se observó la presencia del material cultural (cerámica, obsidiana o lítica) superficial; asimismo no se identificaron restos de estructuras o edificaciones prehispánicas, coloniales ni republicanas con potencial arqueológico.

RECOMENDACIONES:
No obstante lo anterior y tomando en cuenta el potencial arqueológico de la zona, así como el hecho de ser un proyecto aún en desarrollo, se recomienda que al momento de realizar algún trabajo de construcción encontrasen objetos de interés cultural, como algún vestigio arqueológico, este deberá ser notificado a la Dirección Nacional de Patrimonio Cultural según lo establece el Reglamento de la Ley Especial de Protección al Patrimonio Cultural de El Salvador en sus artículos 67 y 68.

CONCLUSIONES:
La Dirección de Arqueología considera, en base al resultado de prospección realizado en el inmueble, **que es factible continuar con el Proyecto "LNG-to-Power"**, y es responsabilidad del o los encargados del proyecto, en caso de hallazgos fortuitos de vestigios arqueológicos, el notificar inmediatamente a la Dirección Nacional de Patrimonio Cultural, en cumplimiento de los artículos 67 y 68 del Reglamento de la Ley Especial de Protección al Patrimonio Cultural de El Salvador.

TECNICO Lic. Oscar Camacho	Vo.Bo. DIRECTOR ARQUEOLOGÍA Lic. Shiome Shibata	Vo.Bo. DIRECTOR NACIONAL DE PATRIMONIO CULTURAL Ma. Wolfgang Effenberger

SECRETARÍA DE CULTURA DE LA PRESIDENCIA **DIRECCIÓN NACIONAL DE PATRIMONIO CULTURAL** **SECCIÓN DE PALEONTOLOGÍA, MUHNES** **INFORME INMEDIATO DE INSPECCIÓN**	REF. PALEONTOLOGIA: **IOF-080-2014**
FECHA DE INGRESO: 15 de Octubre de 2014	N° DE EXPEDIENTE: **TR-SO-005-2014**
NOMBRE DE PROYECTO: "LNG-to-Power"	
UBICACIÓN: Zona Industrial, Nuevo Muelle, Puerto Acajutla, Departamento de Sonsonate	
COLINDANCIAS: **COLINDANTES TERRENO PLANTA: Norte:** Terrenos de CEPA, Cenérgica; **Sur:** Terrenos de CEPA, Puma, Texaco, ETESAL; **Este:** Terrenos de CEPA, Duke Energy, ETESAL**; Oeste:** Terrenos de CEPA, OPSAL, Patio de Contenedores. **COLINDANTES TERRENO TUBERÍA: Norte:** Terrenos de CEPA, terreno baldío, y estacionamiento OPSAL; **Sur:** Terrenos de CEPA, jardines, residencias de los empleados y zona recreativa del puerto; **Este:** Terrenos de CEPA, terreno de la Central Térmica propuesta; **Oeste:** Terrenos de CEPA, Oceáno Pacífico.	
COORDENADAS DE INMUEBLE: N 13º34'59'' W 89º49'43''	
PROPIETARIO: Alejandro Gustavo Alle	
REPRESENTANTE LEGAL:	
PROFESIONAL RESPONSABLE: Arq. Leonora Margarita Ferrer Morán	
ÁREA TOTAL DE INMUEBLE: 126,431.09 m^2 (planta), 8,396.36 m^2 (tubería).	ÁREA A DESARROLLAR: 36,952.56 m^2
FECHA DE INSPECCIÓN: 23 de Octubre de 2014	TECNICO RESPONSABLE DE LA INSPECCIÓN: Mauricio Alejandro Molina Leddy

DESCRIPCIÓN VISITA DE INSPECCIÓN

Se realizo la inspección con personal responsable del terreno, así como con técnicos de la Dirección de Arqueología y de Patrimonio Edificado. Se recorrieron los terrenos de la plana y de las tuberías, y ambos poseían un elevado nivel de alteración en los suelos. Durante el recorrido no obstante se pudo observar las características predominantes del suelo, siendo el terreno destinado a la planta y tubería correspondiente a un llano de inundación, y también se lograron observar alta cantidad de basaltos y corrientes de lavas. Los suelos de los llanos de inundación observados son asignables al Miembro Q'f de la Formación San Salvador que se define como aluviones con intercalaciones de piroclastitas, y las corrientes de lavas y los basaltos asignados al Miembro b1 de la Formación Bálsamo, definido como piroclastitas, corrientes de lava intercaladas. Estos miembros formacionales son de muy bajo potencial paleontológico. No se encontraron visibles ni aflorantes restos de flora o fauna fosilizada.

RECOMENDACIONES

Que cuando se realicen las actividades de decapado, remoción de suelos y elaboración de fosas sépticas o pozos se nos haga de conocimiento para revisar que tan constante es la estratigrafía del terreno y conocer así su profundidad. Junto a estas observaciones se deberán considerar también las recomendaciones correspondientes a la Dirección de Arqueología. No obstante lo anterior sí se aprobase el proyecto y sí en el transcurso de los trabajos de realización y construcción, se encontrasen objetos o vestigios de interés paleontológico, deberán notificarlo a la Dirección Nacional de Patrimonio Cultural, según lo establecen los artículos 67 y 68 del Reglamento de la Ley Especial de Protección al Patrimonio Cultural de El Salvador.

CONCLUSIONES

Dado a que no es posible encontrar ningún vestigio de interés paleontológico en la superficie del área recorrida, la Sección de Paleontología del Museo de Historia Natural de El Salvador MUHNES, **considera que es factible la realización del proyecto en el referido terreno**, solamente si cumple con lo establecido en las recomendaciones. La anterior conclusión únicamente contempla lo apreciado por la Sección de Paleontología por lo que al momento de notificar al interesado o elaborar la resolución se deberán anexar las recomendaciones y conclusiones de la Dirección de Arqueología.

PALEONTOLOGO	Vo.Bo. DIRECTORA MUHNES	Vo.Bo. DIRECTOR NACIONAL DE PATRIMONIO CULTURAL
Mauricio Molina	Lcda. Eunice Echeverría	Lic. Wolfgang Effenberger

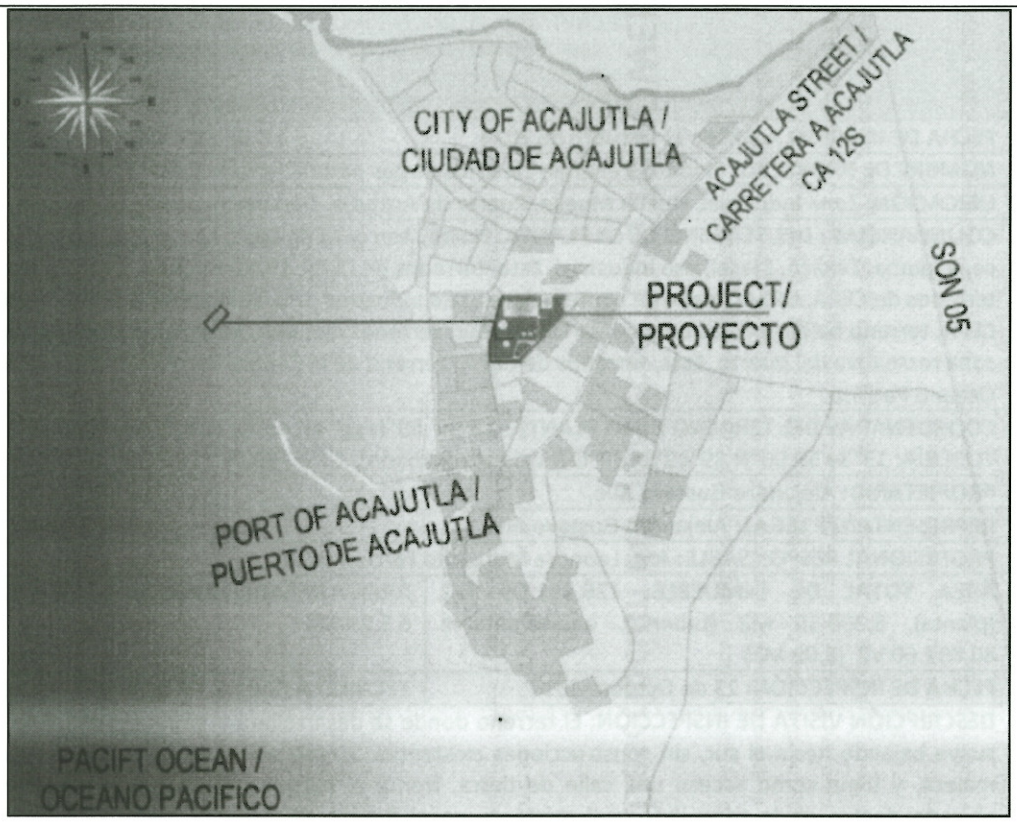
SECRETARÍA DE CULTURA DE LA PRESIDENCIA
DIRECCIÓN NACIONAL DE PATRIMONIO CULTURAL
DIRECCIÓN DE PATRIMONIO CULTURAL EDIFICADO (DPCE)

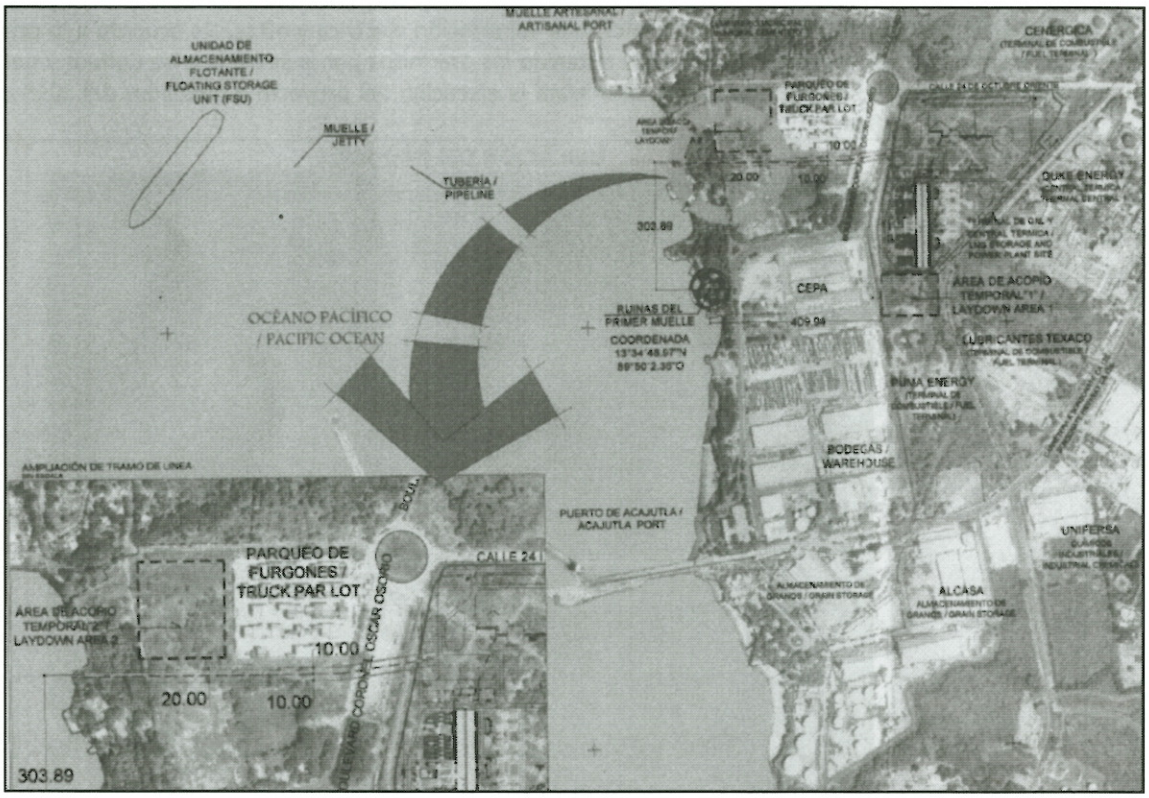
INFORME INMEDIATO DE INSPECCIÓN MODIFICADO

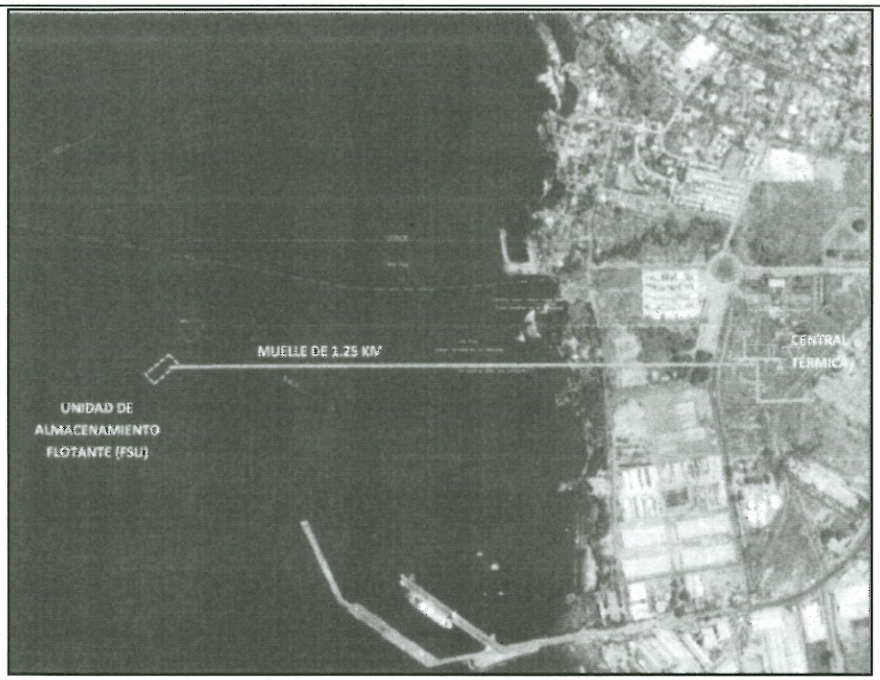
FECHA DE INGRESO A DPCE: 21 Octubre de 2014	N° DE EXPEDIENTE: **TR-SO-005-2014**
NOMBRE DE PROYECTO: Planta de energía eléctrica de gas natural licuado (LNG TO POWER)	
UBICACIÓN: Zona Industrial, Nuevo Muelle, Puerto de Acajutla, Departamento de Sonsonate.	
COLINDANCIAS : DEL TERRENO DE LA PLANTA: **Norte,** terrenos de cepa, cenérgica, uso industrial, **Sur**, terrenos de cepa, puma, Texaco, Etesal, uso industrial, **Este**, terrenos de CEPA, DUKE ENERGY, ETESAL, uso industrial **Oeste**, terrenos de CEPA, OPSAL, patio de contenedores, uso industrial. **DEL TERRENO DE LA TUBERÍA: Norte,** terrenos de CEPA, terreno baldío y estacionamiento OPSAL, **Sur,** terrenos de CEPA, Jardines, residencias de los empleados y zona recreativa del puerto, **Este,** terrenos de CEPA, Terreno de la Central Térmica, **Oeste,** terrenos de CEPA, Océano Pacífico.	
COORDENADAS DEL TERRENO DE LA PLANTA: 13"34',59"N gg"4g',43"O, **COORDENADAS DEL TERRENO DE LA TUBERÍA:** 13"34'59.06"N 89"49'51.39"O (inicio aproximado), 13"34'59.07"N 89"49'4t.77"O (final aprox. en el mar)	
PROPIETARIO: Alejandro Gustavo Alle.	
REPRESENTANTE LEGAL: Alejandro Gustavo Alle.	
PROFESIONAL RESPONSABLE: Arq. Leonora Margarita Ferrer Morán	
ÁREA TOTAL DE INMUEBLE: 126,431.O9 M2 (planta), 8,396.36 M2 (tubería), equivalente a 80,897.60 V2 (8.09 MZ)	**ÁREA A DESARROLLAR:** 36,952.56 M2, igual a 52,871.72 V2 ó 5.29 MZ
FECHA DE INSPECCIÓN: 23 de Octubre 2014	**TECNICO A CARGO DE INSPECCIÓN:** Téc. Rosmeri de Reyes

DESCRIPCIÓN VISITA DE INSPECCIÓN: El terreno donde se desarrollará el proyecto es plano, tiene una pendiente suave bajando hacia el sur, sin construcciones existentes. Su uso actual es baldío, con vegetación de arbustos y maleza, y tiene como acceso una calle de tierra, frente al parqueo de rastras y camiones. El proyecto estará ubicado dentro de la zona industrial existente en el Puerto de Acajutla, dentro de terrenos arrendados a la Comisión Ejecutiva Portuaria Autónoma (CEPA). El proyecto comprende la construcción de una terminal de Gas Natural Licuado (GNL) con capacidad de recibir grandes buques; por lo que el proyecto incluirá la construcción de un muelle de 1.25 Km., una central térmica, una subestación eléctrica y otros. De acuerdo a lo presentado por el solicitante, una vez aprobado el estudio y obtenido los prermisos por la Secretaría de Cultura y del Ministerio del Medio Ambiente y Recursos Naturales, se iniciará la ejecución del proyecto a mediados del 2015 con un período contractual de 3 años.

UBICACIÓN DEL INMUEBLE

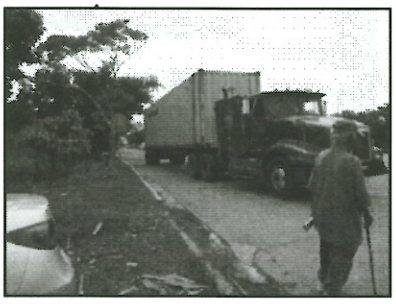

CITY OF ACAJUTLA /
CIUDAD DE ACAJUTLA
ACAJUTLA STREET /
CARRETERA A ACAJUTLA
CA 12S
SON 05
PROJECT/
PROYECTO
PORT OF ACAJUTLA /
PUERTO DE ACAJUTLA
PACIFT OCEAN /
OCEANO PACIFICO


MUELLE ARTESANAL /
ARTISANAL PORT
UNIDAD DE
ALMACENAMIENTO
FLOTANTE /
FLOATING STORAGE
UNIT (FSU)
MUELLE /
JETTY
TUBERIA /
PIPELINE
OCÉANO PACÍFICO
/ PACIFIC OCEAN
RUINAS DEL
PRIMER MUELLE
COORDENADA
13°34'48.07"N
89°50'2.38"O
CEPA
409.94
302.89
PARQUEO DE
FURGONES /
TRUCK PAR LOT
ÁREA DE ACOPIO
TEMPORAL "1" /
LAYDOWN AREA 1
DUKE ENERGY
LUBRICANTES TEXACO
PUMA ENERGY
BODEGAS /
WAREHOUSE
PUERTO DE ACAJUTLA /
ACAJUTLA PORT
UNIFERSA
ALCASA
AMPLIACIÓN DE TRAMO DE LINEA
PARQUEO DE
FURGONES /
TRUCK PAR LOT
CALLE 24
ÁREA DE ACOPIO
TEMPORAL "2" /
LAYDOWN AREA 2
10.00
20.00
10.00
303.89

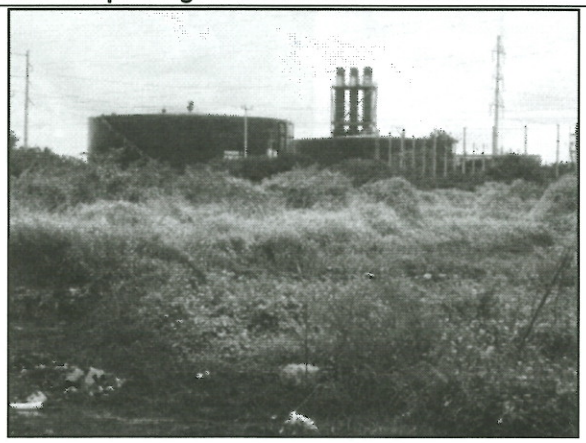


FOTOGRAFIAS DEL INMUEBLE

Acceso al terreno de la planta, frente al parqueo de rastras y camiones



Terreno de la planta, en fotografía inferior se puede observar una planta generadora colindante al terreno



Área donde se instalará la tubería

RECOMENDACIONES: Se recomienda tomar en cuenta las indicaciones dadas la Dirección de Arqueología y por el Ministerio de Medio Ambiente y Recursos Naturales.

CONCLUSIONES: Dada la naturaleza del proyecto y tomando en cuenta que en los dos terrenos donde se desarrollará dicho proyecto no hay edificación alguna, el inmueble no amerita ser normado por parte de la Dirección de Patrimonio Cultural Edificado. Por lo que se **CONSIDERA FACTIBLE** realizar el proyecto LNG TO POWER, construcción de "Planta de energía eléctrica de gas natural licuado" y no se requiere iniciar un proceso de Licencia de Obras en la Dirección de Patrimonio Cultural Edificado.

Téc. Rosmeri Flores de Reyes
Realizó Inspección Técnica

Revisó Arq. Eva Hernández
Jefe de la Unidad de Normativa

Vo. Bo. Arq. Nolvia Ventura
Directora de Patrimonio Cultural Edificado

Vo. Bo. Lic. Wolfgang Effenberger
Director Nacional de Patrimonio Cultural

C.C. Archivo: EXPEDIENTE TR-SO-005-2014

Appendix 5AB–

Executive Summary of Phase I Environmental Site Assessment Report

Phase I Environmental Site Assessment Report

Energía del Pacífico
Acajutla, Sonsonate, El Salvador

October 2016

ERM Project: 0362498

Energía del Pacífico

The business of sustainability

ERM

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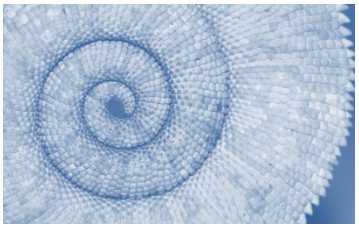

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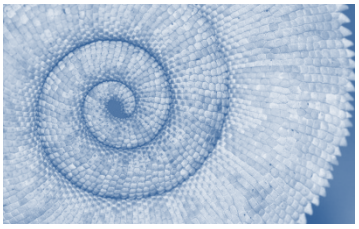
Executive Summary & Conclusions



Environmental Resources Management Panamá, S.A. (ERM) conducted a Phase I Environmental Site Assessment (ESA) of a Vacant Lot, located at Municipality of Acajutla, Department of Sonsonate, El Salvador (hereinafter the "Subject Property"). The Phase I ESA was conducted in general accordance with the scope and limitations of *American Society of Testing and Materials* (ASTM) Standard E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. Although the ASTM E 1527-13 Standard applies to facilities in the United States, ERM used the Standard as a guidance document in the absence of a similar standard in El Salvador. The Phase I was performed at the request of Energía del Pacífico Ltda. de C.V. (EdP), to assess the potential environmental liabilities associated with potential impacts to the surface and/or subsurface from past and current operations at the Site, in anticipation of potential financial transaction and Capital Project expenditures involving the Property. Any exceptions to, or deletions from, E1527-13 are described in Section1.3.4 of this report.

A site visit was conducted on August 17, 2016 by Ms. Vilma Peréz of ERM. Mr. José Carlos Melhado was interviewed as part of this assessment to gain information on current and historical use of the Site.

The Subject Property consists of a vacant lot of approximately 12.64 hectares, in addition to two laydown areas north and south of Subject Property of another 3.7 hectares. The surrounding land use is primarily industrial and marine shoreline. The Subject Property is part of a project, which consists of the construction of a regasification and floating storage unit, a marine/inland distribution pipeline, and an operational power plant. The floating storage unit will be constructed one kilometer off the coast of Acajutla. The distribution pipeline will connect the floating storage unit, the operation plant and they will consist of approximately one kilometer of a marine portion and 500 meters of inland portion. The inland portion will connect to the operation power plant located in a vacant gated lot owned by Comisión Ejecutiva Portuaria Autónoma (CEPA).

Energía del Pacífico (EdP) a subsidiary of Quantum-GLU, will install a thermoelectric power plant for the generation of electric energy using natural gas as fuel. The plant will generate a net capacity of 378 megawatt (MW) of electricity to be distributed by seven electric companies. EdP employs twenty four (24) full-time employees and its operating shift hours are from 7:30 a.m. to 5:00 p.m., five (5) days a week.

The power plant is projected to produces 378 MW using natural gas as fuel. It will consist of nineteen (19) engines with internal combustion; each engine will produce approximately 18.3 MW for a total of 348 MW. An extra combine cycle engine will collect the exhaustion gases from the engines to fuel a vapor turbine of 30 MW.

Based on the data obtained during the Site visit, the environmental database review, and interviews with persons familiar with the Site and its history, the following environmental conditions were identified at the Site:

Recognized Environmental Conditions

The ASTM Standard E 1527-13 defines a recognized environmental condition (REC) as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property". The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is no intended to

include de Minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Based on the information obtained during the Phase I ESA, including a site reconnaissance, interviews with EdP personnel, and review of available documentation, this assessment has revealed no evidence of actual RECs in connection with the Site.

Historical Recognized Environmental Conditions

Based on the data obtained during the Phase I ESA, including a site reconnaissance, interview with persons familiar with the site and its history, and review of available documentation, this assessment did not reveal historical RECs at the Subject Property.

Other Potential Environmental Issues

Based on the data obtained during the Phase I ESA, including a site reconnaissance, interview with persons familiar with the site and its history, and review of available documentation, this assessment did not reveal evidence of other potential environmental issues in connection with the Subject Property. However, ERM recommends a Phase II Environmental Site Assessment (ESA). The Phase II process will generate additional information regarding the identification and nature of potential contaminants associated with potential hydrocarbon sources in the vicinity of the Subject Property.

Summary of Identified Issues	
ASTM E1527-13 Findings:	
Recognized Environmental Conditions (RECs)[1]	
No RECs were identified during this assessment.	N/A
Controlled Recognized Environmental Conditions (CRECs)[1]	
No CRECs were identified during this assessment.	N/A
Historical Recognized Environmental Conditions (HRECs)[1]	
No HRECs were identified during this assessment.	N/A
De Minimis Condition	
No De Minimis Conditions were identified during this assessment.	N/A

[1] Key ASTM definitions, including REC, CREC and HREC, are provided in Section 7.

Energía del Pacífico

Appendix Chapter 6

December 2016 16-3489

ECO INGENIEROS
LÍDERES EN CONSULTORÍA AMBIENTAL

DILLON CONSULTING

Appendix 6A–
Environmental Normative Matrix

Comprehensive legal analysis presenting the legal implications of the project denominated "LNG TO POWER" Thermoelectric Plant for Electricity Generation with a net capacity of 378 MW, based on natural gas and maritime terminal to receive Liquefied natural gas (LNG) and convert it into Natural Gas (GN) "

I. Background.

In accordance with Art. 19 of the Regulation of the Environment Law, the Ministry of Environment and Natural Resources (MARN) provided the Terms of Reference for the preparation of the Environmental Impact Study of the **"LNG TO POWER" Project, Installation of a thermal power plant for the generation of electric energy with a net capacity of 378 MW, using natural gas as fuel and a maritime terminal to receive the Liquefied Natural Gas (LNG) and convert it into Natural Gas (GN).** By means of the terms of reference is established the minimum information that the owner interested in the realization of this project must provide to verify the environmental feasibility and consequently obtain the corresponding environmental permit.

In the Terms of Reference, it is mandatory that one of the conditions that must be presented by the owner of the activity, within the Environmental Impact Study (ESIA), is to develop "a comprehensive legal analysis, separately of the Environmental Impact Study and duly identified in the Index of the document, by an Attorney of the Republic, authorized by the Supreme Court of Justice of El Salvador, of the legal implications. Comprehensive legal analysis should be interpreted as a legal feasibility study and it must be concluded whether the current regulatory framework does not contravene the nature of the proposed project and its components; Considering permissible limits, restrictions and measures.

II. Objective of the analysis.

The analysis seeks to enable the legal compliance of the 378 MW thermal power plant and the maritime terminal from which the Liquefied Natural Gas will be received and converted into Gas Natural for energy production. The project will be located in Puerto de Acajutla, Municipality of Acajutla, Department of Sonsonate, space located in the Marine Coastal Corridor of the Salvadoran Republic.

The analysis is included in Chapter 6, and in more detail the Environmental Legislation Matrix Project LNG TO POWER, included in appendix 6A.

Reviewing the way in which the project was been designed, planned and implemented, it is possible to conclude that it is LEGALLY FEASIBLY CONSIDERING NATIONAL AND INTERNATIONAL LEGISLATION APPLICABLE, AS LONG AS THE REGULATORY ASPECTS IDENTIFIED ARE FULFILLED, not only by the owner, but also by the governing bodies that exercise environmental governance. The matrix of legal analysis to be refined and oriented on the state of compliance with the legal requirements, required by current regulations in our country, having as a baseline, the technical and legal documentation incorporated in the Environmental Impact Study of the project in reference. The holder has been informed and is obliged to continue with the status of compliance with the legal aspects qualified in this way and to verify that those qualified as "in compliance process", come to be fulfilled in their entirety.

This is my report.

San Salvador, December 14, 2016.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**General environmental**	**Law of environmental reforms: (4) D.L. N ° 237 08 February 2007, published in the D.O. N ° 47, volume N ° 374 09 March 2007.**	**Ministry of environment and natural resources**	Scope of environmental permits Article 20.-the environmental permit will require the holder of the activity, work or project, to perform all actions of prevention, mitigation or compensation, laid down in the program for environmental management, as part of the environmental impact study, which will be adopted as a condition for the grant of the Ambiental. including permission works or installations of treatment and mitigation of environmental impacts the environmental operating permit will be issued for the time of your life and stage of abandonment, subject to monitoring and control of the Ministry.	**X**			The owner conscious of its duty of these articulated compliance, so it is effectively developing their EIS and has hired a task force for this purpose, per the requirements set forth in the TDR provided by MARN, in date may 28, 2014. Some have with their number of RPSA, (see Chapter 1 and Appendix 2A, 6F).
				Article 21.-any natural or legal person must present the corresponding environmental impact study to run activities, works or projects:	**X**			
				(g) electric transmission lines	**X**			
				(K) located in fragile, protected areas or their wetlands and buffer zones	**X**			
				(o) any other activities that may have significant or irreversible impacts on environment, ecosystems and human well-being or health.	**X**			
				Article 22.-the owner of all activity, work or project that requires environmental permit for its realization or performance, expansion, rehabilitation or conversion shall submit to the Ministry environmental form requiring this with information that you request. The Ministry categorized activity, work or project, per its size and the nature of the potential impact.	**X**			
				Article 23.-the environmental impact study be carried out on behalf of the owner, through a multidisciplinary technical team. Companies or people, who are dedicated to prepare environmental impact studies, must be registered with the Ministry, information, who will establish the procedure of certification to service providers of environmental impact of diagnostics and audits of environmental assessment studies and for statistical purposes.	**X**			
General provisions	**Consultation published**	**Law of environmental reforms: (4) D.L. N ° 237 08 February 2007, published in the D.O. N ° 47, volume N ° 374 09 March 2007. Guide of procedures for developing the public inquiry established in article 25, Literal B) of the Environment Act, D. O. July 13, 2010. Vol. 388, no. 131.**	**Ministry of environment and natural resources**	See environmental impact studies of public consultation Article 25.-the public consultation of environmental impact studies, will be governed by the following rules: (a) prior to its approval, studies will be made of the knowledge of the public, at the expense of the owner, within a period of ten working days so that anyone who is considered affected express their opinions or make its observations in writing, which will be announced in advance in nationwide media and through other means in the way to establish the regulation of this law; (* NOTE DECREE N ° 566)	**X**			The holder has complied partially with the component of citizen consultation, representatives to consult the communities surrounding the project, with people from the Mayor's Office, the health unit, educational centers, ADESCOS and others, (such as can be seen in the EsIA, Numeral 8.0 participation of social actors It will be the MARN, who set the following public consultation, whether only per Art. 25 literal "a" or also Art. 25 literal "b". Will also be MARN who weigh both technical, legal, and coupled with public consultation.
				(b) for those environmental impact studies whose results reflect the possibility of affecting the quality of life of the population or threatening risks to the health and welfare human and environment, will be organized by the Ministry a public consultation of the study in the municipalities where one thinks to carry out the activity, work or project; and	**X**			
				(c) in all cases of consultations on the environmental impact study, the opinions issued by the public should be weighted by the Ministry.	**X**			
		Reform to the Guide to develop the public inquiry established in article 25, Literal B) of the Environment Act. D. o. November 19, 2010. Vol. 389, no. 217.	**Ministry of environment and natural resources**	Article 1.-replace the mentioned agreement No. 65, specifically in the Roman IV, the phase weighting, in paragraph 3, which deals with the weighting of views, by the following text: 3 weighting of opinions once known technical analysis of opinions, will proceed to place the results in the matrix of weights corresponding.	**X**			
General provisions	**General environmental**	**Guide to procedures for developing public consultation added to the mentioned**	**Ministry of environment and natural resources.**	Article 1.-added the mentioned agreement N ° 117, specifically in the Roman IV, the phase weighting, in paragraph 3, which deals with the weighting of perceptions, after the section on "Relationship EsIA/analysis of magnitude intensity", and before the section on "Elaboration of the report of the results of the weighting"...	**X**			

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
		agreement N ° 117, In specific in the Roman IV, phase weighting, in paragraph 3, which deals with the weighting of opinions. D. o. July 28, 2011. Volume 392, no. 142.		Article 3.-the result of weighting, will inform it the Ministry the holder of activity, work or project, the communities involved, the municipal governments, institutions of the Central Government or autonomous, and everyone who has participated in the realization of the public consultation. This communication does not constitute other observations from those laid down in the article 33 of the regulation General of the law of the environment.	**X**			
		General rules of the law environment nature: Executive DecreeNo: 17 fecha:21 March 2000D. official: 73 volume: 347 publication DO: 12 April 2000Reforms: (2) Decree Executive No. 39 dated April 28, 2009, published in Official Journal No. 98, volume 383 dated May 29, 2009.	**Ministry of environment and natural resources,**	Cases of consultation Article 10.-the participation of the population will be promoted through the query in the following cases: ... d. prior to the approval of the environmental impact of works or projects, in accordance with Art.25 of the law.	**X**			
				Obligations of the holder with respect to the environmental assessment Article 15.-the owner of a policy, plan, program, activity, work or project specific, public or private, will have the following obligations related to environmental assessment, b. present the environmental activity, work or project form Ministry;	**X**			Under the nature and scale of the project holder introduced environmental form to MARN, categorizes the project, having been in the group, B2, so it has been given the TDR for the realization of the present EsIA.
				c. submits the environmental impact study, in accordance with the terms of reference drawn up based on the guidelines provided by the Ministry;	**X**			
				(d. finance inspection of studies of environmental impact, per the literal Art. 25 to) of the Act;	**X**			The holder has complied partially with the component of citizen consultation, representatives to consult the communities surrounding the project, with people from the Mayor's Office, the health unit, educational centers, ADESCOS and others, (such as can be seen in the EsIA, Numeral 8.0 participation of social actors) It will be the MARN, who set the following public consultation, either per Art. 25 literal "a" or also Art. 25 literal "b". Will also be MARN who weigh both technical, legal, and coupled with public consultation.
				e. submits to the Ministry, the guarantee of environmental compliance, by an amount equivalent to the costs of the physical works or investments that are required to implement the management program or environmental adaptation, and when appropriate in accordance to article 55 of the Act, the deposit that guarantees the establishment of institutional prevention and contingency plan;		**X**		Now not given bail of environmental compliance in the EsIA process. In due course, it will be presented by the holder
				f obtained from the Ministry of the environmental permit, prior to the start of the activity, work, or public or private project per article 19 of the Act;		**X**		The holder is preparing the EIS to get the environmental permit, to start your project.
				h. complies with the provisions of the Ministry about the audits of environmental assessment;		**X**		This holder consents that after begin construction and spending the time specified in the schedule of activities, as stipulated in the environmental bond, will be the environmental assessment audit, to find out whether it has met the environmental measures.
				Article 20.-for the realization or performance, expansion, rehabilitation or conversion of activities, works or projects referred to in article 21 of the Act, the owner shall provide to the Ministry, environmental form, the information requested, pursuant to article 22 of the Act. The Ministry may use the available electronic information by public institutions, the documents requested in the form of environmental-related. (1) The Ministry may, deems necessary, make observations to environmental forms in a unique opportunity.	**X**			The holder is already in the process of environmental impact assessment, is knowing that your project is category group B2 and its study must include a minimum provisions of article 23 of the General Regulation of the LMA. In fact the items of the referred article and the EsIA have been revised and all are. (see all EsIA)
				Article 22.-the Ministry, based on article 22 of the Act, categorized activity, work or project, per its size and the nature of the potential impact that its implementation could generate, per the following division: ... 2 category. Includes all activities, works or projects that generate moderate or high and therefore the environmental impacts, as result of the evaluation of the environmental documentation, the Ministry issues terms of reference for the preparation of the environmental impact study. This study will be approved or not by the Ministry.	**X**			Under the nature and scale of the project holder introduced environmental form to MARN, categorize the project, having been in the group, B2, so it has been given the TDR for the realization of the present EsIA.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Environmental General / projects Categorization**	**MARN agreement No. 39, D.O. 83 volume 375 of the May 9, 2007, modified by Agreement between the Executive N ° 127, dated November 26, 2007 year, published in the journalOfficial N ° 46 volume N ° 378, on 06 March 2008, andAgreement between the Executive N ° 23, published in the official journal N ° 162, taking no. 380,on September 1, 2008.**	**Ministry of environment and natural resources**	B2 category: Plants of electricity generation from nuclear energy, thermal, geothermal, among others.	**X**			
General provisions	**Environmental General / TDR type**	**Remember 90, Official Journal of the 15 July 2011, vol. 392, number 133**	**Ministry of environment and natural resources**	TDR type for generation of electricity from wind and Solar resource	**X**			The holder is already in the process of environmental impact assessment, it is knowing that your project is category group B2 and its study must include a minimum provisions of article 23 of the General Regulation of the LMA. In fact the items of the referred article and the EsIA have been revised and all are. (see all EsIA)
General provisions	**General environmental**	**General rules of the law of nature environment: Executive Decree No: 17 fecha:21 March 2000 D. official: 73 volume: 347 publication DO: 12 April 2000 Reforms: (2) Decree Executive No. 39 dated April 28, 2009, published in Official Journal No. 98, volume 383 dated May 29, 2009.**	**Ministry of environment and natural resources,**	Article 23.-the environmental impact study shall include as a minimum: a title and authors;	**X**			
				b. Executive summary of the study;				
				c. Description of the project and its alternatives;				
				d. considerations legal and environmental regulations applicable, related to the activity, the work, or the project;				
				e description, characterization and quantification of current environmental, physical, biological and socio-economic components, the site and area of influence;				
				f identification, prioritization, prediction and quantification of environmental impacts;				
				g interpretation of the results of the benefit-cost analysis, profitability and efficiency, whereas technical, economic, social and environmental factors (applicable to activities, works or public sector projects);				
				h. environmental management program;				
				i. Appendix: maps, evaluation methods used, technical studies, tables, graphs, report of public consultations carried out on the initiative of the holder, as well as the study of risk, if applicable.				
				The content of the environmental management program Article 24.-the environmental management program includes the following components: a determination, prioritization, and quantification of the measures of prevention, mitigation and compensation of environmental impacts and determination of necessary investments;	**X**			The environmental management program, contains all the measures to reduce pollution levels to effect of prevent, correct, reduce or offset, depending on the case, the negative impacts on the environment. The previous statement is based on these components have been found. (see section 10.0 of the EsIA), if the accuracy of the predictions, relevance and alignment of the environmental measures (by impact) depend on the technical component, point that escapes this comprehensive legal analysis.
				b. monitoring;	**X**			Monitoring, contains the verification of the compliance of environmental quality parameters and evaluate the functioning of the measures to be implemented within the environmental management program. (see table 10.43 program of monitoring, stage of construction; Table 10.58 program of monitoring operations stage)

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
				c. closure of operations and rehabilitation, where appropriate; and	**X**			The study of environmental impact, no associated phase of closing in their arrays of LDCs, monitoring or schedule; However, did not consider it in the descriptive part of the EsIA, along several items, such as: Paragraph 4.15. Closing stage.
				d. the study of risk and environmental management, in cases where necessary.	**X**			Holder has incorporated the study of environmental risks in its risk analysis event meteorological and seismic being these those who technically justified the project per the EsIA. (Paragraph 9 study of risk and contingency PLAN).
				The component of determination, prioritizing, quantifying and implementation measures Article 25.-the component of determination, prioritizing, quantifying and implementation of measures for prevention, mitigation and compensation of impacts, will aim to identify and implement environmental measures to be carried out by the holder of the activity, work or project during the different stages	**X**			If they are included within the EsIA, the multidisciplinary team, together with the Coordinator of the study have been discussed, identified, prioritized, quantified and implemented environmental measures. (See EsIA and numeral 7 identification, prioritization, prediction and quantification of environmental potential impacts, including potential situations of risk),
				The component will contain the location of the measures, determination of investments, the timetable of implementation of measures and supervision of its implementation.	**X**			He has been prepared the schedule of implementation of the measures to be implemented, the time of 3 years. (see EsIA. Numeral 10 program of environmental engine harness, table 10.44 timetable for implementation of the environmental management program; Table 10,61 schedule of implementation of the program of environmental management, operation stage).
				Component of monitoring Article 26.-the component of monitoring will be applied during the different stages and will aim to ensure the efficiency of implemented prevention, mitigation and compensation measures allowing, by means of periodic evaluation, corresponding measures. The frequency of the monitoring shall be determined by the nature of the activity, work or project.	**X**			Monitoring, contains the verification of the compliance of environmental quality parameters and evaluate the functioning of the measures to be implemented within the environmental management program. (see table 10.44 program of monitoring, stage of construction; Table 10.60 program of monitoring operations stage)
				This component will contain objectives, specification of the measures and actions subject to monitoring, reference, point and line frequency control, resources required, estimated investments, schedule of activities, roles and responsibilities of the personnel involved, verification parameters and reports.	**X**			
General provisions	**General environmental**	**General rules of the law of nature environment: Executive DecreeNo: 17 date: 21 March 2000D. official: 73 volume: 347 publication DO: 12 April 2000Reforms: (2) Decree Executive No. 39 dated April 28, 2009, published in Official Journal No. 98, volume 383 dated May 29, 2009.**	**Ministry of environment and natural resources.**	The study of risk Article 28.-the study of risk and environmental management activities, works or projects included in article 21, literal n) of the Act, will aim the identification of risks, as well as accidents and emergencies; its content shall include as a minimum: a. identification and determining the activities which represent risks or threats to the health of the population and the structure of ecosystems;	**X**			Holder has incorporated the study of environmental risks in its risk analysis event meteorological and seismic being these those who technically justified the project per the EsIA. (9.0 assessment of risks and Plan for contingencies and Appendix 9 d. Contingency plan).
				b. identification of materials or hazardous substances that will be used during the stages of construction, operation and closure of operations;	**X**			The owner has identified dangerous substances, so safety MSDS data sheet will be used (see sub-numeral 4.12 management of substances, waste and hazardous waste in the stage of operation) Estimations of the risk in the sub-numeral have also been made. 4.8.3. characteristics of danger and safety sheet materials and Appendix 4F. Materials safety sheet. Also, have been made in sub-numeral 9.0 risk assessments risk assessment and Contingency Plan Holder has incorporated the study of environmental risks in their analysis of risk per event meteorological and seismic. (Paragraph 9 study of risk and contingency PLAN). The relevance or technical alignment of this study of chemical risk or by natural events, to the TDR given by MARN.
				c. identification of risks to the environment and to the population, by potential failures during the stages of construction, operation and closure of operations;	**X**			
				d. identification of the causes by which occur faults;	**X**			
				e. determination of the probability of occurrence of the identified failures and their consequences.	**X**			

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**General environmental**	**General rules of the law of nature environment: Executive Decree No: 17 fecha:21 March 2000 D. official: 73 volume: 347 publication DO: 12 April 2000 Reforms: (2) Decree Executive No. 39 dated April 28, 2009, published in Official Journal No. 98, volume 383 dated May 29, 2009.**	**Ministry of environment and natural resources.**	The public consultation of the environmental impact studies Article 32.-the environmental impact studies will be made of the knowledge of the public, per the following procedure: the Ministry will provide the holder the format for the publication about the environmental impact study, which shall be borne by the holder in three consecutive days, in any of the print media's national coverage;	**X**			The holder has complied partially with the component of citizen consultation, representatives to consult the communities surrounding the project, with people from the Mayor's Office, the health unit, educational centers, ADESCOS and others, (such as can be seen in the EsIA, Numeral 8.0 participation of social actors) It will be the MARN, who set the following public consultation, whether only per Art. 25 literal "a" or also Art. 25 literal "b". Will also be MARN who weigh both technical, legal, and coupled with public consultation.
				b. in the case of the environmental impact studies that require public consultation referred to in article 25 literal (b) of the Act, procedures guide for developing it will be, in addition to what is mentioned in the previous paragraph. This consultation will be organized by the Ministry and the necessary expenses relating to the need for local, audiovisual support, printed material and local broadcasting, are all borne by the holder;	**X**			
				c. will be represented in consultation with the communities involved, the municipal government, in whose territorial jurisdiction is located the area of impact of the project; the holder of the activity, the work or the project, you must expose it. The Ministry will oversee organizing the consultation process as the environmental authority;	**X**			
				d. the representative of the Ministry will lift a procès-verbal of the public consultation, which will contain the main points of discussion and decisions adopted by those present on the project. This certificate must be signed by the representatives referred to in the previous paragraph.	**X**			
				e the views received during the public consultation of the study process should be weighted under criteria strictly technicians, during the evaluation of the environmental impact, law study; and	**X**			
				f. the Ministry will keep in reserve studies of environmental impact information, concerning technical and financial background that could affect the rights of industrial property or intellectual or legitimate commercial interests involved.	**X**			
				Observations to the study of environmental impact Article 33.-when the analysis of the environmental impact assessment does not satisfy the terms of reference and reflect deficiencies of form or contents, the Ministry shall notify the owner of the activity, the work or project the corresponding observations, specifying the aspects that need to be expanded or clarified, among others, that he rectified them. (1)	**N/A**			The owner is aware that to deliver the EsIA, MARN, can make observations to the study, and is in the best position to evacuate the observations you made.
				The Ministry may make observations once the environmental impact studies. If the holder does not exceed observations, you will be asked again he rectified them, being the last chance to overcome them. (1)				
				The Ministry may make observations with respect to new elements or facts which the holder submit to try to remedy the observations referred to in the previous numeral. If it does not exceed these observations with regard to the new elements, the resolution that matches will be issued. (1)				
				The Ministry, remedied or not observations, will issue the resolution that corresponds, observing the deadlines laid down in article 24 of the Act. (1)				
General provisions	**Generation of electric power.**	**Categorization of Activities, works or Projects. Agreement No. 33. D.O. November 8, 2012, take 395, no. 105.**	**Ministry of environment and natural resources.**	1 categorization of activities, works or projects aimed at the utilization of solar energy for the generation of heat or electricity. Group B, category 2: Activities, works or projects with high potential for environmental impact. They require elaborate environmental impact study.	**X**			Under the nature and scale of the project holder introduced environmental form to MARN, categorize the project, having been in the group, B2, so it has been given the TDR for the realization of the present EsIA.
General provisions	**Generation of electric power.**	**General electricity lawDecree No. 843, D.O. on October 21, 1996, vol. 333, no. 201.**	**SIGET**	Article 7.-generating activities not referred to in articles 5 and 6, as well as the transmission, distribution and commercialization of electric power, will be carried out upon registration in the register of operators in the sector electricity that will take the SIGET. Such registration must be updated annually. Operators who import energy and generators must pay yearly the SIGET in concept of fee for the updating of the register, three colons thirty-nine cents for each megawatt-hour delivered with commercial purposes during the previous year. This value must be annually adjusted by the SIGET, considering the price index consumers published by the Ministry of economy.		**X**		The owner is consent to processing grant and submitted all the documentation required by this Act, proceedings which take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**General electricity law Decree No. 843, D.O. on October 21, 1996, vol. 333, no. 201.**	**SIGET.**	Article 25.-the granting of such permission at any time be deemed exclusive, and entitle the applicant to carry out studies, polls and surveys that are necessary in State property. In the case of property tax, the person concerned must obtain permission from the authority that administers the goods concerned.		**X**		

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Generation of electric power.**	**General electricity law Decree No. 843, D.O. on October 21, 1996, vol. 333, no. 201.**	**SIGET.**	Article 26.-the deadline of the temporary permit will be of two years and can be renewed only once at the request of the person concerned. The request for permission, as well as that of its renewal, shall be formulated the requirements that establish the SIGET.		**X**		
General provisions	**Generation of electric power.**	**General rules of the law of electricity. Decree 70, July 25, 1997, vol. 336, no. 138.**	**SIGET.**	Article 8.-entities interested in studies for the development of electricity generation projects using geothermal, or hydraulic resources in national assets for public use or State, shall submit this to the SIGET, request accompanied by the following: (a) data of the applicant concerning its excellence and legal capacity and the documentation supporting such data; (b) details of the geographical area in which will conduct the studies including the roster of national assets for public use or the State in which they will be made; (c) nature, type and detail of the resource to study; and (d) description of the type of studies to be carried out and estimated time of duration of the same.		**X**		The owner is consent to processing grant and submitted all the documentation required by this Act, proceedings which take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**General rules of the law of electricity. Decree 70, July 25, 1997, vol. 336, no. 138.**	**SIGET.**	Article 11.-the permit granting the SIGET, will be expressed clearly that it is not exclusive to studies of the resource concerned, moreover, that such permission not empowered to enter real estate owned by private individuals without the prior agreement with these, or property tax without the consent of the authority that manages it, detailing the national property of public use and state that studies, may be made as well as the limitations and conditions for the execution of the same in such property.		**X**		
General provisions	**Generation of electric power.**	**General rules of the law of electricity. Decree 70, July 25, 1997, vol. 336, no. 138.**	**SIGET.**	Article 22.-the qualification documents shall contain at least: a) description of the resource, as well as data from the project to be submitted to tender, which shall include at least the nominal and net generation capacity to be installed; (b) legal, technical and financial requirements that must comply with entities that wish to be qualified to effect of participating in the tender (c) the same requirements that project in particular has established authority in the field of environment; (d) the period within which the project will have to enter commercial operation; (e) the special conditions to be included in the respective contract. The disagreement of a supplier with any special conditions, shall be reason for the SIGET not qualify to the offeror; f) form and term where he must submit documents that are certifying compliance with the requirements referred to in point (b)); (g) the criteria to the SIGET used to examine information submitted by entities wishing to be qualified, specifying clearly the grounds for rejection of the documentation submitted by entities; (h) the definition of the regulatory framework to which shall be subject the SIGET and bidders in the tendering process.		**X**		
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Authorization to enter and leave the port Article 32. Authorization to enter and exit port is granted by the Local port maritime authority, at the request of the ship-owners, operators or their agents, or the captain of the ship, or in charge of the naval artifact. The authorization is subject to prior compliance with the provisions on safety of navigation, health, customs, immigration and port regulations.		**X**		The owner is consent to obtain authorization for the entrance and exit of the port and to present all documentation requested by this Act, proceedings which take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Vessels and Salvadoran naval artifactsArticle 36.Vessels and Salvadoran naval artifacts must be registered in the internal order and for all legal purposes, by your name, number, registration number, displacement tonnage and port of registry.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Requirements Article 42. To register a ship or naval artifact in the REMS, you must register: 1 have given compliance with the regulatory requirements on construction and conditions of seaworthiness and suitability of the vessel or naval artifact, as determined by its constructor; 2. that the owner is domiciled in the country; and 3. If any holder of the property a society, that has been constituted in accordance with the laws of the country, or that having been abroad, have in El Salvador branch, seat or any other kind of permanent representation, in accordance with the respective law.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Certificate of registration Article 43. The AMP will grant to any warship or naval artifact that enroll in the REMS, a certificate of registration stating the name of the ship or naval artifact and that of owner, the registration number and the extent of the total and net tonnage, in the case of a ship, as well as the other data contained in the registration sheet. This certificate identifies and determines the nationality of the vessel or naval artifact.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Technical, academic requirements and adequacy of the staff Article 54. The AMP will regulate the minimum requirements of professional suitability must comply and consequently certify all personnel performing functions in the maritime industry.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Article 129. If the policy does not establish the place of the port where the ship should be placed to load or unload, its designation will correspond to the charterer, except port provisions to the contrary. The place must be safe and allow the ship to remain afloat. If the charterer omits to make the designation of the place of loading or unloading or if several charterers do not agree on the particular, the charterer, upon request, may choose such place.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Classification Article 183. The nature of the ports of El Salvador is defined per the ownership, use, purpose, and degree of intervention of the AMPL. Per their ownership, are: ... 2 individual ports or private, are those privately owned, with the corresponding authorizations are managed and operated by private sector entities... Per their use, they are: ... 2. private: which offer and service ships, ship-owners, shippers and receivers of goods in the form restricted to the needs of individuals or third parties contractually related with them. These ports will be developed within the system of free competition. Their economic activity is; 2. industrial ports: those whose purpose is the operate exclusively industrial, extractive processes or capture specific charges, and must be operational integration between the main industry activity and the port;		**X**		It is considered that the infrastructure where it will be floating structures of EDP, could be considered a private port, if this happens to happen, the holder is aware that it must comply with procedures to this effect, set the rules, the procedure will take place later to obtain the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Private ports Article 187. In accordance with this Act and the regulations laying down the AMP on the subject, this may authorize the construction of private, private use ports or public use, for them to run one or more of the activities specified in article 183 of this Act.		**X**		
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Authorizations requestedArticle 216.Authorizations must be requested to the AMP, through accreditation and presentation of all documentation that corresponds to the port project is trying to develop.		**X**		
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Offences and penalties on construction and operation of ports Article 234. Authorizations for construction and operation of ports, docks and maritime facilities regarding infractions and sanctions are regulated per the following cases: 1. failure to comply with the conditions of construction, operation and exploitation of ports, marine terminals and port facilities in accordance with the regulations, program master of port development, contracts management and Salvadoran official rules of 6,000.00 to 120,000.00 special drawing rights; 2 build, operate and exploit marine terminals and port facilities without the authorization of the AMP, from 60,000.00 to 120,000.00 special drawing rights;		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Generation of electric power.**	**Decree No. 994. Seaport General maritime law. D.O. N ° 182, volume N ° 357, 01 October 2002**	**AMP**	Management of costs and restrictions on use of beaches Article 235. Is prohibited to all vessels the discharge of garbage, oil and its derivatives, downloads of sewage and other hazardous or harmful elements that could contaminate or damage the waters under the jurisdiction of El Salvador.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 8-Executive of the Act General regulations maritime port. D.O. No. 13, took no. 406, 21 January 2015**	**AMP**	Application Article 31.-this procedure will be applied by the AMP for the granting of the following authorizations: (f) any other authorization that does not have designated procedure in the LGMP or its regulations.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 8-Executive of the Act General regulations maritime port. D.O. No. 13, took no. 406, 21 January 2015**	**AMP**	Request Article 32.-any request should be addressed to the Executive Director of the maritime port authority and be submitted by the person concerned, his legal representative or authorized person, and in case if not presented by them, must be notary signed. The request may be submitted on forms approved by the AMP for each type of authorization and, in any case, you must meet the following requirements: to) the General of the applicant and his representative, if any; ...		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 8-Executive of the Act General regulations maritime port. D.O. No. 13, took no. 406, 21 January 2015**	**AMP**	Stoppage of maritime and port works Article 59.-the AMP is empowered to close and enclose the area of maritime and port, works that are built without your prior authorization, or that are built outside the conditions laid down in the authorization. Also you can order removal of materials, machinery and equipment used for the construction of the work, at the expense of the managed, being able to use the collaboration of the public force, if he deems it necessary.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 236. Navigation and marine law.**	**AMP**	Article 31.-minor vessels will be enrolled before the Secretary of Navy. They are divided into three classes: boats, Bongos and boats.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 236. Navigation and marine law.**	**AMP**	Article 32.-the owner of a boat that you want to register it, submit your request written before the Ministry of marine, which be expressed: (1) that it is person resident in the Republic; (2) having goods with what satisfy damage that her fault affected the trade and the fines that may be imposed for violation of this law. In the absence of well-known goods, you must pay bail to the satisfaction of the Secretary of Navy; ...		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 236. Navigation and marine law.**	**AMP**	Article 39.-only to vessels registered with the Ministry of marine, will be allowed to make loading and unloading of vessels at anchor in the Bay, under the penalty of twenty-five colons of penalty to the owner of the boat that violated this article. Excluding only the boats that bring ships.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Decree No. 236.Ley of navigation and marine.**	**AMP**	Article 40.-for that bongo drums and dinghies can engage in traffic that speaks the previous article, needed special permission from the Commander and captain of the port, who after inspecting them, it may be granted up to two months.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Generation of electric power.**	**Act No 56, No 4 agreement. Regulation of maritime and port works. D.O. No. 233, volume no. 376, December 13, 2006.**	**AMP**	Article 6.-The application requirements The application for the construction of maritime and port, must contain information and documentation following:... (d) place of work to make and location map delimiting all terrains, surfaces, zone of influence and aquatic areas, demarcated in the updated nautical charts; (e) type and description of the maritime or port facilities is planned, as well as the amount of investment and time which will demand its construction; (f) study of technical-economic feasibility, including the draft of the master plan of land use and territorial development, in the case of the private sector; and favorable technical opinion of the port project, issued by the Commission national of the investment public (CONIP) of the Ministry of finance, to public entities; (g) study of environmental impact and the respective permits; (h) permission of the Vice Ministry of housing and urban development; (i) permission of CONCULTURA, when applicable; j) final design of the project, which shall include as a minimum: Diagnostics, structural, hydraulic and electrical designs, topographic calculations, bathymetry, technical specifications, play of planes full, memory calculation, scheduling, detailed by activity, soil studies; and ...		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit. A good portion of the permissions or resolutions requiring the AMP, are related in the present EsIA.
General provisions	**Generation of electric power.**	**Act No 56, No 4 agreement. Regulation of maritime and port works. D.O. No. 233, volume no. 376, December 13, 2006.**	**AMP**	Article 10.-Registration of authorization Any authorization for construction of maritime and port, must be registered in the REMS.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Act No 56, No 4 agreement. Regulation of maritime and port works. D.O. No. 233, volume no. 376, December 13, 2006.**	**AMP**	Article 25.-Conclusion of the works After the execution of a work, the owner, Manager or port operator, request authorization to the AMP, for the commissioning of works, attaching the following documents: (a) acceptance of the work; (b) liquidation technical and financial; and (c) flat "as built". The AMP, in one period not more than twenty-two business days after will issue the corresponding authorization and order your registration in the REMS.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Act No 56, No 4 agreement. Regulation of maritime and port works. D.O. No. 233, volume no. 376, December 13, 2006.**	**AMP**	Article 14.-Authorization requirements To be authorized as the operator port and/or provider of port services, you must meet the following requirements: (a) fill in the respective form and the corresponding payment; b) have sufficient legal, technical and economic capacity to pursue its own activity; (c) take office established in the ports where shall exercise their functions; ...		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Act No 56, No 4 agreement. Regulation of maritime and port works. D.O. No. 233, volume no. 376, December 13, 2006.**	**AMP**	Article 20.-Hazardous cargo The manual of port operations, on matters related to the dangerous goods must include preventive rules to be adopted for the management of this type of loads, in accordance with the international code of dangerous goods, CMIMPNU.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Act No 56, No 4 agreement. Regulation of maritime and port works. D.O. No. 233, volume no. 376, December 13, 2006.**	**AMP**	Article 26.-Access AreasFor reasons of public interest, strain, prior authorization from the AMP, will be responsible for the management of the common areas, channel access, approach and areas of funding to the different merchant ports.The regulation of such management must be defined in the operations manual which must be drawn up for this purpose.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Generation of electric power.**	**Act No 56, No 4 agreement. Regulation of maritime and port works. D.O. No. 233, volume no. 376, December 13, 2006.**	**AMP**	Article 5.-Local port maritime authority The authorization for entering and leaving port or marine terminal will be granted by the AMPL, at the request of ship-owners, operators, their agents or the master of the vessel, or commissioned naval artifact and it shall be subject to prior compliance with the provisions of the regulations; as well as the comprehensive safety, safety of navigation, health, customs, immigration and port regulations.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Resolution No. 86/2015. Salvadoran maritime registry regulation. D.O. No. 88, volume no. 407, may 18, 2015.**	**AMP**	Registration of ships Article 42. The register of ships is the subsystem of the REMS where marine units are registered: ships, boats and artefacts Naval, existing or under construction. The registration of existing ships, materialize after verification of the conditions of navigability, established through the authorization procedure provided for in the regulations for the navigation of ships and sea people authorizations. The authorization referred to in the preceding paragraph, will determine also the activity that will be used every maritime unit, which will be considered by the REMS when realize the inscription.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Resolution No. 86/2015. Salvadoran maritime registry regulation. D.O. No. 88, volume no. 407, may 18, 2015.**	**AMP**	Certificate of registration Article 44. The certificate of registration, will be the document by means of which will be credited to the maritime unit has been included in the REMS, prior authorization on conditions of airworthiness directive issued by the AMP. Such documents shall accredit also who the domain right about saying right or if the quality of holder, in accordance the LGPM. The certificate of registration shall contain the following data: 1) name of the maritime unit;		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Resolution No. 86/2015. Salvadoran maritime registry regulation. D.O. No. 88, volume no. 407, may 18, 2015.**	**AMP**	Permits and authorizations Article 63. The resolutions issued by the AMP, containing permissions shall be entered in the REMS and authorizations concerning maritime and port activities referred to in the LGMP and their Regulations. The inscription of the resolutions referred to in the preceding paragraph will be ordered by the Executive Director, prior compliance with the requirements set out in the respective regulations; and by the Board of Directors of the AMP, when you know in second instance in the authorization process.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Resolution No. 113/2013. Regulations for the issuance of certificates of safety to the superstructures port operated by third parties and adjacent superstructures to ports. D.O. No. 201, volume 401, 29 October 2013.**	**AMP**	Article 6.-Application Every owner or holder of superstructure which is intended for the development of port inside the port area or outside the premises operations but accessing it through easement, lease, loan or other Act legal, prior to its operation must request certification of safety of the superstructure, to which must be presented: (a) form "Request for certification of safety of superstructure controlled" signed by the applicant; ...		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Generation of electric power.**	**Resolution No. 113/2013. Regulations for the issuance of certificates of safety to the superstructures port operated by third parties and adjacent superstructures to ports. D.O. No. 201, volume 401, 29 October 2013.**	**AMP**	Article 12.-Safety certification feesIssuance and validity of the security certificate of regulated superstructures, will have an annual fee which will be established in the statement of charges for administrative services provided by the maritime port authority in the port.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Regulations for the navigation of ships and sea people authorizations, D. Official: 25, vol. 382, February 06, 2009.**	**AMP**	Article 5. Applications. requirements Applications for the processing of the different authorization procedures laid down in this regulation, must be submitted by the owner, agent or legal representative of the vessel, as the case may be...		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**Regulations for the navigation of ships and sea people authorizations, D. Official: 25, vol. 382, February 06, 2009.**	**AMP**	Article 32. Of authorizations for seafarers … Any person that is part of the crew of the vessels and naval artifacts, or who performs profession, trade or occupation in the port jurisdiction, or activity regulated or controlled by the AMP must be duly authorized by the AMP and registered in the REMS.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 11. Ports For the purposes of the delimitation of the territorial sea, the furthest from the coast permanent port buildings that form an integral part of the port system are part of this. The offshore installations and artificial islands permanent port constructions will not be considered.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 57. Width of the exclusive economic zone The exclusive economic zone shall not extend beyond 200 nautical miles counted from the baselines from which the breadth of the territorial sea is measured.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 60. Artificial islands, installations and structures in the exclusive economic zone 1. in the exclusive economic zone, the coastal State shall have exclusive right to build, as well as to authorize and regulate the construction, operation and use of: (b) installations and structures for the purposes specified in article 56, for other economic purposes; (c) installations and structures which might hinder the exercise of the rights of the coastal State in the area.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	3. the construction of such artificial islands, installations or structures must be duly notified, and permanent means must be maintained to warn of their presence. Facilities or abandoned or disused structures will be removed to ensure the safety of navigation, considering generally accepted international standards has been established in this respect the competent international organization. For the purposes of removal, the fishing, the protection of the marine environment and the rights and obligations of other States be also considered. Appropriate notice shall be given of the depth, position and dimensions of the installations and structures which have not been completely removed.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Generation of electric power.**	**The United Nations ConventionOn the law of the sea**	**AMP**	Article 79.Cables and pipes underwater on the continental shelf1. all States have the right to lie on the continental shelf lines submarines, in accordance with the provisions of this article.2. the coastal State, to reserve their right to take reasonable measures for the exploration of the continental shelf, the exploitation of their natural resources and the prevention, reduction and control of pollution caused by pipes, shall not prevent the laying or the conservation of such cables or pipelines.3. the layout of the line for the laying of such pipelines on the continental shelf is subject to the consent of the coastal State.4. None of the provisions of this part shall affect the right of the coastal State to establish conditions for the entry of cables or pipes within its territory or territorial sea, or its jurisdiction over cables and pipelines constructed or used in connection with the exploration of its continental shelf, the exploitation of the resources or the operations of artificial islands installations and structures under its jurisdiction.5 when they tend submarine cables or pipelines, States shall take duly into account cables or pipelines already installed. The possibility of repairing the cables or pipes is not dullexisting.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 81. Drilling on the continental shelf The coastal State shall have the exclusive right to authorize and regulate drilling that occur on the continental shelf with any purpose.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 85. Excavation of tunnels The provisions of this part shall not prejudice the right of the coastal State to exploit the subsoil by the excavation of tunnels, either that is the depth of water in the place concerned.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 90. Right of navigation All States are coastal or landlocked, have the right to that vessels flying its flag operating in the high seas.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 91. Nationality of ships 1. each State shall establish the requirements for granting its nationality to ships, for the registration in a register on its territory and which have the right to fly its flag. The ships will possess the nationality of the State whose flag they are authorized to fly. There must be a genuine link between the State and the ship. 2. each State shall issue the documents relevant to vessels which granted the right to fly its flag.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 112, right to lay submarine cables and pipelines 1. all States are entitled to lay cables and submarine in the bed of the high seas beyond the continental shelf. 2. paragraph 5 of article 79 shall apply to such cables and pipes.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 113. Rupture or damage to submarine cables or pipelines All State shall adopt laws and regulations necessary for they constitute punishable offences the rupture or the deterioration of a submarine cable on the high seas, caused voluntarily or by culpable negligence by a vessel flying its flag or by a person subject to its jurisdiction, which can interrupt or obstruct telegraphic or telephone, communications as well as the rupture or damage , under the same conditions, of a pipeline or a high voltage submarine cable.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 114. Rupture or damage to submarine cables or pipelines caused by owners of other wires or pipes underwater State shall adopt laws and regulations required so that persons subject to their jurisdiction to be proprietary cables or pipes on the high seas and, to build or repair cables or pipes, causing the rupture or the deterioration of another cable or other piping will respond in the cost of your repair.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 119. Conservation of the living resources of the high seas (b) shall consider the effects on species associated with captured or dependent species of them, with a view to maintaining or restoring populations of such associated or dependent species by above levels at which their reproduction may be seriously threatened.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Generation of electric power.**	**The United Nations ConventionOn the law of the sea**	**AMP**	Article 145.Protection of the marine environmentIn accordance necessary measures shall be taken with respect to activities in the area with this Convention to ensure the effective protection of the marine environment from harmful effects that may arise from these activities. To that end, the authority will establish rules, regulations and procedures appropriate for, among other things:(a) to prevent, reduce and control pollution of the marine environment and other risks, including the coasts, and the disruption of the marine ecological balance, paying special attention to the need for protection against the harmful consequences of activities such as drilling, dredging, excavation, disposal of waste, construction and operation or maintenance offacilities, pipelines and other devices related to such activities;(b) protect and preserve the natural resources of the area and prevent damage to marine flora and fauna.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 146. Protection of human life About activities in the area, the necessary measures to ensure the effective protection of human life shall be adopted. To that end, the authority will establish standards, regulations and appropriate procedures that complement existing international law, as contained in treaties on the.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 147. Harmonization of activities in the area and in the marine environment 1. activities in the area shall be reasonably considering other activities in the marine environment. 2. the facilities used for activities in the area shall be subject to the following conditions: (a) they shall be constructed, placed and removed exclusively in accordance with the provisions of this part and subject to the rules, regulations and procedures of the authority. Construction, location and removal of such installations shall be duly notified and will remain permanent means to draw attention to their presence;		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Generation of electric power.**	**The United Nations Convention On the law of the sea**	**AMP**	Article 149. Archaeological and historical objects All the archaeological and historical objects found in the area shall be preserved or you will have them for the benefit of all humanity, particularly considering the preferential rights of the State or country of origin, the State of cultural origin or the State of historical and archaeological origin.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit. However, there is already a resolution of SECULTURA appended to the present ESIA.
General provisions	**Management of hazardous substances**	**Decree No. 630. Law on Natural Gas. D. o. No. 115, taking no. 379, June 20, 2008.**	**MINEC**	Authorizations. Article 7.-will require the prior granting of authorization, the following activities: (a) the construction of natural gas storage facilities; ... Authorizations shall be granted by the Directorate, at the request of the person concerned, prior compliance with requirements and obligations set forth in this Act and its regulations.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**	**Decree No. 630. Law on Natural Gas. D. o. No. 115, taking no. 379, June 20, 2008.**	**MINEC**	Licensing Article 8.-built infrastructure, address, prior opinion of this that has complied with provisions of the authorization, shall grant the license of operation of facilities and equipment subject of this authorization. It will also require license to operate any enlargement, modification, or renovation of the infrastructure.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**	**Decree No. 630. Law on Natural Gas. D. o. No. 115, taking no. 379, June 20, 2008.**	**MINEC**	General requirementsArticle 9.-those interested in obtaining an authorization to develop any of the activities referred to in this law, shall meet the following requirements:(a) submit application detailing the activity that seeks to make, name, denomination or company name and address of the applicant, description of the place where it will be located to the facilities; as well as the rules to apply in accordance with the provisions of article 59 of this law; and particularly in the case of the activities of the transport and distribution of natural gas, accredited experience in the development of the same by a minimum of five years with a recognized history of preventing, safety and use of cutting-edge technology.b) demonstrate the availability of the building in which it will perform the activity;(c) a document showing the respective legal capacity, in the case of a legal person;(d) certify the registration of existing trade;(e) copy of the tax card, certified by notary;(f) creditworthiness issued by the Directorate General of internal revenue;(g) copy certified by a notary of the single document of identity (DUI) of the applicant, in case of natural persons and the legal representative in the case of legal persons;(h) resolution of rating of the site, construction and road review issued by the competent authority; e,(i) a copy certified by a notary of the taxpayer registration number.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Management of hazardous substances**	**Decree No. 630. Law on Natural Gas. D. o. No. 115, taking no. 379, June 20, 2008.**	**MINEC**	Authorization and license for self-consumption Article 12.-may authorize the storage of natural gas including the transportation pipeline of such product for consumption, to the place where the facilities of the industry, are prior compliance with the requirements established by this Act and the corresponding regulations. The transport operations referred to in this article, shall not be subject to concession rules regulated in article 18 of this law. In the event storage for subsistence activity to make use of the pipeline system, will be subject to rate regulation and the right of free access; This rule shall not apply if that vent is engaged in the industry to supply. The product received by the company supplied, will be for the exclusive use of the same operations. The license for the storage of natural gas for subsistence will last for thirty years renewable.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**	**Decree No. 630. Law on Natural Gas. D. o. No. 115, taking no. 379, June 20, 2008.**	**MINEC**	Operation licenses. Article 49.-operation licenses shall verify works, buildings and equipment of holders of authorizations or concessions to comply with technical standards and corresponding security. To obtain the operating license, the person who has been previously authorized the construction, you must request it, appending the following, as applicable depending on the nature of the activity: (i) insurance policy civil liability and all risk for facilities requests the license of operation; (ii) certificate of calibration of dispensers and equipment; (iii) certificate of the hydraulic or pneumatic tests of facilities; e, (iv) certificates showing the rules under which the different equipment and facilities have been built.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**	**Decree No. 630. Law on Natural Gas. D. o. No. 115, taking no. 379, June 20, 2008.**	**MINEC**	Import and export Article 50.-imports and exports of natural gas can be made by any national or foreign natural or legal person obtaining prior authorization and respective license; as well as, meet the annual register in the address.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**	**Decree No. 630. Law on Natural Gas. D. o. No. 115, taking no. 379, June 20, 2008.**	**MINEC**	Common obligations. Article 60.-persons who intend to engage in natural gas storage, transportation of natural gas by pipelines, natural gas distribution networks, transportation of modular gas, operation of filling stations of CNG for vehicular use and conversion of motor vehicles to CNG workshops, must comply with the obligations listed below: (a). having obtained the concession, license or authorization, prior to perform activities regulated by this law; (b). comply with technical standards that facilities, equipment and procedures covered by the present Act, relating to natural gas;		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**	**Decree No. 93. Special Directive for storage, use, import and export of Natural Gas. D.O. No. 233, volume no. 409, 17 December 2015.**	**MINEC**	Article 5). -the installation of storage of GN onshore, must comply with the following requirements of design and location:...(5.7. the person concerned must process and get to the Ministry of environment and natural resources, MARN, the environmental permit for the construction of the project, in accordance with the letter h) of article 10 of the law and in accordance with the provisions of article 19 of the law of the environment.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**		**MINEC**	5.8. the person concerned must obtain permits relating to construction and security operations from the pier to the maritime port authority, pursuant to the provisions of the General Law on maritime port and its regulations. Obtained authorization shall accredit the compatibility of works with the infrastructure required for the project, requirement in the letter f) of article 10 of the law.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**	**Decree No. 93. Special storage, consumption, import regulations and Export of Natural Gas. D.O. No. 233, volume no. 409, 17 December 2015.**	**MINEC**	Article 13)-for its construction, the installation of storage of GN onshore, must comply with the following requirements: ... 13.61 for seismic design, it should be noted the following: 13.61.2 tanks, systems of retention of LNG and other systems and structures, will be designed to resist two levels of seismic activity, the side effects to this activity and to keep operating conditions during and after the earthquake. Under the concept of earthquake of unemployment insurance (SPS), the Maritime Terminal of GN should be stopped after an earthquake for inspection, before returning to their normal operation; the SPS also applies to the case of a tsunami.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
General provisions	**Management of hazardous substances**	**Decree No. 93. Special storage, consumption, import regulations and Export of Natural Gas. D.O. No. 233, volume no. 409, 17 December 2015.**	**MINEC**	13.66.21 is they should design and install anti-corrosion protection systems in all buried piping, in accordance with the specific regulations applicable; should be taken special care in stainless steels and steels to aluminum, which must be protected to minimize corrosion caused by industrial and atmospheric corrosive agents during the manufacture of the equipment, the construction and operation of the GN Maritime Terminal.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**	**Decree No. 93. Special storage, consumption, import regulations and Export of Natural Gas. D.O. No. 233, volume no. 409, 17 December 2015.**	**MINEC**	13.67.1 NG Maritime Terminal must have a control center to monitor continually their operations. 13.67.2. the control center will be in separate and protected in other installations of the Maritime Terminal of GN, sheltering the occupants time to develop emergency procedures and subsequently allow them to evict the area safely.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**	**Decree No. 93. Special storage, consumption, import regulations and Export of Natural Gas. D.O. No. 233, volume no. 409, 17 December 2015.**	**MINEC**	13.68. with the aim of ensuring the uninterrupted and safe operation of the Maritime Terminal of GN, equipment and major systems, pressure relief and safety, must be redundant; i.e., such equipment and systems should be installed twice. 13.69 for LNG transfer and refrigerants from ships to storage tanks, the following should be considered: 13.69.1 piping systems must have for each transfer system isolation valves; Similarly, a system of cooling to control the transfer of LNG temperature before and during operation should be installed. Valves should be installed to prevent decline in LNG transfer systems, of no return ("check" valves). 13.69.2 pumps or compressors must have additional remote control to local unemployment and control devices to stop the operation from the discharge zone; also, be in coordination with controls on board the vessel that transports GN. ...		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
General provisions	**Management of hazardous substances**	**Decree No. 93. Special storage, consumption, import regulations andExport of Natural Gas. D.O. No. 233, volume no. 409, 17 December 2015.**	**MINEC**	13.66.21 is they should design and install anti-corrosion protection systems in all buried piping, in accordance with the specific regulations applicable; should be taken special care in stainless steels and steels to aluminum, which must be protected to minimize corrosion caused by industrial and atmospheric corrosive agents during the manufacture of the equipment, the construction and operation of the Maritime Terminal of GN.		**X**		The owner is aware of complying with the provisions of legislation, transactions that take place after obtaining the environmental permit.
Water resources	**Drinking water**	**NSO 13.07. 01:08. Water, drinking water. (Second update). D.O. June 12, 2009, taking 383 No. 109**	**MINEC**	4.2 PHYSICAL AND CHEMICAL QUALITY REQUIREMENTS Table 3 values for chemical substances Table 4 values for chemical substances of inorganic type of high risk to health	**N/A**			The supply of water for the workers will be through bottles of purified water. (see sub-numeral 4.13.1 consumption of water resources construction stage).
Water resources	**Generation of wastewater**	**Decree N ° 39.- Regulation special sewage Published in the official journal number 101 of 1 June of the year 2000**	**Ministry of environment and natural resources.**	Article 7.-any natural or legal, public or private person, owner of a work, project or activity responsible for produce or manage water waste and its disposal in a receiving environment, hereinafter called the licensee, must be installed and operate treatment systems for their wastewater to comply with the provisions of this regulation and the relevant legislation.	**X**			In the project, Energía del Pacífico LNG to Power, special sewage will be treated by means of a separator tank water-oil. (see sub-numeral, 4.12.2 oily water management system; 4.14.7 special waste water) The waters of ordinary type will be handled by means of septic tank and septic tank, as MINSAL has established it. (see EsIA, sub-numeral 4.6.9.2 management and Final disposal of the waste water of ordinary type)

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
				Article 9.-holders must develop and submit to the Ministry reports operational systems of treatment of waste water and the conditions of their shed, reflecting the frequency of sampling, as stipulated in the Arts. 16, 19 and 25 of this regulation. The annual summary will be part of the annual report of the result of the application of environmental management or environmental adjustment programs.	**X**			In the project Energía del Pacífico Project LNG to Power. special waste water will be treated with a water-oil separator tank. (see sub-numeral, 4.12.2 oily water management system; 4.14.7 special waste water)
				Article 10.-regular operational reports shall contain as a minimum the following information: (a) registration of occupancy;				
				(b) register of laboratory analysis carried out by the holder and by accredited laboratories, per the relevant legislation;				
				(c) register of damage to infrastructure caused by accidental situations or accidents in the management and operation of the system;				
				(d) accidental situations or accidents in the management and operation of the system that caused wastewater discharges with levels of pollutants which are contrary to the limits permitted by the respective technical standards;				
				(e) assessment of the current state of the system, and				
				(f) control and corrective actions.				
				Article 11.-based on article 23 of the law and for the purpose that the analysis contained in the reports required in the environmental permit are valid, must come from legally accredited laboratories by the National Council of science and technology, hereinafter CONACYT. Such laboratories are those with which it can be shown that dumping characterization complies with environmental quality standards established. In case of analysis which is will not tell with laboratories previously accredited by CONACYT, you can afford than those performed by laboratories that are in process of accreditation, for which CONACYT shall transmit to the Ministry the corresponding list.	**X**			In the project Energía del Pacífico Project LNG to Power, special sewage will be treated by means of a separator tank water-oil. (see sub-numeral, 4.12.2 oily water management system; 4.14.7 special waste water)
				Article 12.-evaluation of the quality of wastewater will include analysis of characteristics physical - chemical and microbiological, in accordance with the technical standards of quality of wastewater.				
				Article 16.-without prejudice to the provisions of the preceding articles, depending on the nature of the work, project or respective activity, as well as the analysis described, the competent authority may require that dumping characterization must include other quality parameters to determine and control the presence of contaminants from waste water, thus: see table of the article mentioned (where established activity and component or characteristic of the spill) that by being very intense not It is related in the present array.				
				Application of sampling and analysis Article 17.-the frequencies of sampling and analysis set out in this regulation are the minimum required for the preparation and submission of operational reports. Its application is limited to the wastewater discharged into any receiving environment.				
Water resources	**Generation of wastewater**	**Decree N ° 39.- Regulation special**	**Ministry of environment and**		**X**			The owner to set the frequency of the monitoring and the parameters to be analyzed as that regulation established by.

<table>
<tr><th colspan="8">Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador</th></tr>
<tr><th rowspan="2">Legal area</th><th rowspan="2">Environmental aspect</th><th rowspan="2">Applicable standard</th><th rowspan="2">Governing body</th><th rowspan="2">Article of applicable Legal body</th><th colspan="3">Compliance</th><th rowspan="2">Evidence of compliance or enforcement proceedings</th></tr>
<tr><th>Yes</th><th>In process</th><th>No</th></tr>
<tr><td></td><td></td><td>sewage Published in the official journal number 101 of 1 June of the year 2000</td><td>natural resources.</td><td>Minimum frequency of sampling and analysis of wastewater of ordinary type
Article 18.-the minimum frequency of sampling and analysis per characteristic of systems of ordinary type wastewater treatment effluent flow and components, will be made as stated below:
<table><tr><td>PARAMETROS</td><td colspan="3">CAUDAL m³ / día</td></tr><tr><td></td><td>< 50</td><td>> 50</td><td>> 100</td></tr><tr><td>PH, Sólidos Sedimentales y Caudal</td><td>Mensual</td><td>Semanal</td><td>Diario</td></tr><tr><td>Grasa y aceites</td><td>Anual</td><td>Semestral</td><td>Trimestral</td></tr><tr><td>DBO5,20</td><td>Trimestral</td><td>Trimestral</td><td>Trimestral</td></tr><tr><td>Sólidos Suspendidos Totales</td><td>Anual</td><td>Semestral</td><td>Trimestral</td></tr><tr><td>Coliformes fecales</td><td>Trimestral</td><td>Trimestral</td><td>Trimestral</td></tr></table>
However the provisions of this regulation, in the case of the parameters pH, settleable solids and flow, for the purposes set out in this article, do not require be carried out by an accredited laboratory; However, they must be included in the operational report. It will also be the provisions of article 16, depending on the work, project or activity concerned.
Minimum frequency of sampling and analysis of special type wastewater
Article 19.-in regards to the sewage of special type, as referred to in the preceding article, shall apply provisions below:
<table><tr><td>CARACTERISTICAS</td><td colspan="3">CAUDAL m³ / día</td></tr><tr><td></td><td>< 10</td><td>10 a 100</td><td>> 100</td></tr><tr><td>Temperatura, PH, Sólidos Sedimentables y Caudal</td><td>Mensual</td><td>Semanal</td><td>Diario</td></tr><tr><td>Otros parámetros obligatorios según el Art. 18</td><td>Anual</td><td>Semestral</td><td>Trimestral</td></tr></table>
However, the features temperature, pH, settleable solids and flow, for the purposes provided in this article, do not require be carried out by an accredited laboratory; However, they must be included in the operational report.</td><td>X</td><td></td><td></td><td></td></tr>
<tr><td>Water resources</td><td>Generation of wastewater</td><td>Agreement No. 249. NSO 13,49,01:09 waste water discharged to a body receiver. D.O. March 11, 2009. Vol. 382, no. 48</td><td>Ministry of environment and natural resources.</td><td>5. REQUIREMENTS.Maximum levels permissible of the parameters of this standard must be achieved by means of the respective treatments. To reach such levels does not allow dilution.(See table 1).
<table><tr><th>ACTIVIDAD</th><th>DQO (mg/l)</th><th>DBO5,20 (mg/l)</th><th>Sólidos Sedimentables (ml/l)</th><th>Sólidos Suspendidos Totales (mg/l)</th><th>Aceites y grasas (mg/l)</th></tr><tr><td>AGUAS RESIDUALES DE TIPO ORDINARIO</td><td>150</td><td>60</td><td>1</td><td>60</td><td>20</td></tr></table></td><td>X</td><td></td><td></td><td rowspan="4">The waters of ordinary type will be handled by means of type package plant and sold with all its components, less civil works and sludge-drying patio. (see EsIA, sub-numeral 10.1.25 wastewater treatment plant construction;) Figure 10.12 - scheme of the treatment system in wastewater treatment plant) The treated effluent will be discharged to the gutter drainage of strain in the Beltway corner of the ground.</td></tr>
<tr><td></td><td></td><td>Decree No. 40. Special rules of technical standards of environmental quality, D.O. 101. Vol. 347, 01 June 2000.</td><td>Determination of dumping
Article 8.-the authorization of discharges or emissions through the environmental permit, when the conditions of the receiving environment or ecosystem, exceed the limits established by the technical standards of environmental quality, should be considered more strict limits and actions that promote their recovery.</td><td>X</td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td>If the capacity of the receiving environment or ecosystem could not be determined, the authorization shall be based on provisions of the discharge or emission standard and must always apply the standards of environmental quality, per the Arts. 10 and 20 of this regulation.</td><td>X</td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td>Wastewater
Article 20.-for the discharge of wastewater will be established, as provided for in this regulation, quality standard containing the allowable limits, the precautionary principle to pollution of the environment which will serve as receiver of the same prevailing.</td><td>X</td><td></td><td></td></tr>
</table>

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
		Agreement No. 1189.-standard for the storage of hazardous chemicals. D.O. November 11, 2010. Vol. 389 No. 211	**Ministry of public health and Social Welfare.**	The management and Final disposal of waste water of special type. Article 10.-the wastewater generated by those establishments that handle and store hazardous chemicals, shall comply with the special regulation of waste waters of the Ministry of environment and natural resources.	**X**			In the project energy of the Pacific LNG to Power, special sewage will be treated by means of a separator tank water-oil. (see sub-numeral, 4.12.2.1 oily water management system; 4.14.7 special waste water)
Gaseous emissions	**Generation of emissions.**	**Special technical standards of environmental quality regulations, Decree No. 40, D.O. 101. Vol. 347, 01 June 2000.**	**Ministry of environment and natural resources**	Article 9: the ambient air quality standard will establish the maximum permissible limits to be applied for air pollutants to ensure human health and the environment, which may never exceed the following limits of allowable levels of ambient air quality: TABLE 1 9 ARTICLE	**X**			Due to the nature of the process are identified emissions smoke, fumes and dust, (see EsIA. Sub-numeral 4.6.9.5 atmospheric emissions; Table 4.25 - quality program overview ambient air (air emissions) acceptance tests).
				Article 10: based on article 47 letter to) of the Environment Act, the holders of fixed or stationary sources of emissions must be installed systems of control and reduction of emissions, without prejudice to the use of measures of minimization of the generation of emissions. It is prohibited to use of techniques of dilution or dispersion as primary or unique control method to reduce the concentration of pollutants.	**X**			
		Proposal of NSO 13.11. 02:01. Atmospheric emissions Stationary sources		2. FIELD OF APPLICATION This standard is applicable throughout the national territory, about the prevention and control of atmospheric pollution by emissions in any State of aggregation of matter, caused by stationary sources.	**X**			
				7 FEATURES AND SPECIFICATIONS OF EMISSIONS Installation of new industries in the country which are not covered in this standard shall comply with the emission limits defined by the MARN in a special on an individual basis for each industry scheme.	**X**			
	Generation of Emissions.	**Agreement No. 524. San Salvador, June 17, 2003 NSO: 13.11.01: 01; Quality of the ambient air, atmospheric Immissions. Published in Official Journal No. 360 of August 26, 2003**		6 FEATURES AND SPECIFICATIONS OF THE INMISIONS Inmissions of the main contaminants of air limits are specified in table 1. ((See table 1 (Immissions) ambient air quality standard	**X**			The owner is aware that at this point the MARN can set parameters or limits of ENMISION that it deems appropriate.
				7 COMPLIANCE AND VERIFICATIONIt is the monitoring of compliance with this mandatory standard MARN as a competent authority. In environmental emergencies related to the quality of the air, MARN may take temporary measures to overcome such emergencies. (see table 1 Calidad Norma ambient air) (immission)	**X**			
Gaseous emissions	**Generation of IMMISSIONS.**	**Agreement No. 524. San Salvador, June 17, 2003 NSO: 13.11.01: 01; Quality of the ambient air, atmospheric Immissions. Published in Official Journal No. 360 of August 26, 2003**	**Ministry of environment and natural resources**	MEASUREMENT METHODOLOGY The evaluation of the quality of the air in each area, will take place during sampling periods comprising variations climatic and seasonal, if any, and considering the types and characteristics of the emission sources major sector, cycles of operation representative annual average production of sources, as well as any other conditions of the area that can affect the air quality.	**X**			By the type of project the EsIA, establishes that the plant will generate emissions. (cf. EsIA.sub-numeral 4.6.9.5 emissions into the atmosphere; To mitigate the impact by dust generation during the construction proposed environmental measures that are included in the PMA. 4.14.6. noise: The noise will be measured after putting up teams. The sampling will be carried out by an independent contractor picked by the EDP; Table 4.29 - Overview of the noise test program). 4.1.2.4 optimization in the design of the Marine Terminal and the power plant. Reorientation of Roundhouse southward, and in a North-South axis, first, to handle the spread of noise towards the nearest residential areas.
				This period of sampling shall cover a minimum period of four (4) weeks sampling, a minimum of twenty (20) effective, distributed samples during all the time of sampling, with a minimum frequency of uptake of one (1) specimen every three (3) days, for studies that are made during one period of less than six (6) months, with a minimum frequency of one (1) shows every six (6) days for studies carried out at periods greater than six (6) months. Same periods of measurement reflect the diurnal and nocturnal variations and highs, in the case of continuous measurements. The number of points of sampling and its location must permit are detected variations in concentration due to existing sources. In any case, the location of sampling stations is outside the boundary of any source.	**X**			
				The determination of the concentration of pollutants in the air may be carried out by the methods of sampling, periods of measurement and analytical methods listed below (see table sampling, frequency and analytical methods of measurement 1) of the NSO Norma: 13.11.01: 01;	**X**			

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Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
Gaseous emissions	**Generation of noise.**	**Proposal of NSO 13.11. 02:02. Atmospheric emissions fixed Source**	**Ministry of environment and natural resources**	8. MAXIMUM AMBIENT NOISE LEVELS Table 14 Maximum permissible limits of noise from stationary sources **Ubicación de la fuente** / **dB (A)** 06:00 a 22:00 horas / **dB (A)** 22:00 a 06:00 horas Industrial y comercial: **75** / **70**	**X**			By the type of project the EsIA, establishes that the plant will generate emissions. (cf. EsIA.sub-numeral 4.6.9.5 emissions into the atmosphere; To mitigate the impact by dust generation during the construction proposed environmental measures that are included in the PMA. 4.14.6. noise: The noise will be measured after putting up teams. The sampling will be carried out by an independent contractor picked by the EDP; Table 4.29 - Overview of the noise test program). 4.1.2.4 optimization in the design of the Marine Terminal and the power plant. Reorientation of Roundhouse southward, and in a North-South axis, first, to handle the spread of noise towards the nearest residential areas.
Gaseous emissions	**Generation of noise.**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Evaluation of noise At. 149. the evaluation of noise should be performed under normal operating conditions, must be representative of a working day of eight hours and in that day, that, under normal operating conditions, present the greatest noise emission. If the evaluation lasts more than one day's work, all sessions that occur in normal conditions of operation should be stored. Use wind shield on the microphone of the measuring instruments during the evaluation period.				
Gaseous emissions	**Generation of noise.**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Evaluation Article 150.-evaluation can be environmental type, to determine the emission of noise from one or a set of machines; identify, characterize and classify the sources of noise or occupational exposure to verify if the workers are exposed to noise levels above the allowed or to predict the risk of hearing loss in workers.				
Gaseous emissions	**Generation of noise.**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Types of noise Article 151.-occupational noise exposure will distinguish the stable noise, fluctuating noise and impulse noise.				
Gaseous emissions	**Generation of noise.**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Stable noiseArticle 152.-stable noise is one that presents fluctuations of the instantaneous sound pressure level less than or equal to 5 decibels (DBA) in instrumental response "slow" for a period of 1 minute observation.Fluctuating or intermittent noise is one that presents fluctuations of instantaneous sound pressure level greater than 5 dB to "slow", urging a 1 minute observation period. This can be in random or repetitive cycles (unpredictable). Impulse noise is the one who presents pulse of acoustic energy of less than 1 second or greater than 1 second intervals.				
Gaseous emissions	**Generation of noise.**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Permissible noise limits Article 155-occupational exposure to noise stable or fluctuating noise must be controlled so that for a day of 8 hours per day no worker may be exposed to a level of equivalent continuous sound pressure level exceeding 85 dB (A), measured at the position of the ear of the worker (at one distance of no more than 30 cm of your listening area).	**X**			By the type of project the EsIA, establishes that the plant will generate emissions. (cf. EsIA.sub-numeral 4.6.9.5 emissions into the atmosphere; To mitigate the impact by dust generation during the construction proposed environmental measures that are included in the PMA. 4.14.6. noise: The noise will be measured after putting up teams. The sampling will be carried

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					Yes	**In process**	**No**	
Gaseous emissions	**Generation of noise.**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Tolerance limits Article 156.-ceilings of tolerance of continuous sound pressure levels equivalent, admitted in the workplace without the use of personal devices, such as plugs, headphones, etc., have been calculated with a rate of exchange of 3 dB (A), taking as base 85 dB (A) for an 8-hour day and are set out in the following table: Tabla II – 9: Límites de tolerancia máximos de niveles de presión sonora continúa equivalentes • Valores para trabajadores expuestos sin protección auditiva personal				out by an independent contractor picked by the EDP; Table 4.29 - Overview of the noise test program). 4.1.2.4 optimization in the design of the Marine Terminal and the power plant. Reorientation of Roundhouse southward, and in a North-South axis, first, to handle the spread of noise towards the nearest residential areas.

Nivel de presión sonora equivalente (NPSeq dB A en respuesta lenta *	Tiempo de exposición por día		
	Horas	Minutos	Segundos
85	8		
86	6.35		
87	5.04		
88	4		
89	3.17		
90	2.52		
91	2		
92	1.59		
93	1.26		
94	1		
95		47.4	
96		37.8	
97		30	
98		23.8	
99		18.9	
100		15	
101		11.9	
102		9.4	
103		7.5	
104		5.9	
105		4.7	
106		3.75	
107		2.97	
108		2.36	
109		1.88	
110		1.49	
111		1.18	
112			56.4
113			44.64
114			35.43
115			29.12

Gaseous emissions	**Generation of noise.**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Safety measures against noise Article 165.-requirements to be fulfilled by the employer in the work environment will be: 1 noise is avoided or reduced as far as possible in its focus of origin, trying to slow its spread on their work premises. 2. the anchorage of machines and devices that produce noise will be made with the most effective technique, to achieve their optimal static and dynamic balance. 3. the machines that produce annoying noise must be properly disconnected and those spaces will only work the staff required for their maintenance during the time necessary. 4 will prevent install machines or noisy devices attached to walls or columns that suboptimal minimum: 0.70 m dividing partitions and one meter from the walls or outer columns. 5 starting from 85 dB (A) for 8 hours of exposure and provided that the reduction of the sound level by other procedures is not achieved, will be compulsorily used personal protection such as earmuffs or earplugs and other devices.				
Gaseous emissions	**Generation of greenhouse effect Gases**	**Protocol of Kyoto of the Convention frame of the Nations United on climate change. S/n of September 17, 1998, published October 15, 1998 in the D.O.**	**The State and the population in General**	Article 2. 1. with the aim of promoting sustainable development, each of the Parties included in annex I, to fulfil the quantified limitation and reduction of emissions commitments made pursuant to article 3: (a) apply or continue to develop policies and measures in accordance with their national circumstances, for example as follows: (ii) protection and enhancement of sinks and reservoirs of greenhouse gases not controlled by the Montreal Protocol, taking into account its commitments under relevant international agreements on the environment: promotion of sustainable practices of forest management, afforestation and reforestation;	**X**			The project has equipment that generates significant noise. (see EsIA, sub-numeral, 7.4.3 noise and vibrations;) 7.7 table provides a summary of the results of the monitoring of the noise to the background noise conditions and includes the applicable criteria applied to the project based on the guidelines of the World Bank.) Natural gas requires the extraction of some of the components no-methane as water and carbon dioxide, to avoid that they

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
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					Yes	**In process**	**No**	
Gaseous emissions	**Generation of greenhouse effect Gases**	**Protocol of Kyoto of the Convention frame of the Nations United on climate change. S/n of September 17, 1998, published October 15, 1998 in the D.O.**	**The State and the population in General**	Annex A "Greenhouse gas" Carbon dioxide (CO2) Hydrofluorocarbons (HFCs)				setting compounds when the gas is cooled to the temperature of-256 ° F. (see 4.8.2 composition table 4.12 and the fuel sub-numeral. The expected composition of natural gas)
Land use planning	**Land use**	**Decree 644. Law of Territorial Development and management. D.O. July 29, 2011. Volume 392 No. 143.**	**The State and the population in General**	Partial plansArticle 42. Partial plans detailing the content of municipal plans or micro-regional planning and territorial development, located the networks of infrastructures and public services of its scope and establish the specific arrangements of each subdivision, as well as the conditions of urbanization and construction within the framework of general legislation on the...(17) system of compulsory compensation between owners of land within the area of the partial plan. Partial plans may develop on the initiative of the Municipal Government or by private initiative, prior approval of the Municipal Government.	**NA**			Holder has the qualification of the place, given by the Deputy Minister of housing and urban development (out), (see sub-numeral 4.2.3 qualification place and line construction and Appendix 4A).
				Proposed by private initiative Article 43. If the proposal of the partial plans developed by private initiative, it must have the support of owners holding most the land subject to the relevant plan.				
				Environmental impact assessment. Article 55. It is a set of actions and procedures that ensure that activities, works or projects that have a negative environmental impact in the environment or in the quality of life of the population, undergo from the pre-investment phase procedures to identify who and quantify these impacts and to recommend measures that prevent them, mitigate, compensate or boost; Depending on the case, selecting the alternative that best ensure the protection of the environment. The aforementioned evaluation shall be in accordance with provisions of the means and Environment Act and their respective regulations.	**X**			The holder is already in the process of environmental impact assessment, is knowing that your project is category group B2 and its study must include a minimum provisions of article 23 of the General Regulation. In fact the items of the referred article and the EsIA have been revised and all are. (see all EsIA).
				Densification in consolidated urban areas. Article 66.-the owners of land in consolidated urban areas, seeking to carry out urban transformations that have as a consequence the population density increase, shall compensate the municipality as provided in municipal planning and territorial development plans and partial plans, by the effects that this causes in terms of traffic, solid waste generation , provision of basic services and new demands of equipment of public ownership; such as green areas, schools, and community services.	**X**			Holder has the qualification of the place, given by the Deputy Minister of housing and urban development (out), (see sub-numeral 4.2.3 qualification place and line construction and Appendix 4A).
		Decree N ° 26. Ordinance regulating rates for municipal services of the city of Acajutla, Departamento de Sonsonate. D.O. 185, Volume 353, October 02, 2001.	**Municipality of Acajutla**	Article 8.-are established the following fees for services provided by the municipality in this city, per the structure as described below: N ° 2. Toilet (collection and transportation) Square meter per month: (a) industrial enterprises or factories $0.03 In the interest of the resident population of the municipality, is strictly prohibited the disposal of garbage at sites not authorized by the municipality; for which sets a fine of ¢ 1,500.00 for chemical waste and ¢ 500.00 for any other kind of waste.	**X**			The holder has the feasibility for collection and disposal of the solid waste, by the municipality of Acajutla, See EsIA. Sub-numeral 4.6.9.1 handling and disposal of waste and solid waste and Appendix 4E.
				N ° 12. The use of the surface and subsurface rights (c) towers for conduction of electric: c.1) installation c/u $114.29 c.2) each land use. Per month $11.43	**X**			Holder has the qualification of the place, given by the Deputy Minister of housing and urban development (out), (see sub-numeral 4.2.3 qualification place and line construction and Appendix 4A).
				N ° 14. Licensing (j) for other activities not specified in the above literal $11.43				
		Decree N ° 26. Ordinance regulating rates for municipal services of the city of	**Municipality of Acajutla**	Article 22.-for extension of licenses, permissions and patents of the municipality, may establish requirements deemed necessary or convenient for the issuing or granting them.	**X**			Holder has the qualification of the place, given by the Deputy Minister of housing and urban development (out), (see sub-numeral 4.2.3 qualification place and line construction and Appendix 4A).

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
		Acajutla, Department de Sonsonate. D.O. 185, Volume 353, October 02, 2001.		Article 25.-the mayor shall require Municipal solvency previously extension of any service or license that it corresponds to extend.	**X**			Holder has the qualification of the place, given by the Deputy Minister of housing and urban development (out), (see sub-numeral 4.2.3 qualification place and line construction and Appendix 4A).
Conservation of Fauna Marina	**Marine turtle protection**	**Decree No. 04/2010. Municipal Ordinance that regulates the conservation and protection of sea turtles in the municipality of Acajutla. D.O. 26, vol. 390, 07 February 2011.**	**Municipality of Acajutla**	Measures that it will take the City CouncilArticle 4. The municipal government in order to conserve and protect marine turtles and the recovery of populations of the habitats on which they depend, and shall take the following measures: ...(d) the municipality not permitted in protected areas environmental alterations of habitats of sea turtles as construction projects of tourist, residential, recreational buildings, subdivisions, subdivisions, extraction of sand, artificial lighting and any other type of human or animal activity that modify environmentally areas;	**N/A**			The land where the project was developed is not in ANP.
				(g) control and punished the contamination of aquatic ecosystems with chemicals, sewage dumps, the Elimination of expanses of mangroves for ponds, decrease or alteration of habitats of feeding of sea turtles, in the same way the contamination with toxic algal blooms, solid waste, reduction of the quality of the water, oil pollution and dynamite fishing. The control will take place especially during the periods of reproduction, incubation and migration;	**X**			The holder has the feasibility for collection and disposal of the solid waste, by the municipality of Acajutla, See EsIA. Sub-numeral 4.6.9.1 handling and disposal of waste and solid waste and Appendix 4E.
General provisions	**Solid waste**	**Decree 274 Municipal Code D.O. No. 23 of February 05, 1986**	**Municipality of Acajutla**	TITLE III The associativity of the municipalities and Municipal competition (7) Municipal competition sole chapter Article 4.-is the responsibility of the municipalities: … 19. the provision of the service of toilet, sweep streets, collection, treatment and disposal of wastes. Hazardous solid wastes and biological excepted.	**X**			The holder has the feasibility for collection and disposal of the solid waste, by the municipality of Acajutla, See EsIA. Sub-numeral 4.6.9.1 handling and disposal of waste and solid waste and Appendix 4E.
Earthquakes	**Plant structural damage.**	**Decree No. 777. Law of Civil protection, prevention and mitigation of disasters, D.O. No. 160, volume 368, August 31, 2005.**	**Directorate-General for Civil protection, prevention and mitigation of disasters**	Prevention Article 34.-is a duty of all public or private institutions carrying out hazardous processes or handle substances or hazardous wastes, establish plans appropriate prevention and care in the event of disasters, which shall be submitted to the General Directorate.	**X**			The owner has established plans of contingency and emergency for the protection of its workers. (see EsIA. Sub-numeral 10.4.8 reforestation maintenance and support for Environmental Fund of El Salvador and Appendix 10B).
				36 they are duties of persons in the event of a disaster: a) collaborate with the work of prevention, mitigation and protection that the Directorate-General or the commissions system.				
				(b) comply with the provisions and preventive measures issued by the Directorate-General or the commissions system.				
				(c) evacuate dangerous areas when DG, the commissions of the system or the National Civil Police prompted them.				
				(d) inform the General direction, to any Committee of the system, or any authority, the existence of signs or signs that could presage a disaster.				
				(e) to behave prudently in the event of a disaster.				
				(f) collaborate in the implementation of the mitigation plans of disaster that the Directorate-General or any Committee of the system.				
				(g) organize, follow instructions, and communicate with the rest of the community, to address the disaster with effectiveness and solidarity.				
				(h) assist the wounded in case of disaster. This obligation extends to the hospital public and private entities, the services provided by the latter shall be paid by the State per the regulation.				

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
	Plant structural damage.	**Decree No. 105. Regulations for the structural safety of the buildings. D.O. No. 204, volume 333, 30 October 1996.**	**Ministry of works public**	Article 1.-this regulation establishes the minimum requirements for structural design, the implementation, structural monitoring and the use of constructions with the following objectives: 1 ensure structural safety and conditions of service under normal conditions of operation and moderate seismic events.	**X**			The owner is aware of safety that must have the construction of the project, so that it guarantees the structural safety in case of earthquakes. (see EsIA. Sub-numeral 4.6.2.2 physical works, 4.6.2.3 construction of Maritime Terminal of LNG into the sea and 4.6.7 construction system and technological works on land).
				2 minimize the possibilities of collapse of buildings and the loss of life and injury to human beings in the event of a severe seismic event.	**X**			
				3 maintain as much as possible the functioning of those buildings that provide services or facilities that host for essential for disaster recovery.	**X**			
				Article 2.-the design procedures for earthquake and wind actions, as well as the specific requirements of design and construction for certain materials and structural systems are defined in technical standards that are part of this regulation.	**X**			
				Design for Earthquakes Article 28.-in this chapter are set bases and General requirements of design structures to ensure safety appropriate to the seismic effects. Analysis methods and the requirements for specific structures are listed in the "standard technique for design by earthquake".	**X**			
				Article 29.-structures will be analyzed under the action of two orthogonal horizontal components simultaneous movement of the ground, not specific in the "standard technique for design by earthquake". Deformation and internal forces that may be merged among if, as specified by the technical standards, and will be combined with the effects of gravitational loads and other actions that apply the criteria referred to in title II of this regulation.	**X**			
				Article 30.-all building separate from its boundary with the neighboring properties a distance at least equal to that specified in the "standard technique for design by Earthquakes".	**X**			
				The previous regulation, will need to be clear for the separation between the different structural bodies of same as building.	**X**			
				Separations must be free of rigid materials that may cause an obstruction.	**X**			
				At the same time, must detail in such way that to avoid water infiltration, rain or other agent that prejudice the proper functioning of the buildings.	**X**			
				The details of these separations must be clearly indicated in the architectural / structural plans.	**X**			
Earthquakes	**Plant structural damage.**	**Decree No. 105. Regulations for the structural safety of the buildings. D.O. No. 204, volume 333, 30 October 1996.**	**Ministry of works public**	Article 32.-all the resistant elements of the buildings must be designed in such a way that they behave as a unit before the seismic actions, unless some of them are adequately designed of the main structure, per indicated gaps in the "standard technique for design by Earthquakes ".	**X**			
				DESIGN OF FOUNDATION AND SLOPE STABILITY Article 45.-prior to the design of work, shall be a geotechnical study as set out in Arts. 46 and 47. The geotechnical, companies should register at the Ministry of public works, who should extend the corresponding record.			**X**	In the EIA is related to the slope stability, but not related technical description of such slopes. (See sub-numeral 4.6.1.4 installation of dock Temporally Street for access to Pier)
				Article 46.-the Geotechnical study which referred to article 45 should contain as a minimum, the following: capacity of permissible load, identification and classification of soil, moisture conditions and limits of consistency, presence of contaminants and water flows, underground; as well, the definition of the minimum depth of the concrete platform of the foundations, to levels under which there are no harmful quantities of organic material and soil possess acceptable minimum characteristics. Additionally, all those properties that are required should study for the analysis and design of the work.	**X**			Been the Geotechnical study, see sub-numeral 9.4.3. building method, and appendices 5 d, 5E and 5F).
		Norma Technical for design by Earthquake		1. this stable technical standard the minimum requirements for the structures seismic design and is part of the "regulation for the security structural of the constructions".	**X**			
				1.2.1. all structures, and each part of it should be designed and built to withstand the seismic ground shipment of per the provisions of this Norma Technical.	**X**			
				3.1 BASIS OF DESIGN The seismic design of structures should be considering seismic zoning, site characteristics, occupation category, configuration, the structural system and height, pursuant to this chapter. The minimum seismic design forces should be determined in accordance with chapters 4 and 5 of this Norma Technical.	**X**			

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
Fire	**(Routes of evacuation, lighting, signage, stairs, risk of ignition, fuel**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Emergency doors. Article 13.-doors and emergency exits must meet the following minimum requirements: 1 exits and doors of workplace emergencies will have visible or duly signposted access. 2. in the access doors and emergency exits obstacles that obstruct the normal output of workers will not be allowed. 3. the minimum width of the emergency doors shall be one with twenty (1.20) meters. 4. emergency exits doors will open outward. 5. no emergency door will remain locked, so that it could prevent evacuation. 6 doors of emergencies that communicate to the bleachers will not open directly on their steps, but on wide breaks at least equal to the ones. 7. in the event of a failure in the power supply, routes and evacuation exits shall be equipped with emergency lighting.	**X**			The owner is consents that it must comply with the requirements of prevention of risks in the project site, so it agrees to this compliance.
		Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.	**Ministry of labor and Social Welfare**	Fire protection devicesArticle 117.-all protection, detection, alarm and fire extinguishing devices will remain in good condition for use, avoiding situations that impede or hinder access to such devices.	**X**			The owner is aware of security that you must have the project, so it is considered a fire protection devices. (see EsIA. Paragraph 9.3 9.3.1 workshop of contingency planning, Contingency Plan, 9.3.2 content of the Plan for contingencies and Appendix 9 d)
		Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.	**Ministry of labor and Social Welfare**	Classification of fireworks Article 119.-fire prevention, always it must have to type and the appropriate amount of extinguishing agent, per the type of fire to prevent, in accordance with the following classification: • Class A: are fires in combustible common materials such as wood, cloth, paper, rubber and many plastics. • Class b fires flammable liquids and fuels, greases of petroleum, tar, paint oils bases, solvents, varnishes, alcohols and flammable gases. • Class C: are fires that involve energized electrical equipment. • Class d are the fires in combustible metals like magnesium, titanium, zirconium, sodium, lithium and potassium. • Class k fires in cooking appliances that involve a middle fuel for cooking (mineral oils and animal fats).	**X**			The owner is aware of security that you must have the project, so it is considered a fire protection devices. (see EsIA. Paragraph 9.3 9.3.1 workshop of contingency planning, Contingency Plan, 9.3.2 content of the Plan for contingencies and Appendix 9 d)
		Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.	**Ministry of labor and Social Welfare**	Portable fire extinguishers Article 120.-portable extinguishers should always keep charged and in acceptable conditions of operation; they are always placed in the designated place and shall contain indications in Spanish about: (a) the nature of the extinguishing agent. (b) directions for use. (c) capacity (lbs.). (d) factory plate. (e) revision date.	**X**			
Fire	**(Routes of evacuation, lighting, signage, stairs, risk of ignition, fuel**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Location distances Article 122.-portable extinguishers should be located so that maximum distances to travel to use not exceeding those described below: 1 fire class A: twenty-five (25) meters from the fire extinguisher. 2 fire class B: fifteen (15) meters until the fire extinguisher. 3 fire class c: twenty-five (25) meters from the fire extinguisher. 4 fire class D: twenty-five (25) meters from the fire extinguisher. 5 fire class K: ten (10) meters until the fire extinguisher.	**X**			
		Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.	**Ministry of labor and Social Welfare**	Capacity Article 123.-the capacity of installed fire extinguishers must be reasonably justified per the quantity of combustible material which exists in the area that is covered.	**X**			

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
		Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.	**Ministry of labor and Social Welfare**	Signal Article 124.-portable extinguishers should be located with their respective signal vertical and horizontal, to identify its location and keep your free space.	**X**			
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	The structural safety. Article 4.-all the buildings, permanent or temporary, shall be firm and safe construction to avoid risks of collapse and weather derivatives. The foundations, floors and other elements of the buildings will offer enough resistance to hold and suspend safely the loads for which have been calculated.	**X**			The owner is aware of safety that must have the construction of the project, so that it guarantees the structural safety in case of earthquakes. (see EsIA. Sub-numeral 4.6.2.2 physical works, 4.6.2.3 construction of Maritime Terminal of LNG into the sea and 4.6.7 construction system and technological works on land).
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Article 295.-can only access confined those workers who have the corresponding authorization of work in confined spaces and spaces that meet the necessary requirements to do so.	**N/A**			By type of project they will not conduct works in confined experience.
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Duty to ensure Article 296.-the employer must ensure the safe execution of tasks in confined spaces; In addition, it shall take the necessary measures to ensure that work equipment is suitable.				
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Measures Article 297.-safety of this activity must contain as a minimum: 1 work permit in confined space approved by the delegate of prevention. 2. work procedure. 3. procedure of rescue. 4. appropriate personal protective equipment. 5. properly trained personnel. Direct measurement equipment should be used in those confined spaces where risk conditions require it.				
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Supervision Article 298.-all work in confined space must be permanently supervised by at least one member of the rescue team.	**N/A**			By type of project they will not conduct works in confined experience.
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Obligation to define procedure Article 300.-the employer must identify all confined spaces in the workplace and in addition, define the respective work procedure to follow.				

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Excavations in general Article 321.-before starting any excavation work, there must be a clearing of the ground and to remove the trees, stone blocks and other obstacles. They must also locate underground facilities, such as sewers, water pipes and electrical conduits that could create a hazard during the work; and if they could not be located, you can only have started the excavation with the permission of the competent authority.	**X**			He is set, that before commencing the work, will be cleaned of thick stone, detritus, stubble, so of vegetation, pastures, very few trees will be withdrawn because currently the ground. (see sub-numeral 4.6.1.1 cleaning of the field).
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Must remove Article 323.-in all excavation work, materials, items and equipment that potential must be removed.	**X**			
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Verification of conditionsArticle 324.-cannot develop any kind of work under stumps of trees in suspension or undermined, or walls or other structures that are in the same conditions, unless previously suitable security measures have been taken.	**X**			
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Removal of stones Article 325.-when in the excavation are large masses of rock blocks, or stones should be removed as soon as possible, operating from above; and other workers must move away from the danger zone, until security conditions are established.	**X**			
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Use of harness Article 336.-liners who deliver levels or den measures on the edge of excavations that have more than 2.5 m depth, should wear safety harness with standing on the edge of the excavation.	**X**			The owner has established plans of contingency and emergency for the protection of its workers. (see EsIA. Paragraph 9.3 9.3.1 workshop of contingency planning, Contingency Plan, 9.3.2 content of the Plan for contingencies and Appendix 9 d)
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Adaptation to the use of soils Article 338.-all sheet piling, shoring, or supporting structures, should be appropriate to the magnitude of the work and the kind of soil in which the excavation is done.	**X**			
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Duty of reinforcing Article 339.-when the upper part of an excavation is cracked and employed close to that surface, needs to be stronger the sheet with shoring or necessary supporting structures.	**X**			

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Thickness Article 340.-when the sheet of wood, must have a minimum thickness of 0.03 m.; and when is iron blade; It must be 0.0016 m. (1/16 "). In either case, you must shore up securely to withstand thrust that will be submitted. The Woods used for shoring or supporting structures must be solid, straight grain and no cracks, no long or loose knots.	**X**			
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Distances Article 342.-Struts to hold sheet must support wedges and they will be calculated as columns. The maximum distance between two Struts will not exceed 1.80 m. along the sheet piling.	**X**			
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Sheet piling of iron use casesArticle 343.-at over five meters deep excavations, must use sheet piling of iron and deepen under the bottom of the excavation, in such a way to resist the overturning moment.	**X**			
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Regulation General of prevention of risks in the places of work Decree 89, D.O. April 30, 2012, take 395, no. 78.**	**Ministry of labor and Social Welfare**	Use of face masks and ventilation system Article 344.-when detachment of combustible or toxic gases, workers in the excavation work must use respirators or masks. Eventually, it must be installed in excavation, a system of artificial ventilation.	**X**			
Program of prevention of occupational risks	**Aspects of health and safety occupations with environmental implications**	**Law of the Fire Fighting Department of El Salvador. Decree No. 289.**	**Ministry of the Interior and public security.**	Article 22.-for the opening or operation of the rocket and other commercial or industrial businesses working with flammable, explosive or hazardous materials will require the prior authorization of the fire; to issue this authorization you must perform an inspection and check whether the storage and handling of raw materials, in process and finished goods, are made under the highest standards of safety and prevention. It will also monitor places of marketing of pyrotechnic products to meet the necessary conditions of safety and prevention.		**X**		The owner has no resolution of the Fire Fighting Department de El Salvador, which establishes that "meets the weather fire". Processing that it made subsequently to obtaining the environmental permit.
		Decree No. 254, General risk prevention law in places of work. D.O. on May 5, 2010.	**Ministry of labor and Social Welfare**	Article 8.-will be the employer's responsibility to formulate and execute the management program of prevention of occupational risks of your company per your activity and allocate the necessary resources for their execution. The employer shall ensure the effective participation of workers in the elaboration, implementation and evaluation of the referral program. 4. Design and implementation of its own emergency and evacuation plan.	**X**			The owner has established plans of contingency and emergency for the protection of its workers. (see EsIA. Paragraph 9.3 9.3.1 workshop of contingency planning, Contingency Plan, 9.3.2 content of the Plan for contingencies and Appendix 9 d)
Gases and vapors of chemical substances, water vapor	**Inhalation of toxic Gases, corrosive Gases and Gases warm skin contact**		**Ministry of labor and Social Welfare**	Article 45.-all industrial process that source to powders, gases, vapours, fumes or vapors harmful of any kind, must have devices intended to prevent the pollution of the air and dispose of them in such a way that do not constitute a danger to the health of workers or neighboring towns, in which case the General Directorate of Social Welfare shall notify the competent authorities.	**X**			
				Article 51.-in every place of work must be an inventory of all existing chemical substances, classified per the type and degree of danger. Also in every workplace, must be having the data sheets material safety in Spanish of all chemicals used and presenting risks of radiation, flammability, corrosivity, toxicity, oxidation, instability, or any danger to health. Special treatment must exist in the case of pregnant women, which should avoid contact with chemicals that can cause damage to the person who is to be born.	**X**			
Aspects of occupational health and safety with	**Contingency plan (human security)**		**Ministry of labor and Social Welfare**	Article 34.-all workplace must have plans, equipment, accessories and trained for the prevention and mitigation of emergencies to natural disasters, acts of God or situations caused by human beings.	**X**			
				Article 65.-plans of emergency and evacuation in case of accidents or disasters should be per the nature of work and the environment. All staff must know it and can carry out actions that includes such a plan.	**X**			

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
environmental advocacy		**Decree No. 87. Regulation for the verification of the operation and maintenance of steam generators. D.O. 78, volume 395, 30 April 2012.**	**Ministry of labor and Social Welfare**	Article 3.... Steam generator: subject to pressure vessel, which has been evaporated a liquid or a solid advantage high temperatures of any fuel or other energy source. In this Regulation, may be called as "generators or generator"	**N/A**			The owner establishes that project not is technically a generator of steam, therefore this body of law is not applicable to the production process in analysis
			Ministry of labor and Social Welfare	Article 5.-any user who intends to use steam generators, must give notice to the address with the purpose for which it is registered that uses steam and generators for the subsequent verification of the corresponding logbook.				
				Notice of use of generator must be carried out in forms carrying the address, which will contain information such as the name of the owner and user, address of installation of equipment, manufacturer's name, serial number, year of production or construction, surface, pressure, type of fuel used, certified tests of security, copy of the operating manual for the effect flat, among other information established by the direction.				
				The address will give you a registration number, which will give a sequence number for each steam generator or receptacle and will have all the information submitted by the applicant and obtained from the actions of surveillance carried out.				
				You must give notice to the address when you buy a generator; occurs when any alteration to the characteristics of the product; When they stop working; It is sold, pay, transfer to another facility, is located elsewhere in the work center, exported, is left to use, as well as any action taken on it. These circumstances shall be entered in the corresponding register.				
Health aspects of environmental advocacy	**Installation and sanitary operation permit**	**Decree No. 955. Health Code. D.O. 86, volume no. 299, 05 November 1988.**	**Ministry of health**	Article 97.-to build total or partially all sorts of buildings, public or private, whether in urbanized areas or suburban areas, the interested party shall request in writing to the Ministry or its corresponding delegates in departments, approval of the plan of the project and essential license to implement it.		**X**		The owner is aware that please arrange this type of permit, once have the environmental feasibility of the project
				Article 98.-any building built or rebuilt, can inhabit is, give for rent or allocated to any other use, but even after that the Ministry or its delegates declare that the requirements expressed by the provisions of this code and the complementary regulations met.		**X**		
				Art. 99.-before starting construction, will decontaminate the respective ground where necessary, and appropriate health services are installed and sufficient for the construction workers.		**X**		
				Article 100.-to build, rebuild or modify totally or partially any building, when somehow have affected health facilities, the distribution of plants or premises or is vary conditions of lighting or ventilation, must previously obtain the authority of respective health, the approval of the corresponding draft.		**X**		
Solid waste	**The solid waste management.**	**Decree No. 42 special regulation on the Integral management of solid waste D.O. 101. Vol. 347, 01 June 2000.**	**Ministry of environment and natural resources**	Article 1.-this regulation aims to regulate the handling of solid waste. The scope will be the management of solid wastes of origin household, commercial, services or institutional; they are coming from the cleaning of public areas, or industrial like home, and sanitary solids that are not dangerous.	**X**			The holder has the feasibility for collection and disposal of the solid wastes, by the municipality of Acajutla, See EsIA. Sub-numeral 4.6.9.1 handling and disposal of waste and solid waste and Appendix 4E.
				Temporary storage specification Article 5.-in cases that established collective temporary storage of solid waste sites in the habitable buildings, shall comply with its minimum degree, with the following specifications: (a) temporary storage systems must allow easy cleaning and access; (b) the systems of ventilation, water supply, drainage and fire control, will be adequate; (c) the design shall consider restricting the access of unauthorized persons and animals; and (d) the sites will be designed to facilitate the separation and recovery of potential recyclable materials.	**X**			The incumbent will have a procedure established for the collection of solid waste, (see. Sub-numeral. 4.6.9.1 handling and disposal of waste and solid waste)
				Provisions relating to containers Article 6.-containers for the temporary storage of solid waste, must meet the following minimum requirements: (a) be properly located and covered; b) have adequate capacity to store the volume of solid waste generated; (c) be constructed with waterproof materials and the necessary resistance for the use to which they are intended; (d) have an adequate maintenance; and (e) have the identification on the use and types of waste.	**X**			
Solid waste	**The solid waste management.**	**Decree No. 42 special regulation on the Integral**		Routes, schedules and frequency of collection Article 7.-the determination of routes, schedules and frequencies of collection of solid waste and contingency plans established by the holders, will be held strict subject of current environmental issues.	**X**			The holder has the feasibility for collection and disposal of the solid Wastes, by the municipality of Acajutla,

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
		management of solid waste D.O. 101. Vol. 347, 01 June 2000.		Collection and transport equipment Article 8.-collection and transportation of solid waste equipment must be appropriate to the medium and the activity. Such equipment must be properly identified and be in proper operating condition, and will be enrolled in a visible place and with indelible material the magnitude of the Tara. Equipment must be properly covered to prevent the dispersion of debris.	**X**			See EsIA. Sub-numeral 4.6.9.1 handling and disposal of waste and solid waste and Appendix 4E.
				Transport of solid waste Article 9.-teams of heavy transport of solid waste transfer station, if any, to the final disposal site, must be properly identified. On his journey, a unique and previously established route which will be not altered without permission will be respected.	**X**			
Solid waste	**The solid waste management.**	**Decree No. 42 special regulation on the Integral management of solid waste D.O. 101. Vol. 347, 01 June 2000.**		Treatment of solid wasteArticle 11.-the use of solid waste treatment system in the country will critically depend on the nature and composition of the waste.For the purposes of this regulation, the following systems are identifiedtreatment:(a) composting;(b) recovery, including reuse and recycling; and(c) those specific that prevent and reduce environmental degradation andfacilitate the comprehensive management of waste.The application of these systems of treatments will require obtainingthe environmental permit.	**X**			
Substances, waste and solid waste	**Management of hazardous substances**	**Law of environmental reforms: (4) D.L. N ° 237 08 February 2007, published in the D.O. N ° 47, volume N ° 374 09 March 2007.**	**Ministry of environment and natural resources**	Article 60.-any natural or legal person that use, generate, collect, store, reuse, recycle, market, transport, make treatment or disposal of substances, waste and hazardous waste, must obtain environmental permit, per the provisions of this law.	**X**			The Esia has considered the use of all hazardous chemicals necessary for the project. Materials such as lubricating oils, greases, paints, solvents, will be handled (see sub-numeral 4.12 management of substances, waste and waste hazardous in the stage of operation).
		Decree No. 41. Special in terms of substances, waste and hazardous waste regulation. D.O. No. 41, vol. 347, 1 June 2000.	**Ministry of environment and natural resources**	Article 6. The importer of hazardous substances must provide to the Ministry the technical information necessary to assess the hazardous substances and possible risks that they may cause to human health and the environment	**X**			
				Article 7. Based on article 20 of the Act, the importer of hazardous substances must apply to the Ministry the environmental import permit. Such a request shall contain the following information: (a) full name, address and details of the natural or legal person that matters. If it is a legal person, must indicate precise legal representative, the name and address must in such case prove their legal status in accordance with the law;				
				(b) safety data sheet of the substance that you want to import;				
				(c) amount of the hazardous substance which is imported;				
				(d) the name of the person who supplied the substance, indicating the country of origin; and				
				(e) means of transportation by which the substance will be imported. Extension of the permission				
				Article 12. The environmental hazardous substances import permit must be obtained without prejudice to provisions of other laws relating to chemical products.				
				Article 17. Hazardous waste generators, as well as the natural or legal persons that use, generate, collect, store, re-use, recycle, marketed, transported or carried out treatment of such waste, will be responsible for the compliance with the provisions of the Act, this regulation and the technical rules arising from it, being forced to determine their dangerousness and to register with the Council as well as to keep up-to-date when registering	**X**			Be handled materials such as used lubricating oils, greases, paints, solvents, empty tanks, batteries, and other consumables. (see sub-numeral 4.12 management of substances, waste and waste hazardous in the stage of operation)
				Article 19. The generator must send the Ministry a semi-annual report on the movements that has been carried out during this period, with its hazardous waste.				
				Article 20. The environmental permit will be required for the operation of the respective industries, transport, treatment plants and other activities, in general, that generate or operate hazardous waste	**X**			
				Article 22. Hazardous waste generator must: (a) segregated handle hazardous wastes that are not compatible between Yes;	**X**			Be handled materials such as used lubricating oils, greases, paints, solvents, empty tanks, batteries, and other consumables. (see sub-numeral 4.12 management of substances, waste and waste hazardous in the stage of operation)
				(b) packaging their hazardous waste in containers that meet the conditions of security, full identification of his physical condition and characteristics of dangerousness and incompatibility;				
				(c) give their hazardous waste treatment that apply to you; and				
				(d) maintain and store their hazardous waste safely and in areas that meet the requirements laid down in this regard.				

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
				Article 24. The responsibility for handling and disposal of hazardous waste corresponds to the holder of the activity, work or project.				
				Article 30. Incompatible hazardous wastes if they must manage segregated, to dispose of them safely. The most appropriate treatment must be selected for each hazardous waste, whether physical, chemical or biological, as well as a combination of the above.In general, a hazardous waste treatment will move to reduce its magnitude, to isolate it and to reduce its degree of danger and toxicity.	**X**			
				Hazardous materials management Article 50. Holders of activities, works or projects that do not meet the management and final disposal of hazardous materials, services must hire them with those who have the corresponding environmental permit.	**X**			
				The use of the transport document Article 53. Each volume of transport, the generator or the buffer shall be given to the carrier a document of transport duly signed original and two copies. One of them will be for your file, another will be signed by the carrier; along with the original it will be delivered to the recipient, as well as substances, waste or hazardous waste, who after signing the original, shall immediately send it to the sender.	**X**			The holder has the feasibility for collection and disposal of the solid Wastes, they will be transported to the landfill authorized by the municipality of Acajutla. See Appendix 4E. These special wastes will be removed periodically and delivered to a company authorized for the disposal and final treatment of this type of waste, if you generate.
Substances, waste and hazardous waste	**Management of hazardous substances**	**Decree No. 41. Special in terms of substances, waste and hazardous waste regulation. D.O. No. 41, vol. 347, 1 June 2000.**	**Ministry of environment and natural resources**	Archive Article 55. The transport documents must be kept in the file of the carrier for five years; in the generator and the buffer, ten years; and for the recipient, if this were responsible for the final disposition, twenty-five years.	**X**			The owner is aware of this requirement, this signature at the foot of the present array of comprehensive legal analysis
				Of the report Article 56. The carrier and the consignee shall deliver to the Ministry and the competent authorities a semi-annual report on substances, waste or hazardous waste, who previously received for transport, storage or final disposal, as appropriate, during this period.	**X**			The owner is aware of this requirement, this signature at the foot of the present array of comprehensive legal analysis
				Storage Article 73. Substances, waste and hazardous waste storage areas, among others, must satisfy the following conditions: (a) be separated from production areas, offices, and services should be in areas where the risks are reduced by possible emissions, leaks, fire or explosions, among others.	**X**			The holder will have a procedure established for the collection of solid waste, (see. Sub-numeral. 4.6.9.1 handling and disposal of waste and solid waste).
				b) having walls of containment and restraint for spill collection system;				
				(c) for substances, waste or liquid waste, the floors must have gutters leading spills to the graves of retention, capable of containing stored;				
				(d) having large enough corridors allowing the transit of mechanical, electronic or manual forklifts as well as the movement of security equipment;				
				(e) the walls and the floor shall be covered with waterproof material, such as polyuria, for stored substances, with adequate ventilation and lighting; and				
				(f) having fire prevention systems. Spills of substances, waste and hazardous waste				
				Article 74. The generator and, where appropriate, the holder of the activity of service handling of substances, waste or hazardous waste shall give notice immediately to the Ministry, by any means, when spills, infiltrations and hazardous materials spills occur.	**X**			The owner is aware of this requirement, this signature at the foot of the present array of comprehensive legal analysis
	Hazardous waste generation and management			Ratification of the notice Article 75. The notice referred to in the previous article, shall be ratified in writing within three days, without prejudice to means that the competent authorities have been applied within the scope of its powers. The written notice must include: (a) identification, address and details of the holder, generator or the management activity, concerned;				
				(b) location and characteristics of the site where it occurred the incident;				
				(c) possible causes that led to the spill, infiltration, discharge or discharge;				
				(d) precise description of physic-chemical, toxicological and biological characteristics, as well as the amount of hazardous material released;				

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Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
				e) actions carried out for the attention of the accident and steps taken for the restoration of the affected area; and				
				(f) any damage caused to ecosystems.The responsibility of the corresponding damage, will oversee the owner of the activity involved in the accident, which will be responsible for the compensation which may be applicable, per the law.				
				Security measures Article 77. Safety measures applicable to persons working in the places of storage, transport, recycle, treat or handle these materials, substances, waste or hazardous waste, to ensure its own security, as well as the protection of ecosystems and the environment in general must be taken. Similarly, in the event of a spill, you need to have with absorbent materials, such as calcined clay, sawdust, lime absorbent synthetic (vermiculite) among others, or with the appropriate means for its control and cleaning.	**X**			See EsIA. see sub-numeral 10.2.5 handling and storage of hazardous materials, Figure 10. 45. scheme of storage of hazardous materials.
	Management of hazardous substances	**Agreement No. 1189.-standard for the storage of Hazardous chemicals. D.O. November 11, 2010. Vol. 389 No. 211,**	**Ministry of public health and Social Welfare.**	Scope of application. Article 2.-are subject to compliance with this standard, natural and legal persons carrying out activities of handling and storage of hazardous chemicals.	**X**			The owner is mindful of its duty of these articulated AML compliance, so it is effectively developing their EIS and has hired a task force for this purpose, per the requirements set forth in the TDR type)
				Article 5.-the wineries designed to store hazardous chemicals, should be in areas described by the competent bodies such as: Ministry of environment and natural resources,				
Substances, waste and hazardous waste	**Management of hazardous substances**	**Agreement No. 1189.-standard for the storage of hazardous chemicals. D.O. November 11, 2010. Vol. 389 No. 211,**	**Ministry of public health and Social Welfare.**		**X**			Holder has the qualification of the place, given by the Deputy Minister of housing and urban development (out), (see sub-numeral 4.2.3 qualification place and line construction and Appendix 4A).
				Vice Ministry of housing and urban development, Office of planning of the Metropolitan Area of San Salvador and municipalities, whereas the land use of each place.				
				Wineries must maintain a sanitary protection zone, inside and outside the facilities of the company, per the risk assessment that represent the substances stored for the neighborhood.	**X**			The materials hazards will be stored in the cellars, in the project area (cf. EsIA sub-numeral 10.2.5 handling and storage of hazardous materials, photography 4.6 - image showing the location of materials and equipment inside of the campus construction)
				Article 6.-all infrastructure for the storage of hazardous chemicals, must meet the following minimum conditions of security: to) the area where tanks or containers destined are to store hazardous chemicals in liquid state, must have a system of collection of spills channeled towards dams of containment, with ability to retain 100 per cent (100%) stored bulk tank.	**X**			The materials hazards will be stored in the cellars, in the project area (10.2.5 handling and storage of hazardous materials, photography 4.6 - image showing the location of materials and equipment inside of the campus construction)
				(b) the owner must have devices and alarm systems that alert about spills or fires.	**X**			
				(c) facilities for the storage of hazardous chemicals, must comply with the conditions of construction that will prevent the actions of corrosion, oxidation and incompatibility with what is stored, as well as guarantee the impermeability of floors and walls.	**X**			The owner has established plans of contingency and emergency for the protection of its workers. (see EsIA. Paragraph 9.3 9.3.1 workshop of contingency planning, Contingency Plan, 9.3.2 content of the Plan for contingencies and Appendix 9 d))
				(d) in the interior of the warehouses of chemical substances, accumulation of gas must not exist vapors and odors.	**X**			
				(e) storage of hazardous chemicals, independent of other facilities wineries, will have at least one input and output of emergency, when that area is less than or equal to twenty-five square meters. The distance to travel to reach the exit must be less than six meters.	**X**			
				(f) when the storage area exceeds twenty-five square meters, there must be a minimum of two independent entrances marked. Maximum travel to a safe evacuation route, shall not exceed twenty-five meters.	**X**			
				(g) the electrical installation must comply with the requirements of the national legislation in force, or in their absence should apply international regulations for installations for the storage of chemicals dangerous.	**X**			The owner is aware of this requirement, this signature at the foot of the present array of comprehensive legal analysis
				(h) undertaking must possess storage system of water, not less than 15 cubic meters, which guarantees the first actions in case of emergency, which must remain closed and clean.	**X**			There will be 1 tanks of 1,500 m3 of capacity, located in the project area. (See sub-numeral, 4.13.3 water storage).
				Article 7.-with the purpose of reducing the risks to the health of the population surrounding the place of storage, the owner must comply with the following conditions:	**X**			The materials hazards will be stored in the cellars, in the project area (10.2.5 handling and storage of hazardous materials, photography 4.6 - image showing the location of materials and equipment inside of the campus construction)
				(b) the owner or legal representative of companies that handle and store hazardous chemicals, must have a contingency plan for the company, approved by the fire.				

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
				(d) areas designated for the handling and storage of hazardous chemicals, should be restricted and be properly signposted.	**X**			
				(e) a system of storage of hazardous chemicals should be identified by the type of risk, through symbolism and recognition of the substance per annex 2.	**X**			
				f) in the case that the Ministry of environment and natural resources, or any other competent authority, laid down new provisions on the storage of chemicals system, those provisions must comply.	**X**			The owner is aware that sometime the MARN can set additional measures, so it will sign at the foot of the present comprehensive legal analysis.
Substances, waste and hazardous waste	**Management of hazardous substances**	**Agreement No. 1189. Standard for the storage of hazardous chemicals. D.O. No. 211, vol. 389, November 11, 2010.**	**Ministry of public health and Social Welfare.**	Article 8.-to decrease the risks to the health of the surrounding population, the holder must comply with the following conditions of use: (a) areas designated for the loading, unloading and transfer of hazardous chemicals, must have waterproof floors and spills, such as control system: tanks of containment or gutters and collection boxes, which must be duly identified, and captured substances must be recycled.	**X**			Contingency plan Appendix 9 d.
				(b) the areas mentioned in the previous paragraph, should not be used for other activities, thus also, must not adjoining areas aimed at staff conglomerate, such as offices, cafeteria, meeting rooms and centers, child development or similar establishments.				
				(c) for the handling and storage of hazardous chemicals, the holder must give surety requirements set out in the safety data sheet, of each of the substances and the bullet containing each deposit.	**X**			See EsIA. see sub-numeral 10.2.5 handling and storage of hazardous materials, Figure 10. 45. scheme of storage of hazardous materials.
	Hazardous waste generation and management			The hazardous waste management. Article 11.-generated waste handling and storage of hazardous chemical substances whether overdue, as well as: discarded containers and contaminated because of spillage collection, materials must be disposed in accordance with the special regulations regarding substances, waste and hazardous waste from the Ministry of environment and natural resources.	**X**			Be handled materials such as used lubricating oils, greases, paints, solvents, empty tanks, batteries, and other consumables. (see sub-numeral 4.12 management of substances, waste and waste hazardous in the stage of operation)
				Article 17.-to ensure the handling of flammable substances and fuels, the owner or keeper of the warehouse, shall comply with the following requirements: (a) in the case of spills, do not use water collection or cleaning, using for this purpose absorbent material. The remains of collected fluids should be disposed as "Special in terms of substances, waste and hazardous waste regulations" established in the Ministry of environment.	**X**			The materials hazards will be stored in the cellars, in the project area (10.2.5 handling and storage of hazardous materials, photography 4.6 - image showing the location of materials and equipment inside of the campus construction).
				(b) areas where flammable liquids and substances of acid nature, are handled must be separated by structural barriers, such as walls.				
				c) must be guaranteed in the areas of management, there is no source of ignition, as well as it must not perceive build-up of vapors of stored hazardous chemicals.				
				Article 19.-the companies having storage of substances with corrosive properties shall comply with the following requirements: (a) corrosive substances must be separated by physical barriers of flammable organic compounds.	**X**			
				(c) the storage areas must meet the temperature conditions specified in each corrosive substance safety data sheet.	**X**			
				(d) corrosive substances must be stored in dry, ventilated areas and not be exposed to direct sunlight.	**X**			
				(e) place signs by type of risk of each substance, considering the symbolism of hazardous materials classification, described in annex 2.	**X**			
Substances, waste and hazardous waste	**Management of hazardous substances**	**Agreement No. 1189. Standard for the storage of hazardous chemicals D.O. No. 211, vol. 389, November 11, 2010.**	**Ministry of public health and Social Welfare.**	(f) deposits that contain acids and generate vapors, must have a watertight seal.	**X**			
				(g) the acid must be stored in ventilated areas separated from incompatible chemicals, such as volatile organic materials, solvents, alkalis and oxidants or oxidizing substances, whereas the annex No. 1.	**X**			
				Article 20.-to ensure proper management of substances with corrosive properties, the owner shall comply with the following requirements: (a) corrosive substances shall be placed separate from organic matter, to avoid risk of fire and the generation of toxic gases.	**X**			The materials hazards will be stored in the cellars, in the project area (10.2.5 handling and storage of hazardous materials, photography 4.6 - image showing the location of materials and equipment inside of the campus construction).
				b) shall ensure the compatibility and resistance of the material of manufacture of accessories and equipment for handling and containment of corrosive substances.	**X**			See EsIA. see sub-numeral 10.2.5 handling and storage of hazardous materials, Figure 10. 45. scheme of storage of hazardous materials.
				(c) for the decanting of corrosive substances that generate vapors, they should be handled in areas which ensure the accumulation of these.				
				(d) for spill control, it must be inert absorbent material such as sand, Earth or other material compatible to perform cleaning operations.				

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
				Article 21.-to ensure the protection of the industrial and personnel, the owner must meet the following criteria:(a) prior to maintenance of tanks or pipes that were in contact with corrosive substances, neutralization of such operations should be to eliminate the risk of injury.				
				(c) the owner or legal representative shall ensure that the personnel involved in the process of handling and storage of corrosive substances, using equipment of biosafety per the type of risk, as set out in the product safety data sheet.				
				(d) if there is danger of splashing, complete protection, with face shield must be used.				
				Article 28.-to reduce risk of contamination to the environment and impacts on health, the owner must meet the following requirements: (a) for the purpose of affecting the public health, the premises where they are stored or handle toxic substances, they must have gas extraction systems, avoid fumes and channeled powders to a place from the outside, by means of exclusive channels for this purpose equipped with filters, allowing their recovery and disposal per existing national regulatory framework.	**X**			See EsIA. see sub-numeral 10.2.5 handling and storage of hazardous materials, Figure 10. 45. scheme of storage of hazardous materials.
				(b) in the areas of storage labels clearly indicating the presence of toxic substances should be placed, in visible form.	**X**			
				(c) toxic (T) and very toxic (T +) set out in annex 3, shall not store next to the products described in the respective classification, such as: □ Compressed gases of class 2.				
				□ Substances presenting spontaneous combustion of class 4.2.				
				□ Substances which, in contact with water, emit flammable gases class 4.3.				
				Article 29.-to minimize the risk of spills of toxic substances in the loading and unloading areas, all types of stationary storage containers shall be adopted the following measures: (a) a vessel with capacity to store one greater volume of one cubic meter of toxic substances, must have level indicator and warning alarm of spills.	**X**			See EsIA. see sub-numeral 10.2.5 handling and storage of hazardous materials, Figure 10. 45. scheme of storage of hazardous materials.
				(b) for any system or transfer action should be installed drip control mechanisms; all leak will be repaired immediately, which will be collected and will be available per the special regulations of chemical substances of the Ministry of environment and natural resources.	**X**			
				Industrial safety and Personal protection. Article 30.-to reduce work-related accidents, the owner shall comply with the following requirements: ... (b) the staff in the areas of handling and storage of toxic substances must have team of biosafety per the type of risk. The team at the end of the working day will remain in power of the company, for its maintenance and protection.	**X**			The owner has established plans of contingency and emergency for the protection of its workers. (see EsIA. Paragraph 9.3 9.3.1 workshop of contingency planning, Contingency Plan, 9.3.2 content of the Plan for contingencies and Appendix 9 d)
Substances, waste and hazardous waste	**Management of hazardous substances**	**Agreement No. 1189. Standard for the storage of hazardous chemicals D.O. No. 211, vol. 389, November 11, 2010.**	**Ministry of public health and Social Welfare.**	Article 32.-for the issuance of the sanitary authorization of operation, the person concerned must comply with provisions of annexes 4 and 5 of this standard and other requirement of regulation or legally.		**X**		The holder is aware that you must deal with this type of permit, once you have their environmental feasibility of the project
				Article 33.-for the renovation of the sanitary authorization of functioning, the person concerned must requirements set out in annex 6 of this standard, more regulatory or legal corresponding.				
	Storage and consumption of fuel	**Decree No. 169. Law regulating deposit, transport and Distribution of oil products. D.O. No. 235, vol. 229, on December 23, 1970.**	**Ministry of works public, Ministry of defense and Ministry of the economy**	Article 5) construction, remodeling or expansion of supply tanks of petroleum products, service stations, including those that sell gas for motor vehicles; as well as the installation of tanks for private consumption and packaging of LPG plants, they need to be authorized by agreement of the Ministry. The operation of the infrastructure, shall be authorized by a resolution issued by the direction.	**X**			The project includes storage of fuel, which complies with all the measures of protection. See sub-numeral 4.10 storage and regasification of fuel, 4.10.5 description of storage and regasification unit.
				Art.14) persons who operate tanks for private consumption, shall comply with the obligations of the preceding article and the following: _3 / (a) only fuels the activity or service that has been authorized, is strictly prohibited the sale to third parties; _2 /				
				(b) maintain in a conspicuous place a certification of authorization of operation and the term of the same, granted by the Directorate; and _2 /				
				(c) keep records which indicate the name of the source company, volume and all delivery dates.				

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Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
				Article 3.-in the construction, renovation, extension or transfer of supply tank is obligated to comply with the following security measures: (a) for the design and construction of deposit of use it must comply with norms and Salvadoran regulations, or standards commonly used in the oil industry.				
				Article 16.-the necessary minimum technical specifications which must be met for the construction, operation performance, remodeling or enlargement of any tank for private consumption will be the same as those listed for service stations in the article 10 of this regulation.				
				Article 17.-any person to request authorization for construction of tanks for private consumption, in addition to the requirements set out in article 12 of the law, concerned should meet stipulated in Art. 9, with lyrics to), b) c), d), e), g¨), and h) of this regulation.				
Substances, waste and hazardous waste	**Storage and consumption of fuel**	**Decree No. 630. law on Natural Gas. D.O. No. 115, volume 379, June 20, 2008.**	**Ministry of economy, hydrocarbon and mines.**	Licenses. Article 8.-built infrastructure, address, prior opinion of this that has complied with provisions of the authorization, shall grant the license of operation of facilities and equipment subject of this authorization. It will also require license to operate any enlargement, modification, or renovation of the infrastructure.	**X**			The project includes storage of fuel, which complies with all the measures of protection. See sub-numeral 4.10 storage and regasification of fuel, 4.10.5 description of storage and regasification unit.
				Authorization and license for self-consumption. Article 12.-may authorize the storage of natural gas including the transportation pipeline of such product for consumption, to the place where the industry facilities are supplied, prior compliance with the requirements established by this Act and the corresponding regulations. The transport operations referred to in this article, shall not be subject to concession rules regulated in article 18 of this law. In the event storage for subsistence activity to make use of the pipeline system, will be subject to rate regulation and the right of free access; This rule shall not apply if that vent is engaged in the industry to supply. The product received by the company supplied, will be for the exclusive use of the same operations. The license for the storage of natural gas for subsistence will last for thirty years renewable.				
Substances, waste and hazardous waste	**Storage and consumption of fuel**	**Decree No. 630. Law on Natural Gas. D.O. No. 115, volume 379, June 20, 2008.**	**Ministry of economy, hydrocarbon and mines.**	Operation licenses. Article 49.-operation licenses shall verify works, buildings and equipment of holders of authorizations or concessions to comply with technical standards and corresponding security. To obtain the operating license, the person who has been previously authorized the construction, you must request it, appending the following, as applicable depending on the nature of the activity: (i) insurance policy for civil liability and all risk for installations that requests the license to operate; (ii) certificate of calibration of dispensers and equipment; (iii) certificate of the hydraulic or pneumatic tests of facilities; e, (iv) certificates showing the rules under which have been built with different equipment and installations				
				Import and export. Article 50.-imports and exports of natural gas can be made by any national or foreign natural or legal person obtaining prior authorization and respective license; as well as, meet the annual register in the address. Natural gas export licenses shall be issued by the Directorate, provided internal supply of its portion of the market is not affected.				
				Common obligations. Article 60.-persons who intend to engage in natural gas storage, transportation of natural gas by pipelines, natural gas distribution networks, transportation of modular gas, operation of filling stations of CNG for vehicular use and conversion of motor vehicles to CNG workshops, must comply with the obligations listed below: (a) have obtained the concession, license or authorization, prior to perform activities regulated by this law; (b) comply with technical standards that facilities, equipment and procedures covered by the present Act, relating to natural gas;				

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
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					Yes	**In process**	**No**	
Substances, waste and hazardous waste	**Storage and consumption of fuel**	**Decree No. 630. Law on Natural Gas. D.O. No. 115, volume 379, June 20, 2008.**	**Ministry of economy, hydrocarbon and mines.**	Obligations in the field of Industrial safety. Article 61.-persons who intend to engage in natural gas storage, transportation of natural gas by pipelines, natural gas distribution networks, transportation of modular gas, operation of filling stations of CNG for vehicular use and conversion of motor vehicles to CNG workshops, must comply with the obligations listed below: (a) meet at its facilities, the technical standards of industrial safety which avoid the risks of accidents at work.....(c) acquire and maintain current, insurance policies for damage caused to persons, property and environment, whose value will be determined by the direction having as base investment amounts and characteristics of the potential risks that could be generated with the activities to perform...				
				Obligations of the buffer Article 62.-persons who intend to operate natural gas storage terminals, shall comply with the obligations of article 60 and the following: (a) to comply with minimum security inventories, fixed by the management; b) comply with the practices recommended by the manufacturer and, where applicable, by the manufacturer, in the operation and maintenance of installations and equipment of the terminal...				
Substances, waste and hazardous waste	**Storage and consumption of fuel**		**Ministry of environment and natural resources.**	Article 6. "Paragraph 1. The State of export shall notify in writing, or shall require the generator or exporter who gives written notice, through the competent authority of the States concerned of any transboundary movement of hazardous wastes or other wastes. Such notification shall contain the statements and information required in annex V A, written in the language of the importing State. You will only need to send a notification to each State concerned..."	**X**			The project includes storage of fuel, which complies with all the measures of protection. See sub-numeral 4.10 storage and regasification of fuel, 4.10.5 description of storage and regasification unit.
		Decree N ° 24. Basel Convention. posted on June 24, 1991 D.O.		Article 7. Paragraph 1 of article 6 of the Convention shall apply mutatis mutandis to the transboundary movement of hazardous wastes or other wastes from a party through a State or States which are not parties.				
				".. .number 10: substances and articles of waste containing or contaminated by PCBs or polychlorinated biphenyls (PCBs), polychlorinated biphenyls (PCT) polybrominated biphenyls (PBBS)..."				
Substances, waste and hazardous waste	**Storage and consumption of fuel**	**Stockholm POPs Convention. S/n, published in the D.O. of April 03, 2008**	**Ministry of environment and natural resources.**	Article 5. Measures to reduce or eliminate releases from unintentional production.	**X**			The project includes storage of fuel, which complies with all the measures of protection. See sub-numeral 4.10 storage and regasification of fuel, 4.10.5 description of storage and regasification unit.
				Article 6. Measures to reduce or eliminate releases from stock and waste. "(literal...c) (manage, when appropriate, the stocks in a safe, efficient and environmentally sound... d) sub-literal i) are handled, collected, transported and storage of environmentally sound manner..."				
Cultural Heritage	**Protection of goods of Cultural or historical interest**	**Special law on protection of the Cultural patrimony of El Salvador, Decree No. 513**	**Ministry of culture**	Article 8.-when he is causing damage or are exposed to imminent danger any of the goods referred to in this law, or which, at the discretion of the Ministry may form part of the Salvadoran cultural treasure, this shall take protective measures deemed necessary, by means of measures which shall be notified to the owner or holder of such property and the institutions mentioned in article 26 of this law. Urban and rural development plans, of public works in general and those of buildings or restorations private to that in one way or another they relate to a cultural property will be subjected to the entity responsible for the work to the prior authorization of the Ministry through its respective dependencies.	**X**			In the EsIA, relates the resolution extending the SECULTURA, as in the project area, there are no traces of existence of cultural heritage, (see 5.4.4 sub-numeral cultural, archaeological resources, ceremonial and historical) An archaeological study to obtain the feasibility by SECULTURA which is in Appendix 5AB was conducted.
				Article 23.-when he is causing damage or is in imminent danger of suffering it or be destroyed any of the cultural goods to be covered by the Special Act or which at the discretion of the Ministry can be part of the Salvadoran Cultural treasure, this shall take protective measures deemed necessary through measures which shall be notified to the owner or holder of such property; and to the authorities and institutions referred to in article 26 of the special law.				
				Article 25.-approval of projects to which refers article 8 paragraph 2 of the Special Act shall be null and when they lack authorization that covered the articles above, without prejudice to the corresponding responsibilities to officials and individuals involved in the respective management. Unauthorized works will be suspended immediately by the public authority in the constituency concerned, at the request of the Ministry.				
Biodiversity	**Involvement of Biota in General.**	**Decree No. 852. Forestry law D.O. on June 17, 2002. Volume 355, no. 110.**	**Ministry of agriculture and livestock.**	By their ability to use soil protection Article 12.-prohibits the change of land use class VI, VII and VIII, which are covered with trees. However, they may be exploited sustainably maintaining the same use.	**X**			View. Sub-numeral 5.2.7 type and kind of soil; 5.4.5.1. potential use of soil

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					Yes	**In process**	**No**	
Biodiversity	**Involvement of Biota in General.**	**Decree No. 852. Forestry law D.O. on June 17, 2002. Volume 355, no. 110.**	**Ministry of agriculture and livestock.**	Restricted use Article 23.-declared Areas of restricted use, the surfaces of buildings in which their owners will be required to manage in a sustainable manner the existing vegetation, in the following cases: (a) the lands that surround the births of water or springs, in an area which has the radio at least twenty-five meters, or as determined by the respective technical study, measured horizontally from its maximum flood.	**X**			Holder has the qualification of the place, given by the Deputy Minister of housing and urban development (out), (see sub-numeral 4.2.3 qualification place and line construction and Appendix 4A).
				(b) the riverbanks land of rivers and streams in an area equivalent to twice the maximum draught of the runway, measured horizontally from the highest level reached by the waters on both sides in a return period of 50 years;	**X**			
				(c) the grounds in an area of fifty meters measured horizontally from the higher grown in normal time of lakes and natural lakes and the banks of the artificial reservoirs built by the State or by private individuals which should be permanently wooded;	**X**			
				(d) the grounds of the upper parts of the river basins, especially those that are in water recharge area;	**X**			
				(e) areas that potential of sliding due to steep slopes pose a danger to populations; and	**X**			
		Decree 579, law of protected natural Areas. D.O. on February 15, 2005. Vol. 366 No. 32,	**Ministry of environment and natural resources**	Object Article 1. The present law is to regulate the establishment of the legal system, administration, management and increase of natural protected Areas, to conserve biological diversity, ensure the functioning of essential ecological processes and ensure the perpetuation of natural systems, through a sustainable management for the benefit of the inhabitants of the country.	**X**			Holder has the qualification of the place, given by the Deputy Minister of housing and urban development (out), (see sub-numeral 4.2.3 qualification place and line construction and Appendix 4A).
				Very serious offences Article 45. Following offences very serious: (a) to destroy or damage the natural resources that exist in the place;	**X**			
				(c) cut down trees, shrubs or any other type of vegetation, without the corresponding authorization;	**X**			
				(i) obstruct natural channels that impede the flow of the waters;	**X**			
				(j) modifications in the environment or cause damage to biodiversity, the landscape and the water uptake;	**X**			
				(l) alter, transfer or make improper use of authorizations issued by the competent authority;	**X**			
		Decree 844. Law of conservation of wildlife D.O. on May 25, 1995. Volume 323 No. 96,		Article 3.-the wildlife is part of the natural heritage of the nation and corresponds to the State, its protection and management.	**X**			The EIS has identified in the BIOTIC environment, all wildlife species that exist in development of the project and its area of influence. Sub-numeral between biological 5.3 See Appendix 5, Appendix 5 p, 5Q Appendix, Appendix 5R, Appendix 5S, 5T Appendix, Appendix II.
				Article 9.-species of wildlife included in listings of endangered species or endangered species, that are registered in such categories by the Ministry of the environment and natural resources and to the corresponding International Committee, will be subject to specific protection regulations.				
	Protected species.	**Agreement No. 74-listed species of wildlife officer Threatened or in danger of extinction. D.O 5 October 2015. Vol. 409 No. 181.**		1 listing life species officer wildlife Collyer or in danger of extinction...	**X**			The EIS has identified in the BIOTIC environment, all wildlife species that exist in development of the project and its area of influence. See sub-numeral between biological 5.3.
Biodiversity	**Indigenous peoples and biodiversity**	**Convention on biological diversity, D.O. 92, 19 May 1994. Take 323.**	**Ministry of environment and natural resources**	Preamble Recognizing the close and traditional dependence of many local communities and indigenous peoples that have traditional life systems based on biological resources, and the desirability of sharing equitably benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation of biological diversity and the sustainable use of its components,	**X**			The holder is preparing the EIS to get the environmental permit, to start your project. The EIS has identified in the BIOTIC environment, all wildlife species that exist in development of the project and its area of influence. See sub-numeral between biological 5.3.
Biodiversity	**Indigenous peoples and biodiversity**	**Convention on biological diversity, D.O. 92, 19 May 1994. Take 323.**	**Ministry of environment and natural resources**	Article 8. In situ conservationEach Contracting Party, to the extent possible and as appropriate:...(j) in accordance with its national legislation, respect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of those who possess such knowledge, innovations and practices , and encourage that the benefits arising from the utilization of such knowledge, innovations and practices are shared equal selectively;...	**X**			

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					Yes	**In process**	**No**	
Biodiversity	**Environmental impact assessment**	**Convention on biological diversity, D.O. 92, 19 May 1994. Take 323.**	**Ministry of environment and natural resources**	Article 14. Evaluation of the impact and minimizing the adverse impact of 1. each party, to the extent possible and as appropriate: (a) it shall establish appropriate procedures that required the assessment of the environmental impact of its proposed projects that may have important adverse effects on biodiversity with a view to avoiding or minimizing such effects and, where appropriate, allow the participation of the public in those procedures.	**X**			
Biodiversity	**Public consultation of indigenous peoples**	**Guidelines AKWE: KON (voluntary guidelines of the Convention of biological diversity, to make assessments of cultural impacts, environmental and social development projects that must realize in holy places or lands or waters occupied or used traditionally by indigenous and local communities, or that they can affect those places)**	**NA**	The entire document in what was applicable, in case the owner of the activity, work or project, decide to apply it on a voluntary basis	**X**			There are indigenous peoples recognized within the Department of Sonsonate which are Nahua pipil, descendants of from Nahua tribes of the central zone of Mexico. (see sub-numeral 8.4.1.1. Description of the social actors. Local and cultural groups). The study of citizen consultation, not concern the presence of indigenous peoples, which was validated in the censuses of the indigenous population of Acajutla (where not shown settlers of that feature) http://www.digestyc.gob.sv/index.php/temas/des/poblacion-y-estadisticas-demograficas/censo-de-poblacion-y-vivienda/poblacion-censos.html
Administrative, Civil and criminal environmental responsibility	**AML offences**	**Law of environmental reforms: (4) D.L. N ° 237 08 February 2007, published in the D.O. N ° 47, volume N ° 374 09 March 2007.**	**Ministry of environment and natural resources**	ENVIRONMENTAL OFFENCES Article 86.-constitute violations of this law and its regulations, actions or omissions committed by natural or legal persons, including the State and the municipalities as follows: (a) initiate activities, works or projects without having obtained the corresponding environmental permit; (b) providing false data in environmental impact studies, environmental Diagnostics and any other information which is intended to obtain the environmental permit; (c) violating the obligations contained in the environmental permit; (d) not to surrender, in the terms and deadlines set forth, the bonds established by this law... (... h) violate standards of environmental quality and rational and sustainable exploitation of the resource; j) emit pollutants that violate the permissible levels established by regulation; (k) omit to give timely notice to the competent authority, over spill of substances, products, waste, or hazardous, or contaminants, wastes that jeopardize life and human integrity; and (l) failure to comply with the other obligations imposed by this law	**X**			The owner has been induced and aware of the legal consequences of civil, administrative and criminal law, which may be incurred ignore intentionally or culpably necessary and important requirements of the EsIA or items that have been found in the screening for the study phase and which is not reported in the same. The owner and members of the team consultant and providers of environmental services are aware of reform of AML in article 100, the solidary Civil responsibility. Holder is consents that these details of legal responsibility, must be communicated in writing those responsible to execute environmental measures and its monitoring in the period laid down in the schedule of activities. The signature at the end of this matrix is evidence of the commitment of the proprietor to avoid harmful consequences to the environment.
				CIVIL LIABILITY Article 100.-the State, decentralized entities, and any natural or legal person who, by action or omission, deteriorating environment, is obliged to repair the damage and damages. Whenever possible, you must restore damaged ecosystems or make compensatory measures in cases where the damage is irreversible. In the case of a legal person, is legally presumed that acts of their managers, workers and companies who have contractual relations, were effected by your order and mandate; thus, will respond jointly and severally liable for any environmental damage caused. (5) Contractors and subcontractors are also jointly and severally liable. In the case of acts of civil servants and public employees will respond these directly and mainly; and the State in subsidiary form.REFORMED D.O. No. 88, volume 395, 16 may 2012.	**X**			
				CRIMINAL RESPONSIBILITY Article 105.-which commits crime, because of infringing the provisions laid down in this law shall be punished in accordance with the provisions of the criminal code.	**X**			

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					Yes	**In process**	**No**	
	Forestry violations	**Decree No. 852. Forestry law D.O. on June 17, 2002. Volume 355, no. 110.**	**Ministry of agriculture and livestock.**	Article 35.-this law violations and their respective penalties are as follows: to) cut down without proper authorization, trees in natural forests: 2 to 5 minimum wages for each felled tree... (o) demolish or destroy trees than for historical reasons or that as species in danger of extinction should be preserved, unless it has the corresponding authorization: 20 to 25 times the minimum wage; and p) changing the land use class VI, VII and VIII, covers trees: 15 minimum wages per hectare or fraction damaged.	**X**			
	Serious violations	**Decree 644. Law of Territorial Development and management. D.O. July 29, 2011. Volume 392 No. 143.**	**National Government and Local.**	Very serious offences Article 75. They are very serious infringements: (3) the initiation of subdivisions or other physical works that damage a non-urban area or in areas declared protected areas declared of public utility and social interest.	**X**			The owner has been induced and aware of consequences administrative to initiate activities, works or projects, without the permission of the territorial authority, leaving certificate with the signature at the end of this matrix to present them
				Serious violations Article 76. They are serious breaches: 1) the acts and activities of land transformation through residential areas, subdivisions, works, constructions, buildings or installations; without counting, with approvals, authorizations or permits, in violation of the conditions of those granted, unless it is not specified works legally any technical project and with little impact on the urban, rural or natural environment. Give this last caveat, the violation will be slight. They will have in any case, the condition of serious violations consisting of movements of land acts and the unauthorized felling of trees;	**X**			
	Crimes of environmental awareness	**Decree 1030. Penal Code.**	**System of administration of Justice**	UNAUTHORIZED CONSTRUCTIONS Article 253.-that being an unauthorized construction legally or administratively, on undeveloped or in places of recognized artistic, historical or cultural value shall be punished with imprisonment from six months to one year and a fine of one hundred to two hundred days fine. When construction was carried out under the direction or a construction professional liability, shall be liable, in addition, the special disqualification of profession or trade for the same period.	**X**			The owner has been induced and aware of the present criminal consequences of this binding criminal type elements as considered cultural heritage legislation, leaving certificate with the signature at the end of the present matrix Holder is consents that these details of legal responsibility, must be communicated in writing those responsible to execute environmental measures and its monitoring in the period laid down in the schedule of activities, particularly in the phase of preparation of the site.
Administrative, Civil and criminal environmental responsibility	**Crimes of environmental awareness**	**Decree 1030. Penal Code.**	**System of administration of Justice**	ENVIRONMENTAL POLLUTIONArticle 255.-which provoke or effected directly or indirectly, emissions, radiation or waste of any kind in the soil, atmosphere, land, surface water, groundwater or sea in violation of the laws and respective regulations and which endangers serious health or quality of life of individuals or the balance of ecological systems and the environment It will be punished with imprisonment from four to eight years. (3)	**X**			The owner has been induced and learned of the penal consequences of the kind of environmental pollution, both in its simple form as aggravated, particularly when it comes to the whole process of the handling and operation of the septic tanks of sewage, leaving certificate with the signature at the end of the this matrix.Holder is consents that these details of legal responsibility, must be communicated in writing those responsible to execute environmental measures and its monitoring in the period laid down in the schedule of activities, which may be incurred in the Commission of this criminal unlawful
				AGGRAVATED ENVIRONMENTAL POLLUTION Article 256.-in the cases of the preceding article, the penalty shall be from 6 to 10 years in prison if the fact is attributing legal, private or public person who operates without the corresponding permit environmental or clandestinely or have disobeyed the express provisions of the environmental authority that it amend or suspends operations; It has provided false information to obtain the environmental permit Corresponding would have prevented or hampered the inspection by the authority of the environment. (3)	**X**			The owner has been induced and learned of the penal consequences of the kind of environmental pollution, both in its simple form as aggravated, particularly at the risk generated by chemical pollution. Holder is consents that these details of legal responsibility, must be communicated in writing those responsible to execute environmental measures and its monitoring in the period laid down in the schedule of activities, which may be incurred in the Commission of this criminal unlawful

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					Yes	**In process**	**No**	
	Crimes of environmental awareness			PREDATION OF PROTECTED FLORA Article 259.-which cut, trim, burn, take, collects, sells, made illegal traffic of any species or subspecies of protected flora or man defile or seriously change their natural environment, shall be punished with imprisonment from one to three years. The same penalty shall be guilty who protected natural area damaged seriously any of the elements that have served to qualify as such. (3)	**X**			The owner has been induced and learned of the criminal consequences of PREDATION of FLORA and FAUNA protected types, particularly in what refers to the phase of preparation of site and non-compliance with the plan of tree planting where it has been proposed to compensate the affectation of the see Sub-numeral 10.2.11 reforestation species and support environmental fund of el Salvador) Holder is consents that these details of legal responsibility, must be communicated in writing those responsible to execute environmental measures and its monitoring in the period laid down in the schedule of activities, which may be incurred in the Commission of this criminal unlawful Leave record signing at the end of the this matrix
	Crimes of environmental awareness			PREDATION OF PROTECTED FAUNA That hunt fish threatened species, carried out activities that prevent or not permit their reproduction or contrary to laws or regulations protective of wildlife species, sells with them or their remains, shall be punished by imprisonment from three to five years. The penalty will increase by one third of the maximum as provided in the preceding paragraph, if case of listed endangered species. (3)	**X**			
Environmental jurisprudence	**Protections of environmental cases**	**163-2007, on December 9, 2009. Environmental articles invoked: -Article 25 (c) MAL. -Article 11, 12, 15, 117 and 144 Constitution. -Article 27, 32, 22, 24 and 25 Pr. constitutional law**	**Sala constitutional Supreme Court of Justice**	The University of El Salvador, standing constitutional normative, against the MARN, and the JORDAN company. S.A. de C.V, for a project called "LAS VERANERAS", which began the process of environmental assessment, and at the time of the public consultation, through a greater coverage, the University journal publications, presented opposition to the granting of permission, and sets out the technical reasons; However, it never receives a response, and MARN ponders not the opinion of such an entity. The Constitutional Division fails, that has resulted in the normative requested by the University of El Salvador, against the actions and omissions of the MARN, violation of constitutional rights to due administrative process, legally established, and healthy environment. Things to return to the State they were, prior to the issuance of the environmental permit, insofar as that will invalidate the mentioned authorization, should the defendant authority, issue replacement Providence, as well as also, take measures, restorative, before any environment that may have caused pursuant to resolution object of the protection order.	**X**			The holder has incorporated in its EIS, the report of public consultation, to which refers article 23 literal I of the General regulations of the LMA and manifest have taken into account the social elements there evidenced The holder is aware that this point is critical in environmental legislation, particularly in the environmental jurisprudence, since the MARN must properly assess the consultation of Art. 25 MAL, otherwise, the risk of a potential protection and nullity of administrative acts Ministerial remains latent.
Environmental jurisprudence	**Protections of environmental cases**	**188-2009, may 7, 2010.Article 25 (c) MAL.-Article 11, 65, 117 Constitution.**	**Sala constitutional Supreme Court of Justice**	He sues the Minister of environment, by interpreting art. 25 MAL, merely literal and restrictive way so it has resulted in violations of the fundamental rights of audience, defense, health and the healthy environment of the actors. In this regard, but warns that the respondent officer adjusted his conduct to literally provisions in the legal framework that determines the environmental assessment procedure, it should be remembered that both he and all those authorities of the MARN that participate in the processing of that procedure and, therefore, perform functions affecting the exercise of the fundamental rights of persons they have the duty to comply with the Constitution against any law, Decree, order or judgment which counteract its text.The scope of the provisions of article 25 of the LMA with respect to the participation of people who are opposed to the implementation of a given project, cannot be understood in a restrictive and merely formalistic sense.It is cover to the plaintiffs, who are protected in terms of the environmental permit issued to the project "Electrical El Ceren" procedure.	**X**			The owner is understood to the extent of these resolutions of the room of the constitutional of the CSJ, insofar as that of the processes of public participation for the EIS of the projects, should be respected and complied with; otherwise may be actors willing to exhaust the legal instances, where even administrative procedures can be cancelled.The mandate is to interpret the environmental legislation in their assemblies, integrated, systemic, wide; not in restrictive and merely formalistic manner. The holder is informed of how this new type of approach of environmental cases requires to comply with requirements of the MARN in the EsIA, which were not requested years ago,
Doctrinal elements	**Environmental principles**	**Precautionary principle**	**The State and the population in General**	PRINCIPLE 15 To protect the environment, States should widely apply the precautionary approach in accordance with their capabilities. When there is a risk of serious or irreversible damage, lack of full scientific certainty should not be used as a reason to postpone cost effective measures to prevent environmental degradation.	**X**			The owner has been induced on the implications and requirements of the precautionary principle The precautionary principle is known as INDUBIO PRO NATURE, consisting in case of doubt, you must import and giving priority to what is most suitable to the environment or environment.

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					Yes	**In process**	**No**	
		Principle of the citizen participation	**The State and the population in General**	PRINCIPLE 10 The best way to deal with environmental issues is with the participation of all concerned citizens, at the level that corresponds. At the national level, every person must have adequate access to information about the remedy available to the public authorities, including information about materials and activities that contain danger in their communities, as well as the opportunity to participate in decision-making processes. States should facilitate and promote awareness-raising and the involvement of the population by making information available to all. You must provide effective access to judicial and administrative procedures between these compensations for damages and relevant resources.	**X**			The holder has indicated that you understand the relationship of this principle, with the social and cultural part of the EsIA.
Constitutional elements	**Rights to a healthy environment**	**Constitution of the Republic of El Salvador Decree legislative No. 38, 234 official journal, volume 281, of December 16, 1983**	**The State and the population in General**	Article 69.-the State will provide the resources necessary and indispensable for the permanent quality control of chemical, pharmaceutical and veterinary products by means of monitoring bodies. Also, the State will control the quality of foodstuffs and environmental conditions that may affect health and well-being.	**X**			Holder is consents that these details of legal responsibility, must be communicated in writing those responsible to execute environmental measures and its monitoring in the period laid down in the schedule of activities,
Constitutional elements	**Rights to a healthy environment**	**Constitution of the Republic of El Salvador Decree legislative No. 38, 234 official journal, volume 281, of December 16, 1983**	**The State and the population in General**	Art. 117.-is due the State protect natural resources, as well as the diversity and integrity of the environment, to ensure sustainable development. IT DECLARES SOCIAL PROTECTION, CONSERVATION, RATIONAL USE, RESTORATION OR REPLACEMENT OF NATURAL RESOURCES, IN THE TERMS SET THE LAW. PROHIBITS THE INTRODUCTION INTO THE NATIONAL TERRITORY OF NUCLEAR WASTE AND TOXIC WASTE	**X**			Holder is consents that these details of legal responsibility, must be communicated in writing those responsible to execute environmental measures and its monitoring in the period laid down in the schedule of activities,
Constitutional elements	**Port concessions**	**Decree No. 38. Constitution of the Republic o.n. 234, Volume no. 281, 16/12/1983**	**The State and the population in General**	Article 84.-the territory of the Republic over which El Salvador exercises jurisdiction and sovereignty is irreducible and in addition to the Mainland, includes: the island territory consisting of the Islands, islets and cays which lists the judgment of the Court of Central American justice, pronounced on March 9, 1917 and which also correspond, per other sources of international law; also, other islands, islets and cays which also incumbent upon it under international law. Territorial waters and in the community of the Gulf of Fonseca, which is a historic Bay with characters of closed sea, whose regime is determined by international law and by the statement referred to in the preceding paragraph. Airspace, the subsoil and the corresponding continental and insular platform; In addition, El Salvador exercises sovereignty and jurisdiction over the sea, underground and bedding sea up to 200 nautical miles counted from the lower line tide, in conformity to the regulations of international law.		**X**		The owner is aware of these points of constitutional compliance, so signature as evidence.
				Article 120.-in all concession granting the State for the exploitation of springs, railways, CANALS or other works using materials public, must provide for the term and conditions of such concession, per the nature of the work and the amount of the required investments. THESE CONCESSIONS SHALL BE SUBMITTED TO THE KNOWLEDGE OF THE LEGISLATIVE ASSEMBLY FOR APPROVAL. (5)		**X**		
Constitutional elements	**Indigenous peoples**	**Constitution of the Republic of El Salvador Decree legislative No. 38, 234 official journal, volume 281, of December 16, 1983 /reform of the official journal on June 19, 2014, vol. 403, no. 112, (2a ratification)**	**The State and the population in General**	Article 63.-the country's artistic, historical and archaeological wealth forms part of the Salvadoran cultural treasure, which is under the protection of the State and subject to special conservation laws. El Salvador recognizes indigenous peoples and adopting policies to maintain and develop their ethnic and cultural identity, worldview, values and spirituality.	**X**			There are indigenous peoples recognized within the Department of Sonsonate which are Nahua pipil, descendants of from Nahua tribes of the central zone of Mexico. (see sub-numeral 8.4.1.1. Description of the social actors. Local and cultural groups). The study of citizen consultation, not concern the presence of indigenous peoples, which was validated in the censuses of the indigenous population of Acajutla (where not shown settlers of that feature) http://www.digestyc.gob.sv/index.php/temas/des/poblacion-y-estadisticas-demograficas/censo-de-poblacion-y-vivienda/poblacion-censos.html

Matrix of identification of environmental aspects, Legal compliance environmental and/or sectoral normative LNG To Power Project, Acajutla, Sonsonate, El Salvador								
Legal area	**Environmental aspect**	**Applicable standard**	**Governing body**	**Article of applicable Legal body**	**Compliance**			**Evidence of compliance or enforcement proceedings**
					Yes	**In process**	**No**	
Declaration of human rights	**Indigenous peoples**	**Declaration of the United Nations, rights of indigenous peoples September 13, 2007**	**The State and the population in General**	Article 19.-States shall consult and cooperate in good faith with the indigenous peoples concerned through their representative institutions before adopting and implementing legislative or administrative measures that affect them, to obtain their free, prior and informed consent	**X**			There are indigenous peoples recognized within the Department of Sonsonate which are Nahua pipil, descendants of from Nahua tribes of the central zone of Mexico. (see sub-numeral 8.4.1.1. Description of the social actors. Local and cultural groups). The study of citizen consultation, not concern the presence of indigenous peoples, which was validated in the censuses of the indigenous population of Acajutla (where not shown settlers of that feature) http://www.digestyc.gob.sv/index.php/temas/des/poblacion-y-estadisticas-demograficas/censo-de-poblacion-y-vivienda/poblacion-censos.html
Energía del Pacífico , Ltda. de C.V., legally represented by Mr. Alejandro Alle, declares under oath that he has been released on background and knowledge of administrative, civil and penal consequences, resulting from non-compliance with the requirements of law evaluated as fulfilled in the present table of legal analysis, related or expressed as environmental measures in the environmental impact assessment which is attached in the present study legal environmental and sectoral environmental legislation applicable to the project that represents. It is also aware of skilled aspects of non-FULFILLMENT or in the process of compliance, which must process and manage on their own responsibility.								**Signature: _____**

Appendix 6B–
Environmental Compliance and Performance Table

Table 1 - Summary of World Bank Group and Government of El Salvador's Environmental Standards and Guidelines applicable to the Proposed LNG to Power Project

Parameter	WBG Guidelines[i]	Government of El Salvador Standard[ii]	Project Standard or Requirement
Total Suspended Particles	Not specified	[5]24-hour average: 260 µg/m³ Annual average: 75 µg/m³	[5]24-hour average: 260 µg/m³ Annual average: 75 µg/m³
Lead (Pb)	Not specified	[5]Quarterly: 1.5 µg/m³ Annual average: 0.5 µg/m³	[5]Quarterly: 1.5 µg/m³ Annual average: 0.5 µg/m³
Air Emissions Guidelines for Natural Gas Fired Spark Ignition Reciprocating Engine			
Oxides of Nitrogen (NO_x)	[3] 200 mg/Nm³ (for spark ignition engines)	Not specified	[3] 200 mg/Nm³ (for spark ignition engines)
Wastewater and Ambient Water Quality			
Discharge to Surface Water	[1 2] Discharges of to surface water should not result in contaminant concentrations in excess of local ambient water quality criteria or, in the absence of local criteria, other sources of ambient water quality.	Not specified	
Receiver Body Discharge (Seawater)	[2] The effluent should give rise to an increase in temperature of not more than 3 ° C on the edge of the area where the Initial mixture and dilution. When the zone is not defined	Use 100m from the point of discharge. The effluent must have a Temperature that is not greater than 5 C At the point of discharge.	Or The effluent must have a Temperature that is not greater than 5 C in the point of discharge. The concentration of free chlorine (oxidant total estuarine / marine water) in refrigerant / cold water discharges (to sample at the point of discharge) must be remain 0.2 parts per million (ppm).
Guideline values applicable to sanitary wastewater discharges (limit in liquid effluents)			
COD	[1]125 mg/L	150 mg/L	[1]125 mg/L
BOD, 20	[1]30 mg/L	60 mg/L	30 mg/L
Settleable solids	Not specified	1 mg/L	1 mg/L
Total Suspended solids	[1]50 mg/L	60 mg/L	50 mg/L
Grease and oils	10 mg/L	20 mg/L	10 mg/L
pH	[1]6-9 ph	Not specified	[1]6-9 ph
Fecal coliform (MPN/100ml)	Not specified	Not specified	Not specified
Total Coliform	[1]400[a]	Not specified	[1]400[a]
Total Phosphorous	[1]2 mg/L	Not specified	[1]2 mg/L
Total Nytrogen	[1] 10 mg/L	Not specified	[1] 10 mg/L

Table 1 - Summary of World Bank Group and Government of El Salvador's Environmental Standards and Guidelines applicable to the Proposed LNG to Power Project

Parameter	WBG Guidelines[i]	Government of El Salvador Standard[ii]	Project Standard or Requirement
Guideline values applicable to sanitary wastewater discharges (limit in liquid effluents)			
pH	[1 2 3] 6 to 9 pH (includes hydrotest water)	[6] 5.5-9.0 pH	[1 2 3] 6 to 9 pH (includes hydrotest water)
BOD5/20	[2] 25 mg/l for hydrotest water	[6](BOD5,20: 60 mg/L (for domestic and industrial wastewater)	[2] 25 mg/l for hydrotest water
COD	[1 2] 125 mg/L (includes hydrotest water)	[8]100 mg/L (for industrial wastewater)	[8]100 mg/L (for industrial wastewater)
Heavy Metals (Total)	[2] 5 mg/L for hydrotest water		
Phenols	[2] 0.5 mg/L for hydrotest water	[6]0.5 mg/L	[6]0.5 mg/L
Sulfides	[2] 1.0 mg/L for hydrotest water		[2] 1.0 mg/L for hydrotest water
Chlorides	[2] 600 mg/L (average), 1200 mg/l (maximum) for hydrotest water		[2] 600 mg/L (average), 1200 mg/l (maximum) for hydrotest water
Oil & Grease	[1 2 3]10 mg/L (includes hydrotest water)	[6]20 mg/L(for domestic and industrial wastewater)	[1 2 3]10 mg/L (includes hydrotest water)
Total hydrocarbon content	[2] 10 mg/L for hydrotest water		[2] 10 mg/L for hydrotest water
Total nitrogen	[1] 10 mg/L		[1] 10 mg/L
Total phosphorus	[1] 2 mg/L	[6]15 mg/L	[1] 2 mg/L
Settleable solids		[6]1 ml/L	[6]1 ml/L
Total Suspended solids	[1 3] 50 mg/L [2] 35 mg/L for hydrotest water	[6]60 mg/L	[1 3] 50 mg/L [2] 35 mg/L for hydrotest water
Total coliform bacteria	[1] <400 MPN/100ml	[6]10,000 NMP	[1] <400 MPN/100ml [6]10,000 NMP
Fecal coliform bacteria		[6]2000 NMP	[6]2000 NMP
Aluminium (Al)		[6]5 mg/L	[6]5 mg/L
Arsenic (As)	[3]0.5 mg/L	[6]0.1 mg/L	[6]0.1 mg/L
Total Barium (Ba)		[6]5 mg/L	[6]5 mg/L
Beryllium (Be)		[6]0.5 mg/L	[6]0.5 mg/L
Boron (B)		[6]1.5 mg/L	[6]1.5 mg/L
Cadmium (Cd)	[3]0.1 mg/L	[6]0.1 mg/L	[6]0.1 mg/L
Total Cyanide (CN^-)		[6]0.5 mg/L	[6]0.5 mg/L
Zinc (Zn)	[3]1.0 mg/L	[6] 5 mg/L	[6] 5 mg/L
Cobalt (Co)		[6]0.05 mg/L	[6]0.05 mg/L
Copper (Cu)	[3]0.5 mg/L	[6]1 mg/L	[6]1 mg/L
Hexavalent Chromium (Cr^{+6})		[6]0.1 mg/L	[6]0.1 mg/L
Total Chromium (Cr)	[3]0.5 mg/L	[6]1 mg/L	[6]1 mg/L
Detergents (Sustancias activas al azul de metileno)		[6]10 mg/L	[6]10 mg/L

Table 1 - Summary of World Bank Group and Government of El Salvador's Environmental Standards and Guidelines applicable to the Proposed LNG to Power Project

Parameter	WBG Guidelines[i]	Government of El Salvador Standard[ii]	Project Standard or Requirement
Fluoruros (F-)		[6]5 mg/L	[6]5 mg/L
Organofluorina		[6]0.1 mg/L	[6]0.1 mg/L
Fosfamina		[6]0.1 mg/L	[6]0.1 mg/L
Benzimidazol		[6]0.1 mg/L	[6]0.1 mg/L
Piretroides		[6]0.1 mg/L	[6]0.1 mg/L
Bipiridelos		[6]0.1 mg/L	[6]0.1 mg/L
Fenoxi		[6]0.1 mg/L	[6]0.1 mg/L
Triazina		[6]0.1 mg/L	[6]0.1 mg/L
Fosfonico		[6]0.1 mg/L	[6]0.1 mg/L
Total Iron (Fe)	[3]1.0 mg/L	[6]10 mg/L	[3]1.0 mg/L
Lithium (Li)		[6]2 mg/L	[6]2 mg/L
Total Manganese (Mn)		[6]2 mg/L	[6]2 mg/L
Floating materials		[6,9] Absent	[6,9] Absent
Mercury (Hg)	[3]0.005 mg/L	[6]0.01 mg/L	[3]0.005 mg/L
Molybdenum (Mo)		[6]0.1 mg/L	[6]0.1 mg/L
Nickel (Ni)		[6]0.2 mg/L	[6]0.2 mg/L
Total Nitrogen (N)		[6]50 mg/L	[6]50 mg/L
Organochlorine		[6] 0.05 mg/L	[6] 0.05 mg/L
Organophosphates and Carbamates		[6]0.1 mg/L	[6]0.1 mg/L
Silver		[6]0.2 mg/L	[6]0.2 mg/L
Lead (Pb)	[3]0.5 mg/L	[6]0.2 mg/L	[6]0.2 mg/L
Selenium (Se)		[6]0.05 mg/L	[6]0.05 mg/L
Sulphates (SO_4^{-2})		[6]1000 mg/L	[6]1000 mg/L
Radioactive substances		[6]Absent	[6]Absent
Temperature		[6] 20-35°C	[6] 20-35°C
Vanadium		[6]1 mg/L	[6]1 mg/L
Water Conservation			
Water Monitoring and Management	[2] Water consumption for ORV systems (thermal delta of 5°C for a 8 GSm^3 /year regasification plant) should be minimized where possible. The industry benchmark is 30,000 m^3/hr.		

Table 1 - Summary of World Bank Group and Government of El Salvador's Environmental Standards and Guidelines applicable to the Proposed LNG to Power Project

Parameter	WBG Guidelines[i]	Government of El Salvador Standard[ii]	Project Standard or Requirement
Environmental Noise			
Noise	Residential, institutional or educational areas: • 45 dB(A) nighttime • 55 dB(A) daytime industrial or commercial areas: • 70 dB(A) Or if existing noise above guidelines a maximum increase in background levels of 3 dB(A)	Not specified	Residential, institutional or educational areas: • 45 dB(A) nighttime • 55 dB(A) daytime industrial or commercial areas: • 70 dB(A) Or if existing noise above guidelines a maximum increase in background levels of 3 dB(A)

Appendix 6C–

CEPA Property Deed

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El Presidente de la COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA), Licenciado

JUAN JOSE LLORT CHOUSSY

A FAVOR DE

LA COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

3097982

ANTE LOS OFICIOS NOTARIALES DE

José Alberto Ortiz Herrera

EL SALVADOR, CENTRO AMERICA

2005°612176

PAPEL PARA PROTOCOLO

DOS COLONES

CORTE SUPREMA DE JUSTICIA SECCION DEL NOTARIADO REP. DE EL SALVADOR C.A.

M DE H.

DOSCIENTOS TRES

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JOSE ALBERTO ORTIZ HERRERA NOTARIO REPUBLICA DE EL SALVADOR

MARIO ENRIQUE CAMACHO MONTOYA NOTARIO REPUBLICA DE EL SALVADOR

NUMERO CINCUENTA Y CINCO.- LIBRO OCTAVO.- En la ciudad de San Salvador, a las doce horas del día veintiuno de julio de dos mil cinco.- Ante mí, **JOSE ALBERTO ORTIZ HERRERA,** Notario, del domicilio de Santa Tecla, Departamento de La Libertad, y del de Sonsonate, Departamento del mismo nombre, comparece el señor **JUAN JOSE LLORT CHOUSSY,** quien firma "Juan José Llort", de cuarenta y nueve años de edad, Licenciado en Administración de Empresas, del domicilio de Santa Tecla, Departamento de La Libertad, persona de mi conocimiento, a quien identifico mediante su Documento Único de Identidad número cero un millón novecientos treinta y dos mil doscientos nueve - cinco, quien actúa en su calidad de Presidente de la **COMISIÓN EJECUTIVA PORTUARIA AUTÓNOMA,** Institución de Derecho Público con Carácter Autónomo y Personalidad Jurídica propia, de este domicilio, que ademas es la Administradora de los Ferrocarriles Nacionales de El Salvador, o abreviadamente FENADESAL, que en lo sucesivo se denominará indistintamente "la Comisión" o "la CEPA", de cuya personeria **DOY FE** de ser legitima y suficiente por haber tenido a la vista: a) La Ley Orgánica de la Comisión Ejecutiva Portuaria Autónoma, aprobada por Decreto Legislativo

número cuatrocientos cincuenta y cinco, del veintiuno de octubre de mil novecientos sesenta y cinco, publicado en el Diario Oficial número doscientos seis, Tomo número doscientos nueve, del once de noviembre del año citado, y las reformas posteriores a la misma, aprobadas por Decretos Legislativos números quinientos noventa y nueve del dieciséis de mayo de mil novecientos setenta y cuatro, publicado en el Diario Oficial número ciento cinco, Tomo número doscientos cuarenta y tres del siete de junio del mismo año; setenta y nueve del cuatro de julio de mil novecientos ochenta y cinco, publicado en el Diario Oficial número ciento cuarenta y ocho, Tomo número doscientos ochenta y ocho, del doce de agosto del mismo año; trescientos cincuenta y uno del dieciséis de mayo de mil novecientos ochenta y seis, publicado en el Diario Oficial número noventa y tres, Tomo número doscientos noventa y uno, del veintitrés del mes y año anteriormente citados; y ciento veinticuatro del uno de septiembre de mil novecientos noventa y cuatro, publicado en el Diario Oficial número ciento ochenta y uno, Tomo número trescientos veinticuatro del treinta del mes y año anteriormente citados; de los cuales consta que se creó la Comisión Ejecutiva Portuaria Autónoma como Institución de Derecho Público con carácter autónomo, personalidad jurídica propia, y domiciliada en esta ciudad; que el Gobierno de dicha Comisión es ejercido por una Junta Directiva, integrada por un Presidente y seis Directores; que la Representación Legal de la Comisión corresponde al Presidente de la misma, quien será nombrado por el Presidente de la República; que el período del ejercicio del Presidente de la Comisión es de cuatro años a partir de la fecha de su nombramiento; b) El Decreto Legislativo número Doscientos Sesenta y Nueve, del veintidós de mayo de mil novecientos setenta y

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cinco, publicado en el Diario Oficial número Noventa y Tres, Tomo número Doscientos Cuarenta y Siete de la misma fecha, del cual consta que las Empresas Estatales, Ferrocarril de El Salvador (FES) y Ferrocarril Nacional de El Salvador (FENASAL), incluido en esta última el Puerto de Cutuco, quedaron fusionadas integrando el Sistema de Ferrocarriles Nacionales de El Salvador en una sola empresa denominada Ferrocarriles Nacionales de El Salvador, o abreviadamente, FENADESAL; dicha empresa es propiedad exclusiva del Estado de El Salvador y su administración, explotación y dirección se confiere a la CEPA por cuenta y riesgo del Propietario; c) La Ley para la Construcción, Administración y Operación del Nuevo Aeropuerto Internacional de El Salvador, aprobada por Decreto Legislativo número seiscientos, del dieciséis de mayo de mil novecientos setenta y cuatro, publicado en el Diario Oficial número ciento cinco, Tomo número doscientos cuarenta y tres, del siete de junio del mismo año, y las reformas posteriores a la misma aprobadas por Decretos Legislativos números ochenta, del cuatro de julio de mil novecientos ochenta y cinco, publicado en el Diario Oficial número ciento cuarenta y ocho, Tomo número doscientos ochenta y ocho, del doce de agosto del mismo año; y ciento veintisiete del uno de septiembre de mil novecientos noventa y cuatro, publicado en el Diario Oficial número ciento ochenta y cuatro, Tomo número trescientos veinticinco, del cinco de octubre del mismo año, de los cuales consta que para la dirección, administración, mantenimiento, ampliación y operación del Aeropuerto, la CEPA tendrá todas las facultades del Sistema Administrativo que le concede su Ley Orgánica; d) El Acuerdo Ejecutivo número trescientos cuarenta y cinco del señor Presidente de la República de El

Salvador, Elmas Antonio Saca González, de fecha veintitrés de diciembre de dos mil cuatro, por medio del cual el señor Presidente de la República acordó nombrar Presidente de la CEPA al compareciente, Licenciado Juan José Llort Choussy, a partir del día uno de enero de dos mil cinco, para terminar período de funciones que finaliza el día treinta y uno de agosto de dos mil seis, Acuerdo publicado en el Diario Oficial número doscientos cuarenta, Tomo Número trescientos sesenta y cinco de fecha veintitrés de diciembre de dos mil cuatro; y, e) Certificación del Libro de Actas de Juramentación de Funcionarios Públicos que lleva la Presidencia de la República, extendida por el Secretario para Asuntos Legislativos y Jurídicos de la misma, Licenciado Luis Mario Rodríguez Rodríguez, en esta ciudad, a los trece días del mes de enero de dos mil cinco, en la cual aparece que el Licenciado Juan José Llort Choussy, rindió la Protesta Constitucional ante el señor Presidente de la República, a las once horas con quince minutos del día veintitrés de diciembre de dos mil cuatro.- Acreditada en debida forma la personeria con que actua, el señor Presidente de la CEPA, **ME DICE : I.) ANTECEDENTE: TITULARIDAD SOBRE DOS INMUEBLES QUE FORMAN UN SOLO CUERPO.** Que según inscripciones registrales asentadas bajo el Sistema de Folio Real Automatizado, numeros, M- UNO CERO CERO CUATRO OCHO NUEVE SEIS CINCO; y M- UNO CERO CERO CERO CUATRO TRES SEIS SIETE - CERO CERO CERO CERO CERO, Asiento CINCO, ambas del Registro de la Propiedad Raiz e Hipotecas de la Tercera Seccion de Occidente, con sede en la ciudad de Sonsonate, Departamento de Sonsonate, su representada en duena y actual poseedora de DOS INMUEBLES, antes de naturaleza rustica, hoy urbanos, que forman un solo cuerpo, situados en jurisdicción de Acajutla, en el Departamento de Sonsonate, los cuales se

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describen de manera independiente, así: **(i) PRIMER INMUEBLE:** Denominado como **"PORCION SUR"**, el cual, según antecedente registral se describe de la siguiente forma: """""" **DESCRIPCION TÉCNICA DE LEVANTAMIENTO TOPOGRÁFICO DE LA PORCION SUR, PROPIEDAD DE LA COMISION EJECUTIVA PORTUARIA AUTÓNOMA (CEPA), UBICADA EN EL MUNICIPIO DE ACAJUTLA, DEPARTAMENTO DE SONSONATE.** La presente descripción, inicia en el vértice Noroeste, denominado mojón número cuarenta y cinco, el cual esta definido por las coordenadas Geodésicas proporcionadas por el Instituto Geográfico Nacional (IGN), las cuales son Latitud: doscientos setenta y dos mil setecientos treinta y nueve punto treinta y tres y una longitud: cuatrocientos nueve mil seiscientos noventa y ocho punto cincuenta y tres, y sus linderos se describen de la siguiente manera: LINDERO NORTE: A partir del vértice Noroeste, antes mencionado, esta formado por línea de dieciséis tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón cuarenta y cinco al mojón cuarenta y cuatro rumbo norte cincuenta y seis grados cuarenta y dos minutos cero seis segundos Este, con una distancia de doscientos veintitrés punto cincuenta y tres metros. Del mojón cuarenta y cuatro al mojón cuarenta y tres rumbo Norte cincuenta y dos grados veinticinco minutos cincuenta y tres segundos Este, con una distancia de treinta y dos punto ochenta metros. Del mojón cuarenta y tres al mojón cuarenta y dos rumbo sur cuarenta y ocho grados treinta y cuatro minutos treinta y cinco segundos Este, con una distancia de cuarenta y cinco punto treinta y cuatro metros. Del mojón cuarenta y dos al mojón cuarenta y uno rumbo sur cincuenta y seis grados dieciocho minutos treinta y seis segundos Este, con una distancia de catorce punto cuarenta y dos metros. Del mojón cuarenta y uno al mojón cuarenta rumbo

sur setenta y siete grados cuarenta y cuatro minutos cero siete segundos Este, con una distancia de veintitrés punto cincuenta y cuatro metros. Del mojón cuarenta al mojón treinta y nueve rumbo Norte veintisiete grados cincuenta y tres minutos cincuenta segundos Este, con una distancia de treinta y ocho punto cuarenta y siete metros. Del mojón treinta y nueve al mojón treinta y ocho rumbo norte cuarenta grados veintiún minutos cincuenta y dos segundos oeste, con una distancia de veintiséis punto veinticinco metros. Del mojón treinta y ocho al mojón treinta y siete rumbo Norte cincuenta y siete grados cero cinco minutos cuarenta y un segundos Este, con una distancia de cuarenta punto cincuenta metros. Del mojón treinta y siete al mojón treinta y seis rumbo Norte setenta y tres grados dieciocho minutos cero tres segundos Este, con una distancia de cincuenta y dos punto veinte metros. Del mojón treinta y seis al mojón treinta y cinco rumbo norte diecinueve grados diecisiete minutos veinticuatro segundos Este, con una distancia de veintiuno punto diecinueve metros. Del mojón treinta y cinco al mojón treinta y cuatro rumbo norte cuarenta y dos grados cero cinco minutos veintiún segundos oeste, con una distancia de cuarenta y uno punto setenta y siete metros. Del mojón treinta y cuatro a mojón treinta y tres rumbo norte dieciocho grados cuarenta y ocho minutos cero segundos este, con una distancia de cuarenta y nueve punto sesenta y cinco metros. Del mojón treinta y tres al mojón treinta y dos rumbo norte treinta y tres grados cuarenta y un minutos veinticuatro segundos este, con una distancia de cincuenta y cuatro punto cero ocho metros. Del mojón treinta y dos al mojón treinta y uno rumbo norte sesenta y seis grados cuarenta y ocho minutos cero cinco segundos este, con una distancia de siete punto sesenta y

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dos metros. Del mojón treinta y uno al mojón treinta rumbo sur setenta y un grados cuarenta y cuatro minutos catorce segundos este, con una distancia de ciento cinco punto treinta metros. Del mojón treinta al mojón veintinueve rumbo sur cuarenta y ocho grados veintiún minutos treinta y dos segundos este, con una distancia de ciento diez punto treinta y nueve metros, con la cual se llega al vértice Noreste del terreno que se describe; lindando en estos tramos con Porción Dos - B, propiedad de la CEPA; y luego continua. LINDERO ORIENTE: A partir del vértice Noreste, antes mencionado, esta formado por línea de veinticinco tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón veintinueve al mojón uno A rumbo sur veinte grados treinta minutos doce segundos Oeste, con una distancia de ciento ocho punto quince metros. Del mojón uno A al mojón dos A rumbo sur catorce grados treinta y ocho minutos veinticuatro segundos este, con una distancia de doce punto noventa metros. Del mojón dos A al mojón tres A rumbo sur cincuenta y un grados treinta y ocho minutos veintiocho segundos oeste, con una distancia de cuarenta y uno punto treinta y un metros. Del mojón tres A al mojón cuatro A rumbo sur veinte grados cuarenta y seis minutos cincuenta y nueve segundos oeste, con una distancia de treinta y cuatro punto cincuenta y cuatro metros. Del mojón cuatro A al mojón cinco A rumbo sur ochenta grados dieciséis minutos cincuenta y seis segundos oeste, con una distancia de sesenta y nueve punto veinte metros. Del mojón cinco A al mojón seis A rumbo sur ochenta grados cero ocho minutos veintisiete segundos oeste, con una distancia de noventa punto cuarenta y siete metros. Del mojón seis A al mojón siete A rumbo sur ochenta grados cuarenta y cinco minutos quince segundos oeste, con una distancia de once punto cuarenta y siete

metros. Del mojón siete A al mojón ocho A rumbo sur setenta y nueve grados cincuenta y cuatro minutos veintiún segundos oeste, con una distancia de treinta y tres punto treinta metros. Del mojón ocho A al mojón nueve A rumbo sur treinta y ocho grados quince minutos veintitrés segundos este, con una distancia de ciento cuarenta y uno punto cuarenta y cuatro metros. Del mojón nueve A al mojón dos B rumbo norte cincuenta y cuatro grados veintiún minutos treinta y seis segundos este, con una distancia de veintiuno punto sesenta metros. Del mojón dos B al mojón tres B rumbo norte treinta y tres grados veintitrés minutos cuarenta y ocho segundos este, con una distancia de cinco punto noventa y cuatro metros. Del mojón tres B al mojón cuatro B rumbo norte cincuenta y cinco grados cero ocho minutos cero seis segundos este, con una distancia de ocho punto doce metros. Del mojón cuatro B al mojón cinco B rumbo norte cincuenta y tres grados cero cuatro minutos treinta segundos este, con una distancia de diez punto veintisiete metros. Del mojón cinco B al mojón seis B rumbo norte treinta y nueve grados cuarenta y cuatro minutos cero seis segundos este, con una distancia de seis punto veinticuatro metros. Del mojón seis B al mojón siete B rumbo norte treinta y ocho grados doce minutos doce segundos este, con una distancia de dieciocho punto cuarenta metros. Del mojón siete B al mojón ocho B rumbo norte veintiún grados cuarenta y siete minutos treinta segundos este, con una distancia de veinte punto ochenta metros. Del mojón ocho B al mojón nueve B rumbo norte cuarenta y un grados veinticuatro minutos cero segundos este, con una distancia de dieciocho punto treinta y seis metros. Del mojón nueve B al mojón diez B rumbo norte sesenta y siete grados cuarenta y siete minutos cero seis segundos este, con una distancia de once

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punto cincuenta y seis metros. Del mojón diez B al mojón once B rumbo sur cuarenta y tres grados cero siete minutos cero seis segundos este, con una distancia de tres punto cero un metros. Del mojón once B al mojón doce B rumbo sur diez grados cincuenta y seis minutos cero seis segundos este, con una distancia de siete punto ochenta metros. Del mojón doce B al mojón trece B rumbo sur once grados veintisiete minutos cero seis segundos este, con una distancia de catorce punto veinticinco metros. Del mojón trece B al mojón catorce B rumbo sur ochenta y cuatro grados treinta y tres minutos doce segundos oeste, con una distanciad e ocho punto cero metros. Del mojón catorce B al mojón quince B rumbo sur veintiún grados veintiún minutos veinticuatro segundos oeste, con una distancia de cuarenta y dos punto doce metros. Del mojón quince B al mojón dieciséis B rumbo sur cincuenta y cuatro grados cincuenta minutos cuarenta y dos segundos oeste, con una distancia de cuarenta y cinco punto doce metros. Del mojón dieciséis B al mojón diez A rumbo sur cincuenta y dos grados cincuenta y cinco minutos cuarenta y dos segundos oeste, con una distancia de veinte punto cuarenta y cinco metros, con la cual se llega al vértice Sureste del terreno que se describe; lindando en estos tramos con terreno propiedad de Almacenadora Centroamericana Sociedad Anónima de Capital Variable (ALCASA); y luego continua. LINDERO SUR: A partir del vértice Sureste, antes mencionado, esta formado por línea de nueve tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón diez A al mojón once A rumbo sur cincuenta y cuatro grados treinta y cuatro minutos dieciséis segundos oeste, con una distancia de doscientos veintisiete punto treinta y cuatro metros. Del mojón once A al mojón doce A rumbo norte cincuenta y tres

grados cuarenta minutos dieciocho segundos oeste, con una distancia de cinco punto dieciocho metros. Del mojón doce A al mojón trece A rumbo norte setenta y dos grados cuarenta y cuatro minutos cero seis segundos oeste, con una distancia de tres punto diez metros. Del mojón trece A al mojón catorce A rumbo sur sesenta y nueve grados cincuenta y siete minutos veinticuatro segundos oeste, con una distancia de cinco punto setenta y cinco metros. Del mojón catorce A al mojón quince A rumbo norte cincuenta y siete grados treinta y seis minutos cincuenta y cuatro segundos oeste, con una distancia de diez punto veintitrés metros. Del mojón quince A al mojón dieciséis A rumbo norte quince grados cuarenta y siete minutos treinta segundos oeste, con una distancia de cinco punto catorce metros. Del mojón dieciséis A al mojón diecisiete A rumbo norte sesenta y cuatro grados cero dos minutos treinta segundos oeste, con una distancia de trece punto noventa y cuatro metros. Del mojón diecisiete A al mojón dieciocho A rumbo norte cincuenta y ocho grados treinta y tres minutos cuarenta y ocho segundos oeste, con una distancia de trece punto sesenta y nueve metros. Del mojón dieciocho A al mojón diecinueve A rumbo sur ochenta y tres grados catorce minutos dieciocho segundos oeste, con una distancia de treinta y cuatro punto veintitrés metros , con el cual se llega al vértice Suroeste del terreno que se describe; lindando en estos tramos con terreno propiedad de HARISA; y luego continua. LINDERO PONIENTE. A partir del vértice Suroeste, esta formado por línea de dieciocho tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón diecinueve A al mojón veinte A rumbo norte catorce grados doce minutos cuarenta y dos segundos este, con una distancia de catorce punto noventa y nueve metros. Del mojón veinte A al mojón

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DOS COLONES

veintiuno A rumbo norte quince grados cero tres minutos treinta segundos Oeste, con una distancia de cinco punto ochenta y cinco metros. Del mojón veintiuno A al mojón veintidós A rumbo norte sesenta y cinco grados cero dos minutos treinta segundos Oeste, con una distancia de ocho punto noventa y tres metros. Del mojón veintidós A al mojón veintitrés A rumbo norte cero ocho grados cuarenta y siete minutos doce segundos este, con una distancia de tres punto veintiún metros. Del mojón veintitrés A al mojón veinticuatro A rumbo norte ochenta y nueve grados veintitrés minutos treinta y seis segundos este, con una distancia de siete punto cincuenta y cinco metros. Del mojón veinticuatro A al mojón veinticinco A rumbo norte veintidós grados cero cinco minutos veinticuatro segundos este, con una distancia de cuarenta punto veintinueve metros. Del mojón veinticinco A al mojón veintiséis A rumbo norte diecisiete grados treinta y siete minutos veinticuatro segundos oeste, con una distancia de trece punto dieciocho metros. Del mojón veintiséis A al mojón veintisiete A rumbo norte sesenta y un grados treinta y siete minutos cincuenta y cuatro segundos oeste, con una distancia de seis punto veinticinco metros. Del mojón veintisiete A al mojón veintiocho A rumbo norte diez grados treinta y cinco minutos cincuenta y cuatro segundos oeste, con una distanciad e once punto veinte metros. Del mojón veintiocho A al mojón veintinueve A rumbo norte cuarenta y seis grados cuarenta y ocho minutos treinta segundos oeste, con una distancia de veinte punto ochenta y cinco metros. Del mojón veintinueve A al mojón treinta A rumbo norte sesenta y un grados cero dos minutos treinta y seis segundos oeste, con una distancia de cincuenta y tres punto catorce metros. Del mojón treinta A al mojón treinta y uno A rumbo norte ochenta y siete grados

veinte minutos, cincuenta y cuatro segundos oeste, con una distanciad e diez punto dieciséis metros. Del mojón treinta y uno A al mojón treinta y dos A rumbo norte veinticinco grados cuarenta y cinco minutos treinta y seis segundos este, con una distancia de quince punto veintiocho metros. Del mojón treinta y dos A l mojón treinta y tres A rumbo norte cero seis grados treinta y dos minutos treinta y seis segundos oeste, con una distancia de treinta y siete punto sesenta y cinco metros. Del mojón treinta y tres A al mojón treinta y cuatro A rumbo norte treinta y tres grados diecisiete minutos cero segundos oeste, con una distancia de catorce punto cero siete metros. Del mojón treinta y cuatro A al mojón treinta y cinco A rumbo norte sesenta y dos grados treinta y tres minutos cuarenta y ocho segundos oeste, con una distancia de veintinueve punto trece metros. Del mojón treinta y cinco A al mojón treinta y seis A rumbo norte ochenta y tres grados cuarenta y seis minutos cincuenta y cuatro segundos oeste, con una distancia de veintiséis punto cincuenta y nueve metros. Del mojón treinta y seis A al mojón cuarenta y cinco rumbo norte sesenta y nueve grados treinta y tres minutos cincuenta y cuatro segundos oeste, con una distancia de diez punto cincuenta y un metros, con la cual se llega al vértice Noroeste antes mencionado que es donde dio inicio la presente descripción; lindando en estos tramos, con el Océano Pacífico. La extensión superficial del inmueble descrito es de TRECE HECTÁREAS SETENTA Y CINCO ÁREAS DOCE PUNTO TREINTA Y UNO CENTIÁREAS, equivalentes a DIECINUEVE MANZANAS SEIS MIL SETECIENTOS CINCUENTA Y DOS VARAS CUADRADAS""""".- **(ii) SEGUNDO INMUEBLE:** Denominado como **"PORCION DOS"**, el cual, a partir de su Remedicion, la cual se encuentra debidamente inscrita bajo la Matricula anteriormente citada, quedó

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conformado por dos porciones denominadas, la primera: Porción Dos - A, de un área superficial de una hectárea cero cuatro áreas sesenta y seis punto setenta y uno centiáreas, equivalentes a una manzana cuatro mil novecientos setenta y cinco punto setenta y siete varas cuadradas; y, la segunda: Porción Dos - B, de un área general de noventa y un hectáreas cincuenta y un áreas cincuenta y uno punto setenta y ocho centiáreas, equivalentes a ciento treinta manzanas nueve mil trescientas noventa y nueve punto dieciséis varas cuadradas, pero por habérsele desmembrado una porción interna hacia el rumbo sur-oriente de noventa y seis áreas, veintitrés punto cero ocho centiáreas, equivalentes a una manzana tres mil setecientos sesenta y ocho punto setenta varas cuadradas, a favor del Inazucar y actualmente propiedad de Puma, El Salvador, Sociedad Anónima de Capital Variable, ha quedado reducida a un área superficial de noventa hectáreas, cincuenta y cinco áreas, veintiocho punto setenta centiáreas, equivalentes a ciento veintinueve manzanas, cinco mil seiscientas treinta punto cuarenta y seis varas cuadradas.- Pero por Desmembracion en Cabeza de su Dueño, presentada para su inscripcion en el mismo Registro de la Propiedad de Sonsonate bajo el asiento número DOS MIL CINCO CERO TRES CERO-UNO DOS UNO SIETE SEIS de fecha cinco de los corrientes, se segregó la Porcion Dos - A, habiendo quedado conformada dicha inscripcion registral únicamente por la Porcion Dos - B, **la cual en este Instrumento se denominará simplemente como "PORCION DOS"**, que, según el citado antecedente registral, se describe de la siguiente forma: **"""""DESCRIPCION TÉCNICA DE LEVANTAMIENTO TOPOGRÁFICO DE "PORCION DOS", PROPIEDAD DE LA COMISION EJECUTIVA PORTUARIA AUTÓNOMA (CEPA), UBICADA EN EL MUNICIPIO DE ACAJUTLA, DEPARTAMENTO DE SONSONATE:** La presenta descripción

inicia en el vértice Noroeste, denominado mojón número uno, el cual esta definido por las coordenadas Geodésicas nacionales, proporcionadas por el Instituto Geográfico Nacional (IGN), las cuales son Latitud: doscientos setenta y cuatro mil ciento dieciséis punto cuarenta y cuatro y una Longitud: cuatrocientos nueve mil setecientos setenta y cuatro punto cero tres y sus linderos se describen de la siguiente manera: LINDERO NORTE: A partir del vértice Noroeste, antes mencionado, esta formado por línea de nueve tramos rectos, los cuales tienen los siguientes rumbos y distancias: Del mojón uno a mojón dos rumbo Sur setenta y seis grados veinte minutos cinco segundos Este, con una distancia de doscientos cuarenta punto noventa y seis metros. Del mojón dos al mojón tres rumbo sur setenta y seis grados cero minutos cincuenta y tres segundos Este, con una distancia de doscientos punto sesenta y un metros. Del mojón tres al mojón cuatro rumbo Norte veintidós grados treinta y seis minutos cuarenta y tres segundos Este, con una distancia de doscientos sesenta y cuatro punto treinta y seis metros. Del mojón cuatro al mojón cinco rumbo sur setenta y cuatro grados catorce minutos veinticuatro segundos Este, con una distancia de noventa punto diez metros. Del mojón cinco al mojón seis rumbo sur setenta y nueve grados diez minutos veinticuatro segundos Este, con una distancia de ciento once punto treinta y siete metros. Del mojón seis al mojón siete rumbo sur ochenta y tres grados treinta y seis minutos cincuenta y cuatro segundos Este, con una distancia de ciento cuarenta y nueve punto treinta y siete metros. Del mojón siete al mojón ocho rumbo sur setenta y nueve grados cincuenta y nueve minutos cuarenta y ocho segundos Este, con una distancia de cincuenta y uno punto noventa y ocho metros. Del mojón ocho al mojón nueve

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rumbo Sur setenta y seis grados diez minutos cuarenta y ocho segundos Este, con una distancia de sesenta y uno punto setenta y cinco metros. Del mojón nueve al mojón diez rumbo sur setenta y un grados veinte minutos cincuenta y cuatro segundos Este, con una distancia de ciento setenta y dos punto cuarenta y cinco metros, con la cual se llega al vértice Noreste del terreno que se describe; lindando en estos tramos con Colonia Rasa número uno, con lindero sur del terreno donado por el ex Instituto de Vivienda Urbana (IVU) a favor de la CEPA, calle Benigno Cabrera de nueve metros de ancho de por medio; con lindero oriente del terreno donado por el ex Instituto de Vivienda Urbana (IVU) a favor de la CEPA, y con Colonia Obrera, Bulevar Coronel Oscar Osorio de veinte metros de ancho, de por medio; con Colonia Rasa número dos, con Colonia IVU, y con la Porción Dos - A, propiedad de la CEPA que se menciona en esta misma descripción técnica, Boulevard Veinticinco de Febrero, de por medio; y luego continua. LINDERO ORIENTE: A partir del vértice Noreste, antes mencionado, esta formado por línea recta de dieciséis tramos, los cuales tienen los siguientes rumbos y distancias: Del mojón diez al mojón once rumbo Sur cuarenta y tres grados cero cuatro minutos dieciocho segundos Oeste, con una distancia de ochocientos treinta y cuatro punto diecisiete metros. Del mojón once al mojón doce rumbo Sur treinta y nueve grados quince minutos treinta segundos Este, con una distancia de diecisiete punto treinta y dos metros. Del mojón doce al mojón trece rumbo Sur treinta y cuatro grados treinta y nueve minutos cincuenta y cuatro segundos Oeste, con una distancia de veinte punto sesenta y nueve metros. Del mojón trece al mojón catorce rumbo sur veintiocho grados once minutos cuarenta y ocho segundos Oeste, con una distancia de veintiuno punto

veintiún metros. Del mojón catorce al mojón quince rumbo sur veintiún grados cincuenta y siete minutos cero seis segundos Oeste, con una distancia de veintisiete punto sesenta y tres metros. El mojón quince al mojón dieciséis rumbo Sur catorce grados cuarenta y seis minutos doce segundos Oeste, con una distancia de catorce punto cuarenta metros. Del mojón dieciséis al mojón diecisiete rumbo Sur cero ocho grados treinta minutos treinta segundos Este, con una distancia de quince punto cero un metros. Del mojón diecisiete al mojón dieciocho rumbo Sur cero seis grados cero nueve minutos veinticuatro segundos Oeste, con una distancia de siete punto cincuenta y cinco metros. Del mojón dieciocho al mojón diecinueve rumbo Sur cero ocho grados cuarenta y seis minutos dieciocho segundos Oeste, con una distancia de doce punto veintiséis metros. Del mojón diecinueve al mojón veinte rumbo Sur cero tres grados cero minutos cero segundos Este, con una distancia de trece punto setenta y seis metros. Del mojón veinte al mojón veintiuno rumbo Sur cero un grados veinticinco minutos cuarenta y ocho segundos Este, con una distancia de diez punto ochenta y dos metros. Del mojón veintiuno al mojón veintidós rumbo sur cero cuatro grados cincuenta y tres minutos cero segundos Este, con una distancia de treinta y uno punto sesenta metros. Del mojón veintidós al mojón veintitrés rumbo sur catorce grados cero un minutos treinta segundos este, con una distancia de ciento seis punto cero ocho metros. Del mojón veintitrés al mojón veinticuatro rumbo sur veinticinco grados cincuenta y ocho minutos cero segundos Este, con una distancia de setenta punto treinta metros. Del mojón veinticuatro al mojón veinticinco rumbo sur veintiún grados quince minutos cuarenta y dos segundos este, con una distancia de ciento sesenta punto treinta

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y seis metros. Del mojón veinticinco al mojón veintiséis rumbo sur dieciocho grados dieciocho minutos cero seis segundos Este, con una distancia de setenta y dos punto diecinueve metros, con la cual se llega al vértice Sureste del terreno que se describe; lindando en estos tramos con terreno propiedad de CHEVRON, con terrenos segregados a favor de la Comisión Ejecutiva del Rio Lempa (CEL) hoy propiedad de Duke Energy International El Salvador, Sociedad en Comanditas por Acciones de Capital Variable, con Porción Dos - C propiedad de la CEPA que se describe más adelante, con terreno segregado a favor de Lubricantes Texaco Sociedad Anónima de Capital Variable, y con terreno segregado a favor de Metales y Estructuras de El Salvador Sociedad Anónima de Capital Variable (METASA), derecho de línea férrea de veintiún metros de ancho, de por medio; y luego continua. LINDERO SUR: A partir del vértice Sureste antes mencionado, esta formado por línea de diecinueve tramos rectos. Del mojón veintiséis al mojón veintisiete rumbo Sur cincuenta y dos grados cincuenta y seis minutos cuarenta y ocho segundos Oeste, con una distancia de sesenta y nueve punto setenta y siete metros. Del mojón veintisiete al mojón veintiocho rumbo norte cero cinco grados veintitrés minutos treinta y seis segundos Oeste, con una distancia de ochenta y nueve punto cero cuatro metros. Del mojón veintiocho al mojón veintinueve rumbo Sur setenta y nueve grados treinta minutos cuarenta y dos segundos Oeste, con una distancia de ciento uno punto cero dos metros. Del mojón veintinueve al mojón treinta rumbo norte cuarenta y ocho grados veintiún minutos treinta y dos segundos Oeste, con una distancia de ciento diez punto treinta y nueve metros. Del mojón treinta al mojón treinta y uno rumbo norte setenta y un grados cuarenta y cuatro minutos catorce segundos

Oeste, con una distancia de ciento cinco punto treinta metros. Del mojón treinta y uno al mojón treinta y dos rumbo sur sesenta y seis grados cuarenta y ocho minutos cero cinco segundos oeste, con una distancia de siete punto sesenta y dos metros. Del mojón treinta y dos al mojón treinta y tres rumbo Sur treinta y tres grados cuarenta y un minutos veinticuatro segundos oeste, con una distancia de cincuenta y cuatro punto cero ocho metros. Del mojón treinta y tres al mojón treinta y cuatro rumbo Sur dieciocho grados cuarenta y ocho minutos cero segundos oeste, con una distancia de cuarenta y nueve punto sesenta y cinco metros. Del mojón treinta y cuatro al mojón treinta y cinco rumbo Sur cuarenta y dos grados cero cinco minutos veintiún segundos Este, con una distancia de cuarenta y uno punto setenta y siete metros. Del mojón treinta y cinco al mojón treinta y seis rumbo Sur diecinueve grados diecisiete minutos veinticuatro segundos oeste, con una distancia de veintiuno punto diecinueve metros. Del mojón treinta y seis al mojón treinta y siete rumbo Sur setenta y tres grados dieciocho minutos cero tres segundos oeste, con una distancia de cincuenta y dos punto veinte metros. Del mojón treinta y siete al mojón treinta y ocho rumbo Sur cincuenta y siete grados cero cinco minutos cuarenta y un segundos Oeste, con una distancia de cuarenta punto cincuenta metros. Del mojón treinta y ocho al mojón treinta y nueve rumbo sur cuarenta grados veintiún minutos cincuenta y dos segundos este, con una distancia de veintiséis punto veinticinco metros. Del mojón treinta y nueve al mojón cuarenta rumbo Sur veintisiete grados cincuenta y tres minutos cincuenta segundos Oeste, con una distancia de treinta y ocho punto cuarenta y siete metros. Del mojón cuarenta al mojón cuarenta y uno rumbo norte setenta y siete grados cuarenta y cuatro

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DOS COLONES

minutos cero siete segundos Oeste, con una distancia de veintitrés punto cincuenta y cuatro metros. Del mojón cuarenta y uno al mojón cuarenta y dos rumbo norte cincuenta y seis grados dieciocho minutos treinta y seis segundos oeste, con una distancia de catorce punto cuarenta y dos metros. Del mojón cuarenta y dos al mojón cuarenta y tres rumbo norte cuarenta y ocho grados treinta y cuatro minutos treinta y cinco segundos Oeste, con una distancia de cuarenta y cinco punto treinta y cuatro metros. Del mojón cuarenta y tres al mojón cuarenta y cuatro rumbo Sur cincuenta y dos grados veinticinco minutos cincuenta y tres segundos Oeste, con una distancia de treinta y dos punto ochenta metros. Del mojón cuarenta y cuatro al mojón cuarenta y cinco rumbo Sur cincuenta y seis grados cuarenta y dos minutos cero seis segundos Oeste, con una distancia de doscientos veintitrés punto cincuenta y tres metros, con la cual se llega al vértice Suroeste; lindando en estos tramos con terreno de Almacenadora Centroamericana, Sociedad Anónima de Capital Variable (ALCASA) y terreno propiedad de la CEPA que se denomina Porción Sur; y luego continua. LINDERO PONIENTE. A partir del vértice Suroeste, esta formado por línea de ciento dieciocho tramos rectos los cuales tiene los siguientes rumbos y distancias: Del mojón cuarenta y cinco al mojón cuarenta y seis rumbo norte dieciséis grados cero nueve minutos cuarenta y siete segundos este con una distancia de diecisiete punto treinta y tres metros. Del mojón cuarenta y seis al mojón cuarenta y siete rumbo norte cuarenta y nueve grados veinticinco minutos cuarenta y ocho segundos este, con una distancia de dieciséis punto veintiún metros. Del mojón cuarenta y siete al mojón cuarenta y ocho rumbo norte treinta y nueve grados cuarenta y cuatro minutos cuarenta y dos segundos

Oeste, con una distancia de nueve punto sesenta y cinco metros. Del mojón cuarenta y ocho al mojón cuarenta y nueve rumbo norte setenta y siete grados cincuenta y cinco minutos treinta segundos este, con una distancia de nueve punto ochenta y cinco metros. Del mojón cuarenta y nueve al mojón cincuenta rumbo norte sesenta y tres grados dieciocho minutos cincuenta y cuatro segundos Este, con una distancia de veintitrés punto cuarenta y siete metros. Del mojón cincuenta al mojón cincuenta y uno rumbo norte veinte grados trece minutos dieciocho segundos Este, con una distancia de ocho punto ochenta y dos metros. Del mojón cincuenta y uno al mojón cincuenta y dos rumbo Norte cero siete grados cuarenta y seis minutos dieciocho segundos Oeste, con una distancia de cuarenta y seis punto ochenta y ocho metros. Del mojón cincuenta y dos al mojón cincuenta y tres rumbo Norte cincuenta y siete grados cero tres minutos cuarenta y ocho segundos Oeste, con una distancia de ocho punto cero dos metros. Del mojón cincuenta y tres al mojón cincuenta y cuatro rumbo norte doce grados cincuenta y cuatro minutos doce segundos Oeste, con una distancia de diecinueve punto ochenta y ocho metros. Del mojón cincuenta y cuatro al mojón cincuenta y cinco rumbo Norte treinta y nueve grados cero siete minutos cero segundos este, con una distancia de catorce punto veintiocho metros. Del mojón cincuenta y cinco al mojón cincuenta y seis rumbo Norte setenta y dos grados veintiocho minutos dieciocho segundos este, con una distancia de doce punto cincuenta y ocho metros. Del mojón cincuenta y seis al mojón cincuenta y siete rumbo Norte sesenta y dos grados treinta y siete minutos cero seis segundos este, con una distancia de diez punto cero cinco metros. Del mojón cincuenta y siete al mojón cincuenta y ocho rumbo Norte veintiocho grados cincuenta y un

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DOS COLONES

minutos doce segundos este, con una distancia de veintiséis punto treinta y dos metros. Del mojón cincuenta y ocho al mojón cincuenta y nueve rumbo norte ochenta y un grados treinta y ocho minutos cero segundos este, con una distancia de ocho punto cincuenta y nueve metros. Del mojón cincuenta y nueve al mojón sesenta rumbo Norte quince grados cuarenta y seis minutos cero seis segundos Este, con una distanciad de veinte punto noventa y cuatro metros. Del mojón sesenta al mojón sesenta y uno rumbo Norte veintitrés grados cincuenta y cinco minutos treinta y seis segundos Oeste, con una distancia de doce punto setenta y dos metros. Del mojón sesenta y uno al mojón sesenta y dos rumbo Norte diez grados treinta y dos minutos cero seis segundos este, con una distancia de cuarenta y siete punto setenta y cuatro metros. Del mojón sesenta y dos al mojón sesenta y tres rumbo Norte veinte grados treinta y cinco minutos cero seis segundos oeste, con una distancia de once punto veintinueve metros. Del mojón sesenta y tres al mojón sesenta y cuatro rumbo Norte veinticinco grados veintiocho minutos treinta segundos oeste, con una distancia de cuarenta y ocho punto diecisiete metros. Del mojón sesenta y cuatro al mojón sesenta y cinco rumbo Norte sesenta y cuatro grados cuarenta y siete minutos doce segundos Este, con una distancia de treinta punto treinta y tres metros. Del mojón sesenta y cinco al mojón sesenta y seis rumbo Norte veintitrés grados cuarenta y ocho minutos cero segundos este, con una distancia de veintinueve punto setenta y seis metros. Del mojón sesenta y seis al mojón sesenta y siete rumbo Norte cero grados veintiocho minutos doce segundos este, con una distancia de veintiuno punto noventa y tres metros. Del mojón sesenta y siete al mojón sesenta y ocho rumbo Norte veintiún grados veinte minutos cincuenta y

cuatro segundos Oeste, con una distancia de veintitrés punto setenta y seis metros. Del mojón sesenta y ocho al mojón sesenta y nueve rumbo Norte cero cuatro grados doce minutos treinta y seis segundos Oeste, con una distancia de veinte punto noventa y ocho metros. Del mojón sesenta y nueve al mojón setenta rumbo Norte cuarenta y cuatro grados cuarenta y un minutos dieciocho segundos Oeste, con una distancia de sesenta y tres punto sesenta y nueve metros. Del mojón setenta al mojón setenta y uno rumbo Norte cero ocho grados cuarenta y siete minutos cero segundos Oeste, con una distancia de veinticuatro punto cincuenta y seis metros. Del mojón setenta y uno al mojón setenta y dos rumbo Norte veinte grados treinta y cinco minutos cuarenta y ocho segundos oeste, con una distancia de diez punto cero seis metros. Del mojón setenta y dos al mojón setenta y tres rumbo Norte sesenta y nueve grados cincuenta y nueve minutos veinticuatro segundos este, con una distancia de quince punto noventa y nueve metros Del mojón setenta y tres al mojón setenta y cuatro rumbo Norte veintiún grados cincuenta y cinco minutos cero seis segundos este, con una distancia de veintitrés punto cincuenta y siete metros. Del mojón setenta y cuatro al mojón setenta y cinco rumbo sur setenta y cuatro grados quince minutos cero segundos este, con una distancia de treinta y nueve punto cero un metros. Del mojón setenta y cinco al mojón setenta y seis rumbo Norte catorce grados treinta y ocho minutos veinticuatro segundos Oeste, con una distancia de veintisiete punto dieciocho metros. Del mojón setenta y seis al mojón setenta y siete rumbo Norte cero grados treinta y nueve minutos treinta y seis segundos Oeste, con una distancia de sesenta punto ochenta y dos metros. Del mojón setenta y siete al mojón setenta y ocho rumbo Norte cuarenta y nueve grados cincuenta y tres

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minutos cuarenta y dos segundos oeste, con una distancia de veintiuno punto trece metros. Del mojón setenta y ocho al mojón setenta y nueve rumbo sur ochenta y tres grados cincuenta y siete minutos cuarenta y ocho segundos oeste, con una distancia de diecinueve punto noventa y siete metros. Del mojón setenta y nueve al mojón ochenta rumbo norte cuarenta y tres grados treinta y cinco minutos cuarenta y un segundos Oeste, con una distancia de veintisiete punto cuarenta y seis metros. Del mojón ochenta al mojón ochenta y uno rumbo norte veintiún grados treinta y seis minutos treinta y ocho segundos oeste, con una distancia de dieciocho punto veintinueve metros. Del mojón ochenta y uno al mojón ochenta y dos rumbo Norte veintisiete grados cincuenta y nueve minutos treinta y seis segundos oeste, con una distancia de dieciocho punto ochenta y tres metros. Del mojón ochenta y dos al mojón ochenta y tres rumbo Norte catorce grados treinta y un minutos cuarenta y seis segundos Este, con una distancia de veintidós punto veintiséis metros. Del mojón ochenta y tres al mojón ochenta y cuatro rumbo Norte quince grados veinticinco minutos cero segundos Oeste, con una distancia de doce punto doce metros. Del mojón ochenta y cuatro al mojón ochenta y cinco rumbo Norte doce grados treinta y cuatro minutos cero dos segundos este, con una distancia de cinco punto ochenta y cinco metros. Del mojón ochenta y cinco al mojón ochenta y seis rumbo Norte diez grados cuarenta y dos minutos treinta y un segundos Oeste, con una distancia de once punto noventa y siete metros. Del mojón ochenta y seis al mojón ochenta y siete rumbo Norte sesenta y dos grados cuarenta y cinco minutos diecisiete segundos oeste, con una distancia de diez punto ochenta y cuatro metros. Del mojón ochenta y siete al mojón ochenta y ocho rumbo Norte veintidós

grados cincuenta y cinco minutos veintinueve segundos oeste, con una distancia de nueve punto cero ocho metros. Del mojón ochenta y ocho al mojón ochenta y nueve rumbo Norte veinticuatro grados treinta y dos minutos cuarenta y dos segundos oeste, con una distancia de veintiuno punto cincuenta y ocho metros. Del mojón ochenta y nueve al mojón noventa rumbo sur ochenta y un grados cincuenta y un minutos treinta y cuatro segundos oeste, con una distancia de cinco punto ochenta y cinco metros. Del mojón noventa al mojón noventa y uno rumbo Norte setenta y nueve grados treinta y dos minutos cero dos segundos oeste, con una distancia de quince punto cincuenta y seis metros. Del mojón noventa y uno al mojón noventa y dos rumbo Norte ochenta y seis grados treinta y cinco minutos cero tres segundos oeste, con una distancia de treinta y dos punto setenta y cuatro metros. Del mojón noventa y dos al mojón noventa y tres rumbo Norte dieciséis grados treinta y un minutos veintidós segundos Oeste, con una distancia de diez punto dieciséis metros. Del mojón noventa y tres al mojón noventa y cuatro rumbo norte veintiocho grados cuarenta minutos cero nueve segundos Este, con una distancia de veintiuno punto treinta y ocho metros. Del mojón noventa y cuatro al mojón noventa y cinco rumbo Norte sesenta y cuatro grados treinta y un minutos veinticuatro segundos este, con una distancia de siete punto treinta y cinco metros. Del mojón noventa y cinco al mojón noventa y seis rumbo Norte setenta y ocho grados veinticinco minutos cincuenta y ocho segundos este, con una distancia de veintiséis punto sesenta y dos metros. Del mojón noventa y seis al mojón noventa y siete rumbo Norte cincuenta grados veintiocho minutos cincuenta y nueve segundos Este, con una distancia de siete punto cuarenta y tres metros. Del mojón noventa y siete al mojón noventa y ocho

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DOS COLONES

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rumbo Norte ochenta y ocho grados cero un minutos veintisiete segundos Este, con una distancia de ocho punto ochenta y ocho metros. Del mojón noventa y ocho al mojón noventa y nueve rumbo Norte cero cinco grados treinta y tres minutos cero nueve segundos Este, con una distancia de quince punto dieciséis metros. Del mojón noventa y nueve al mojón cien rumbo Norte cero un grados cuarenta y cuatro minutos veinticuatro segundos Oeste, con una distancia de veinte punto treinta y tres metros. Del mojón cien al mojón ciento uno rumbo norte cuarenta y ocho grados cuarenta y un minutos diecisiete segundos este, con una distancia de nueve punto cincuenta y cinco metros. Del mojón ciento uno al mojón ciento dos rumbo Norte diez grados veintidós minutos cuarenta y siete segundos este, con una distancia de veinticuatro punto cuarenta y nueve metros. Del mojón ciento dos al mojón ciento tres rumbo Norte sesenta grados cincuenta y un minutos treinta y seis segundos Oeste, con una distancia de nueve punto sesenta y dos metros. Del mojón ciento tres al mojón ciento cuatro rumbo Norte ochenta y ocho grados cuarenta y ocho minutos cincuenta y siete segundos Oeste, con una distancia de tres punto setenta metros. Del mojón ciento cuatro al mojón ciento cinco rumbo Norte sesenta y ocho grados treinta y un minutos cuarenta y siete segundos oeste, con una distancia de nueve metros. Del mojón ciento cinco al mojón ciento seis rumbo Norte cincuenta y dos grados dieciséis minutos veintiséis segundos oeste, con una distancia de dos punto noventa y ocho metros. Del mojón ciento seis al mojón ciento siete rumbo norte treinta y seis grados dieciocho minutos cincuenta y siete segundos oeste, con una distancia de veintitrés punto noventa y dos metros. Del mojón ciento siete al mojón ciento ocho rumbo Norte cuarenta y seis grados diez minutos diecisiete segundos Oeste,

con una distancia de veinticinco punto setenta y cinco metros. Del mojón ciento ocho al mojón ciento nueve rumbo Norte treinta grados cero tres minutos cero dos segundos oeste, con una distancia de veinte punto cero tres metros. Del mojón ciento nueve al mojón ciento diez rumbo Norte cincuenta y seis grados cero nueve minutos veintinueve segundos este, con una distancia de once punto catorce metros. Del mojón ciento diez al mojón ciento once rumbo norte treinta y dos grados once minutos cero ocho segundos este, con una distancia de nueve punto cincuenta y tres metros. Del mojón ciento once al mojón ciento doce rumbo Norte cero tres grados cuarenta y seis minutos dieciocho segundos Oeste, con una distancia de tres punto ochenta y cinco metros. Del mojón ciento doce al mojón ciento trece rumbo Norte cuarenta y dos grados cuarenta y ocho minutos cuarenta y cuatro segundos este, con una distancia de cero punto noventa y dos metros. Del mojón ciento trece al mojón ciento catorce rumbo Norte cero seis grados treinta y siete minutos cero ocho segundos Oeste, con una distancia de siete punto treinta y dos metros. Del mojón ciento catorce al mojón ciento quince rumbo Norte diecisiete grados veintiún minutos trece segundos oeste, con una distancia de tres punto quince metros. Del mojón ciento quince al mojón ciento dieciséis rumbo Norte treinta y tres grados cero siete minutos cuarenta y ocho segundos Oeste, con una distancia de cuatro punto noventa y tres metros. Del mojón ciento dieciséis al mojón ciento diecisiete rumbo Norte veintidós grados treinta minutos treinta segundos oeste, con una distancia de cuatro punto noventa y dos metros. Del mojón ciento diecisiete al mojón ciento dieciocho rumbo norte dieciséis grados cuarenta y cinco minutos cincuenta y tres segundos este, con una distancia de nueve punto treinta y cinco metros.

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PAPEL PARA PROTOCOLO

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DOS COLONES

Del mojón ciento dieciocho al mojón ciento diecinueve rumbo Norte sesenta grados cincuenta y ocho minutos veintitrés segundos este, con una distancia de nueve punto cincuenta y ocho metros. Del mojón ciento diecinueve al mojón ciento veinte rumbo Norte treinta y ocho grados dieciséis minutos once segundos este, con una distancia de doce punto cero cuatro metros. Del mojón Ciento veinte al mojón ciento veintiuno rumbo Norte cero cinco grados veintiocho minutos cincuenta y un segundos Oeste, con una distancia de catorce punto noventa y dos metros. Del mojón ciento veintiuno al mojón ciento veintidós rumbo norte once grados cincuenta y un minutos veintiocho segundos Oeste, con una distancia de seis punto cero seis metros. Del mojón ciento veintidós al mojón ciento veintitrés rumbo Norte once grados cincuenta y cuatro minutos cero segundos este, con una distancia de veintidós punto ochenta y seis metros. Del mojón ciento veintitrés al mojón ciento veinticuatro rumbo Norte veinticuatro grados veinticinco minutos once segundos Oeste, con una distancia de dos punto sesenta y seis metros. Del mojón ciento veinticuatro al mojón ciento veinticinco rumbo Norte doce grados cero minutos cero cuatro segundos Oeste, con una distancia de veinte punto cero nueve metros. Del mojón ciento veinticinco al mojón ciento veintiséis rumbo Norte cincuenta y seis grados cero dos minutos treinta y un segundos oeste, con una distancia de veintinueve punto ochenta y cuatro metros. Del mojón ciento veintiséis al mojón ciento veintisiete rumbo Norte veintidós grados cincuenta y ocho minutos cero siete segundos Este, con una distancia de veinte punto cero un metros. Del mojón ciento veintisiete al mojón ciento veintiocho rumbo Norte sesenta y seis grados cincuenta y un minutos cincuenta y seis segundos Este, con una distancia de

veinticinco punto diecinueve metros. Del mojón ciento veintiocho al mojón ciento veintinueve rumbo Norte cero siete grados cincuenta y siete minutos cincuenta y cinco segundos oeste, con una distancia de veintisiete punto noventa y cuatro metros. Del mojón ciento veintinueve al mojón ciento treinta rumbo Norte setenta y cinco grados veinte minutos treinta segundos Este, con una distancia de quince punto catorce metros. Del mojón ciento treinta al mojón ciento treinta y uno rumbo Norte sesenta y seis grados treinta y siete minutos treinta y tres segundos Este, con una distancia de nueve punto cero tres metros. Del mojón ciento treinta y uno al mojón ciento treinta y dos rumbo Norte sesenta y cinco grados treinta minutos treinta y cuatro segundos este, con una distancia de dos punto noventa y tres metros. Del mojón ciento treinta y dos al mojón ciento treinta y tres rumbo Norte sesenta y dos grados veintiún minutos veinticinco segundos Este, con una distancia de catorce punto noventa y seis metros. Del mojón ciento treinta y tres al mojón ciento treinta y cuatro rumbo Norte cincuenta y ocho grados diecisiete minutos veintinueve segundos Este, con una distancia de once punto dieciséis metros. Del mojón ciento treinta y cuatro al mojón ciento treinta y cinco rumbo Norte quince grados cero seis minutos once segundos Oeste, con una distancia de dos punto cero nueve metros. Del mojón ciento treinta y cinco al mojón ciento treinta y seis rumbo Norte veintisiete grados cincuenta minutos veintisiete segundos Oeste, con una distancia de dos punto veinticuatro metros. Del mojón ciento treinta y seis al mojón ciento treinta y siete rumbo Norte veintiséis grados treinta y un minutos treinta y tres segundos Oeste, con una distancia de seis punto cero ocho metros. Del mojón ciento treinta y siete al mojón ciento treinta y ocho rumbo

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DOSCIENTOS DIECISIETE

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DOS COLONES

Norte sesenta y un grados veintiocho minutos veintinueve segundos este, con una distancia de seis punto noventa y un metros. Del mojón ciento treinta y ocho al mojón ciento treinta y nueve rumbo norte cero un grados cero minutos once segundos Oeste, con una distancia de veintitrés punto treinta y dos metros. Del mojón ciento treinta y nueve al mojón ciento cuarenta rumbo sur sesenta y siete grados veintiséis minutos cero tres segundos este, con una distancia de ocho punto ochenta y tres metros. Del mojón ciento cuarenta al mojón ciento cuarenta y uno rumbo sur setenta y un grados cincuenta y ocho minutos cincuenta y nueve segundos este, con una distancia de nueve punto quince metros. Del mojón ciento cuarenta y uno al mojón ciento cuarenta y dos rumbo norte cero ocho grados cincuenta minutos cincuenta y siete segundos Este, con una distancia de cuarenta y cinco punto diecisiete metros. Del mojón ciento cuarenta y dos al mojón ciento cuarenta y tres rumbo sur ochenta y cuatro grados cincuenta y nueve minutos cincuenta y un segundos Este, con un distancia de veintitrés punto noventa y cinco metros. Del mojón ciento cuarenta y tres al mojón ciento cuarenta y cuatro rumbo sur treinta grados cincuenta y siete minutos veintisiete segundos Oeste, con una distancia de siete punto treinta y cinco metros. Del mojón ciento cuarenta y cuatro al mojón ciento cuarenta y cinco rumbo sur cuarenta y ocho grados veintitrés minutos cuarenta segundos Este, con una distancia de dieciséis punto ochenta y nueve metros. Del mojón ciento cuarenta y cinco al mojón ciento cuarenta y seis rumbo sur sesenta y nueve grados veintiún minutos cero un segundos este, con una distancia de veinte punto veintisiete metros. Del mojón ciento cuarenta y seis al mojón ciento cuarenta y siete rumbo norte setenta y ocho grados cero nueve minutos cincuenta

segundos este, con una distancia de dieciséis punto ochenta y dos metros. Del mojón ciento cuarenta y siete al mojón ciento cuarenta y ocho rumbo norte cuarenta y dos grados cincuenta y tres minutos cuarenta y un segundos este, con una distancia de veintisiete punto diecisietes metros. Del mojón ciento cuarenta y ocho al mojón ciento cuarenta y nueve rumbo norte sesenta y siete grados treinta y un minutos cero dos segundos este, con una distancia de veinticinco punto noventa y siete metros. Del mojón ciento cuarenta y nueve al mojón ciento cincuenta rumbo Norte ochenta y siete grados treinta y un minutos treinta y seis segundos Este, con una distancia de veintitrés punto cero dos metros. Del mojón ciento cincuenta al mojón ciento cincuenta y uno rumbo Norte cuarenta grados treinta y dos minutos cuarenta y cuatro segundos Este, con una distancia de cuarenta y cuatro punto veinte metros. Del mojón ciento cincuenta y uno al mojón ciento cincuenta y dos rumbo Norte cuarenta y tres grados cero siete minutos cuarenta y cinco segundos Este, con una distancia de veinticinco punto setenta y cinco metros. Del mojón ciento cincuenta y dos al mojón ciento cincuenta y tres rumbo Norte cero tres grados diecisiete minutos cincuenta y seis segundos este, con una distancia de dieciocho punto diecinueve metros. Del mojón ciento cincuenta y tres al mojón ciento cincuenta y cuatro rumbo Norte doce grados trece minutos cero cinco segundos este, con una distancia de cinco punto sesenta y ocho metros. Del mojón ciento cincuenta y cuatro al mojón ciento cincuenta y cinco rumbo Norte cero un grados cuarenta y seis minutos treinta y un segundos Este, con una distancia de siete punto cuarenta y cuatro metros. Del mojón ciento cincuenta y cinco al mojón ciento cincuenta y seis rumbo Norte setenta y siete grados cero minutos treinta y siete segundos Oeste,

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PAPEL PARA PROTOCOLO

DOS COLONES

DE H.

DIECIOCHO

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con una distancia de cincuenta y uno punto cuarenta y seis metros. Del mojón ciento cincuenta y seis al mojón ciento cincuenta y siete rumbo Norte setenta y un grados cuarenta y siete minutos treinta y un segundos oeste, con una distancia de veinticinco punto veinticuatro metros. Del mojón ciento cincuenta y siete al mojón ciento cincuenta y ocho rumbo norte ochenta grados cincuenta y ocho minutos catorce segundos. Oeste, con una distancia de cuarenta y siete punto sesenta y siete metros. Del mojón ciento cincuenta y ocho al mojón ciento cincuenta y nueve rumbo norte cero tres grados veintiún minutos cero cuatro segundos oeste, con una distancia de catorce punto treinta y tres metros. Del mojón ciento cincuenta y nueve al mojón ciento sesenta rumbo Norte setenta y nueve grados cero siete minutos cincuenta y cuatro segundos oeste, con una distancia de quince punto cero seis metros. Del mojón ciento sesenta al mojón ciento sesenta y uno rumbo sur treinta grados doce minutos cincuenta y ocho segundos Oeste, con una distancia de diez punto cero seis metros. Del mojón ciento sesenta y uno al mojón ciento sesenta y dos rumbo sur setenta y cuatro grados treinta y un minutos cuarenta y un segundos oeste, con una distancia de veintisiete punto cincuenta y dos metros. Del mojón ciento sesenta y dos al mojón ciento sesenta y tres rumbo Norte setenta y seis grados cero siete minutos veintiocho segundos oeste, con una distancia de dos punto setenta y dos metros. Del mojón ciento sesenta y tres al mojón uno rumbo Norte dieciséis grados veintinueve minutos cuarenta y seis segundos Este, con una distancia de cuarenta y nueve punto ochenta y tres metros, con la cual se llega al vértice Noroeste antes mencionado que es donde dio inicio la presente descripción; lindando en estos tramos con el Océano Pacífico y el Cementerio General de la

ciudad de Acajutla.- La extensión superficial general de este inmueble es de NOVENTA Y UN HECTAREAS CINCUENTA Y UN AREAS CINCUENTA Y UNO PUNTO SETENTA Y OCHO CENTIAREAS, equivalentes a CIENTO TREINTA MANZANAS NUEVE MIL TRESCIENTAS NOVENTA Y NUEVE PUNTO DIECISEIS VARAS CUADRADAS; pero por desmembración de una "porción interna" hacia el rumbo sur -oriente de NOVENTA Y SEIS AREAS VEINTITRES PUNTO CERO OCHO CENTIAREAS, equivalentes a UNA MANZANA TRES MIL SETESCIENTOS SESENTA Y OCHO PUNTO SETENTA VARAS CUADRADAS, vendida en el año de mil novecientos noventa y siete al Instituto Nacional del Azúcar (INAZUCAR) hoy propiedad de Puma, El Salvador, Sociedad Anónima de Capital Variable, **su superficie ha quedado reducida a un área de NOVENTA HECTÁREAS, CINCUENTA Y CINCO ÁREAS, VEINTIOCHO PUNTO SETENTA CENTIÁREAS, equivalentes a CIENTO VEINTINUEVE MANZANAS, CINCO MIL SEISCIENTAS TREINTA PUNTO CUARENTA Y SEIS VARAS CUADRADAS.** Dicha "porción interna" desmembrada se describe de la siguient manera: inicia en el vértice Noroeste, denominado mojón número uno, el cual esta definido por las coordenadas Geodésicas proporcionadas por el Instituto Geográfico Nacional (IGN), las cuales son Latitud: doscientos setenta y tres mil ciento sesenta y siete punto setenta y tres y una longitud: cuatrocientos diez mil ciento noventa y cuatro punto setenta y nueve, y sus linderos s describen de la siguiente manera: LINDERO NORTE: A partir del vértice Noroeste, antes mencionado, esta formado por línea de nueve tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón uno al mojón dos rumbo norte ochenta grados siete minutos cincuenta y cuatro segundos Este, con una distancia de diecisiete punto sesenta y dos metros. Del mojón dos al mojón tres rumbo Norte nueve grados dieciséis minutos cuarenta y dos segundos Oeste,

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PAPEL PARA PROTOCOLO

DE H.

DOSCIENTOS DIECINUEVE

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DOS COLONES

con una distancia de siete punto sesenta y nueve metros. Del mojón tres al mojón cuatro rumbo Norte setenta y nueve grados cuarenta y tres minutos cuarenta y ocho segundos Este, con una distancia de veintiuno punto noventa y tres metros. Del mojón cuatro al mojón cinco rumbo Norte diez grados dos minutos treinta segundos Oeste, con una distancia de veintiséis punto cincuenta metros. Del mojón cinco al mojón seis rumbo norte setenta y nueve grados dieciocho minutos treinta segundos Este, con una distancia de ocho punto ochenta y nueve metros. Del mojón seis al mojón siete rumbo Norte setenta y nueve grados cincuenta y ocho minutos cincuenta y cuatro segundos Este, con una distancia de diez punto dieciocho metros. Del mojón siete al mojón ocho rumbo norte ochenta grados catorce minutos cincuenta y cuatro segundos Este, con una distancia de trece punto setenta metros. Del mojón ocho al mojón nueve rumbo Norte ochenta grados quince minutos veinticuatro segundos Este, con una distancia de diecisiete punto setenta y nueve metros. Del mojón nueve al mojón diez rumbo Norte ochenta grados veintiún minutos cincuenta y cuatro segundos Este, con una distancia de uno punto setenta y ocho metros, con la cual se llega al vértice Noreste del terreno que se describe; y luego continua. LINDERO ORIENTE: A partir del vértice Noreste, antes mencionado, esta formado por línea de dos tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón diez al mojón once rumbo sur nueve grados treinta y cinco minutos cincuenta segundos Este, con una distancia de ciento dos punto diecinueve metros. Del mojón once al mojón doce rumbo sur cuarenta y dos grados cincuenta y ocho minuto veinticuatro segundos Oeste, con una distancia de uno punto veinticuatro metros, con la cual se llega al vértice Sureste del terreno

que se describe; y luego continua. LINDERO SUR: A partir del vértice Sureste, antes mencionado, esta formado por línea de ocho tramos rectos, los cuales tienen los siguientes rumbos y distancias: Del mojón doce al mojón trece rumbo sur cuarenta y nueve grados quince minutos treinta segundos Oeste, con una distancia de dieciséis metros. Del mojón trece al mojón catorce rumbo sur treinta y ocho grados nueve minutos seis segundos Oeste, con una distancia de cinco punto sesenta y tres metros. Del mojón catorce al mojón quince rumbo sur cincuenta y siete grados cuarenta y nueve minutos treinta segundos Oeste, con una distancia de seis punto ocho metros. Del mojón quince al mojón dieciséis rumbo sur sesenta y dos grados quince minutos cero segundos Oeste, con una distancia de seis punto seis metros. Del mojón dieciséis a mojón diecisiete rumbo sesenta y siete grados tres minutos cuarenta y ocho segundos este, con una distancia de cuatro punto ochenta y ocho metros. Del mojón diecisiete a mojón dieciocho rumbo sur setenta grados treinta y seis minutos cincuenta y cuatro segundos Oeste, con una distancia de cinco punto quince metros. Del mojón dieciocho al mojón diecinueve rumbo sur setenta y cinco grados veintiocho minutos seis segundos Oeste, con una distancia e diecinueve punto treinta y tres metros. Del mojón diecinueve al mojón veinte rumbo sur ochenta y tres grados veintiún minutos seis segundos Oeste, con una distancia de treinta y uno punto setenta y ocho metros con el cual se llega al vértice Suroeste del terreno que se describe; y luego continua. LINDERO PONIENTE. A partir del vértice Suroeste, esta formado por línea de dos tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón veinte al mojón veintiuno rumbo norte diez grados dos minutos cero segundos Oeste, con una distancia de

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DE H.

DOS COLONES

DOSCIENTOS VEINTE

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cincuenta y siete punto ochenta y cinco metros. Del mojón veintiuno al mojón uno rumbo norte diez grados cinco minutos cuarenta y cuatro segundos Oeste, con una distancia de veintiocho punto cincuenta y cuatro metros, con la cual se llega al vértice Noroeste antes mencionado que es donde dio inicio la presente descripción.- La Porción antes descrita linda en todo sus rumbos con la Porción Dos - B, propiedad de la CEPA, y -como ya se dijo- tiene una extensión superficial de noventa y seis áreas, veintitrés punto cero ocho centiáreas, equivalentes a una manzana, trés mil setecientos sesenta y ocho punto setenta varas cuadradas."""""""" **II.) REUNION DE INMUEBLES.** Dichos Inmuebles se encuentran unidos entre sí formando un solo cuerpo, en tal sentido, MEDIANTE ÉSTE ACTO EL OTORGANTE PROCEDE A REUNIRLOS, siendo la Descripcion Tecnica del Inmueble ya reunido, la siguiente: """""""" **DESCRIPCION TÉCNICA DE LEVANTAMIENTO TOPOGRÁFICO DE REUNION DE INMUEBLES, PROPIEDAD DE LA COMISION EJECUTIVA PORTUARIA AUTÓNOMA (CEPA), UBICADA EN EL MUNICIPIO DE ACAJUTLA, DEPARTAMENTO DE SONSONATE.** La Reunión de Inmuebles a describir, que en adelante se denominará **"PERIMETRO GENERAL"**, tiene un área general de CIENTO CINCO HECTAREAS VEINTISEIS AREAS SESENTA Y CUATRO PUNTO CERO NUEVE CENTIAREAS, equivalentes a CIENTO CINCUENTA MANZANAS SEIS MIL CIENTO CINCUENTA Y UNO PUNTO SETENTA Y OCHO VARAS CUADRADAS, pero por habérsele desmembrado una porción interna hacia el rumbo sur-oriente de NOVENTA Y SEIS AREAS VEINTITRES PUNTO CERO OCHO CENTIAREAS, equivalentes a UNA MANZANA TRES MIL SETESCIENTOS SESENTA Y OCHO PUNTO SETENTA VARAS CUADRADAS, a favor del Inazucar y actualmente propiedad de Puma, El Salvador, Sociedad Anónima de Capital Variable, **ha quedado reducida a un área superficial de CIENTO CUATRO HECTÁREAS, TREINTA ÁREAS, CUARENTA Y UNO**

PUNTO CERO UNA CENTIÁREAS, equivalentes a CIENTO CUARENTA Y NUEVE MANZANAS, DOS MIL TRESCIENTAS OCHENTA Y TRES PUNTO CERO OCHO VARAS CUADRADAS; la cual se describen de la siguiente manera: **"PERIMETRO GENERAL"**: La presente descripción inicia en el vértice Noroeste, denominado mojón número uno, el cual esta definido por las coordenadas Geodésicas nacionales, proporcionadas por el Instituto Geográfico Nacional (IGN), las cuales son Latitud: doscientos setenta y cuatro mil ciento dieciséis punto cuarenta y cuatro y una Longitud: cuatrocientos nueve mil setecientos setenta y cuatro punto cero tres y sus linderos se describen de la siguiente manera: LINDERO NORTE: A partir del vértice Noroeste, antes mencionado, esta formado por línea de nueve tramos rectos, los cuales tienen los siguientes rumbos y distancias: Del mojón uno al mojón dos rumbo Sur setenta y seis grados veinte minutos cinco segundos Este, con una distancia de doscientos cuarenta punto noventa y seis metros. Del moj dos al mojón tres rumbo Sur setenta y seis grados cero minutos cincuenta y tres segundos Este, con una distancia de doscientos punto sesenta y un metros. Del mojón tres al mojón cuatro rumbo Norte veintidós grados treinta y seis minutos cuarenta y tres segundos Este, con una distancia de doscientos sesenta y cuatro punto treinta y seis metros. Del mojón cuatro al mojón cinco rumbo Sur setenta y cuatro grados catorce minutos veinticuatro segundos Este, con una distancia de noventa punto diez metros. Del mojón cinco al mojón seis rumbo Sur setenta y nueve grados diez veinticuatro segundos Este, con una distancia de ciento once punto treinta y siete metros. Del mojón seis al mojón siete rumbo Sur ochenta y tres grados treinta y seis minutos cincuenta y cuatro segundos Este, con una distancia de ciento cuarenta y nueve punto treinta y siete metros. Del mojón

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siete al mojón ocho rumbo Sur setenta y nueve grados cincuenta y nueve minutos cuarenta y ocho segundos Este, con una distancia de cincuenta y uno punto noventa y ocho metros. Del mojón ocho al mojón nueve rumbo Sur setenta y seis grados diez minutos cuarenta y ocho segundos Este, con una distancia de sesenta y uno punto setenta y cinco metros. Del mojón nueve al mojón diez rumbo Sur setenta y un grados veinte minutos cincuenta y cuatro segundos Este, con una distancia de ciento setenta y dos punto cuarenta y cinco metros, con la cual se llega al vértice Noreste del terreno que se describe; lindando en estos tramos con Colonia Rasa número uno, con lindero sur del terreno donado por el ex Instituto de Vivienda Urbana (IVU) a favor de la CEPA, calle Benigno Cabrera de nueve metros de ancho de por medio; con lindero oriente del terreno donado por el ex Instituto de Vivienda Urbana (IVU) a favor de la CEPA, y con Colonia Obrera, Bulevar Coronel Oscar Osorio de veinte metros de ancho, de por medio; con Colonia Rasa número dos, y con Colonia IVU, Bulevar Veinticinco de Febrero, de por medio; y luego continua. LINDERO ORIENTE: A partir del vértice Noreste, antes mencionado, esta formado por línea recta de dieciséis tramos, los cuales tienen los siguientes rumbos y distancias: Del mojón diez al mojón once rumbo Sur cuarenta y tres grados cero cuatro minutos dieciocho segundos Oeste, con una distancia de ochocientos treinta y cuatro punto diecisiete metros. Del mojón once al mojón doce rumbo Sur treinta y nueve grados quince minutos treinta segundos Este, con una distancia de diecisiete punto treinta y dos metros. Del mojón doce al mojón trece rumbo Sur treinta y cuatro grados treinta y nueve minutos cincuenta y cuatro segundos Oeste, con una distancia de veinte punto sesenta y nueve metros. Del mojón trece al mojón catorce rumbo Sur

veintiocho grados once minutos cuarenta y ocho segundos Oeste, con una distancia de veintiuno punto veintiún metros. Del mojón catorce al mojón quince rumbo Sur veintiún grados cincuenta y siete minutos cero seis segundos Oeste, con una distancia de veintisiete punto sesenta y tres metros. El mojón quince al mojón dieciséis rumbo Sur catorce grados cuarenta y seis minutos doce segundos Oeste, con una distancia de catorce punto cuarenta metros. Del mojón dieciséis al mojón diecisiete rumbo Sur cero ocho grados treinta minutos treinta segundos Este, con una distancia de quince punto cero un metros. Del mojón diecisiete al mojón dieciocho rumbo Sur cero seis grados cero nueve minutos veinticuatro cuatro segundos Oeste, con una distancia de siete punto cincuenta y cinco metros. Del mojón dieciocho al mojón diecinueve rumbo Sur cero ocho grados cuarenta y seis minutos dieciocho segundos Oeste, con una distancia de doce punto veintiséis metros. Del mojón diecinueve al mojón veint rumbo Sur cero tres grados cero minutos cero segundos Este, con una distancia de trece punto setenta y seis metros. Del mojón veinte al mojón veintiuno rumbo Sur cero un grados veinticinco minutos cuarenta y ocho segundos Este, con una distancia de diez punto ochenta y dos metros. Del mojón veintiuno al mojón veintidós rumbo Sur cero cuatro grados cincuenta y tres minutos cero segundos Este, con una distancia de treinta y uno punto sesenta metros. Del mojón veintidós al mojón veintitrés rumbo Sur catorce grados cero un minutos treinta segundos Este, con una distancia de ciento seis punto cero ocho metros. Del mojón veintitrés al mojón veinticuatro rumbo Sur veinticinco grados cincuenta y ocho minutos cero segundos Este, con una distancia de setenta punto treinta metros. Del mojón veinticuatro al mojón veinticinco rumbo Sur veintiún grados

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DE H.

DOS [illegible] VEINTIDOS

No 6820784

DOS COLONES

quince minutos cuarenta y dos segundos Este, con una distancia de ciento sesenta punto treinta y seis metros. Del mojón veinticinco al mojón veintiséis rumbo Sur dieciocho grados dieciocho minutos cero seis segundos Este, con una distancia de setenta y dos punto diecinueve metros, con la cual se llega al vértice Sureste del terreno que se describe; lindando en estos tramos con terreno propiedad de CHEVRON, con terrenos segregados a favor de la Comisión Ejecutiva del Rio Lempa (CEL), hoy propiedad de Duke Energy International El Salvador, Sociedad en Comanditas por Acciones de Capital Variable, con Porción B propiedad de la CEPA que se menciona en esta misma descripción, con terreno segregado a favor de Lubricantes Texaco Sociedad Anónima de Capital Variable, y con terreno segregado a favor de Metales y Estructuras de El Salvador Sociedad Anónima de Capital Variable (METASA), derecho de línea férrea de veintiún metros de ancho, de por medio; y luego continua. LINDERO SUR: A partir del vértice Sureste antes mencionado, esta formado por línea de cincuenta y cinco tramos rectos. Del mojón veintiséis al mojón veintisiete rumbo Sur cincuenta y dos grados cincuenta y seis minutos cuarenta y ocho segundos Oeste, con una distancia de sesenta y nueve punto setenta y siete metros. Del mojón veintisiete al mojón veintiocho rumbo Norte cero cinco grados veintitrés minutos treinta y seis segundos Oeste, con una distancia de ochenta y nueve punto cero cuatro metros. Del mojón veintiocho al mojón veintinueve rumbo Sur setenta y nueve grados treinta minutos cuarenta y dos segundos Oeste, con una distancia de ciento uno punto cero dos metros. Del mojón veintinueve al mojón treinta rumbo Sur veinte grados treinta minutos doce segundos Oeste, con una distancia de ciento ocho punto quince metros. Del mojón treinta al mojón

treinta y uno rumbo Sur catorce grados treinta y ocho minutos veinticuatro segundos Este, con una distancia de doce punto noventa metros. Del mojón treinta y uno al mojón treinta y dos rumbo Sur cincuenta y un grados treinta y ocho minutos veintiocho segundos Oeste, con una distancia de cuarenta y uno punto treinta y un metros. Del mojón treinta y dos al mojón treinta y tres rumbo Sur veinte grados cuarenta y seis minutos cincuenta y nueve segundos Oeste, con una distancia de treinta y cuatro punto cincuenta y cuatro metros. Del mojón treinta y tres al mojón treinta y cuatro rumbo Sur ochenta grados dieciséis minutos cincuenta y seis segundos Oeste, con una distancia de sesenta y nueve punto veinte metros. Del mojón treinta y cuatro al mojón treinta y cinco rumbo Sur ochenta grados cero ocho minutos veintisiete segundos Oeste, con una distancia de noventa punto cuarenta y siete metros. Del mojón treinta y cinco al mojón treinta y seis rumbo Sur ochenta grados cuarenta y cinc minutos quince segundos Oeste, con una distancia de once punto cuarenta y siete metros. Del mojón treinta y seis al mojón treinta y siete rumbo Sur setenta y nueve grados cincuenta y cuatro minutos veintiún segundos Oeste, con una distancia de treinta y tres punto treinta metros. Del mojón treinta y siete al mojón treinta y ocho rumbo Sur treinta y ocho grados quince minutos veintitrés segundos Este, con una distancia de ciento cuarenta y uno punto cuarenta y cuatro metros. Del mojón treinta y ocho al mojón treinta y nueve rumbo Norte cincuenta y cuatro grados veintiún minutos treinta y seis segundos Este, con una distancia de veintiuno punto sesenta metros. Del mojón treinta y nueve al mojón cuarenta rumbo Norte treinta y tres grados veintitrés minutos cuarenta y ocho segundos Este, con una distancia de cinco punto noventa y cuatro metros.

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DE H.

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Del mojón cuarenta al mojón cuarenta y uno rumbo Norte cincuenta y cinco grados cero ocho minutos cero seis segundos Este, con una distancia de ocho punto doce metros. Del mojón cuarenta y uno al mojón cuarenta y dos rumbo Norte cincuenta y tres grados cero cuatro minutos treinta segundos Este, con una distancia de diez punto veintisiete metros. Del mojón cuarenta y dos al mojón cuarenta y tres rumbo Norte treinta y nueve grados cuarenta y cuatro minutos cero seis segundos Este, con una distancia de seis punto veinticuatro metros. Del mojón cuarenta y tres al mojón cuarenta y cuatro rumbo Norte treinta y ocho grados doce minutos doce segundos Este, con una distancia de dieciocho punto cuarenta metros. Del mojón cuarenta y cuatro al mojón cuarenta y cinco rumbo Norte veintiún grados cuarenta y siete minutos treinta segundos Este, con una distancia de veinte punto ochenta metros. Del mojón cuarenta y cinco al mojón cuarenta y seis rumbo Norte cuarenta y un grados veinticuatro minutos cero segundos Este, con una distancia de dieciocho punto treinta y seis metros. Del mojón cuarenta y seis al mojón cuarenta y siete rumbo Norte sesenta y siete grados cuarenta y siete minutos cero seis segundos Este, con una distancia de once punto cincuenta y seis metros. Del mojón cuarenta y siete al mojón cuarenta y ocho rumbo Sur cuarenta y tres grados cero siete minutos cero seis segundos Este, con una distancia de tres punto cero un metros. Del mojón cuarenta y ocho al mojón cuarenta y nueve rumbo Sur diez grados cincuenta y seis minutos cero seis segundos Este, con una distancia de siete punto ochenta metros. Del mojón cuarenta y nueve al mojón cincuenta rumbo Sur once grados veintisiete minutos cero seis segundos Este, con una distancia de catorce punto veinticinco metros. Del mojón cincuenta al mojón cincuenta y uno rumbo Sur

ochenta y cuatro grados treinta y tres minutos doce segundos Oeste, con una distanciad e ocho punto cero metros. Del mojón cincuenta y uno al mojón cincuenta y dos rumbo Sur veintiún grados veintiún minutos veinticuatro segundos Oeste, con una distancia de cuarenta y dos punto doce metros. Del mojón cincuenta y dos al mojón cincuenta y tres rumbo Sur cincuenta y cuatro grados cincuenta minutos cuarenta y dos segundos Oeste, con una distancia de cuarenta y cinco punto doce metros. Del mojón cincuenta y tres al mojón cincuenta y cuatro rumbo Sur cincuenta y dos grados cincuenta y cinco minutos cuarenta y dos segundos Oeste, con una distancia de veinte punto cuarenta y cinco metros. Del mojón cincuenta y cuatro al mojón cincuenta y cinco rumbo Sur cincuenta y cuatro grados treinta y cuatro minutos dieciséis segundos Oeste, con una distancia de doscientos veintisiete punto treinta y cuatro metros. Del mojón cincuenta y cinco al mojón cincuenta y seis rumbo Norte cincuenta y tr grados cuarenta minutos dieciocho segundos Oeste, con una distancia de cinco punto dieciocho metros. Del mojón cincuenta y seis al mojón cincuenta y siete rumbo Norte setenta y dos grados cuarenta y cuatro minutos cero seis segundos Oeste, con una distancia de tres punto diez metros. Del mojón cincuenta y siete al mojón cincuenta y ocho rumbo Sur sesenta y nueve grados cincuenta y sie minutos veinticuatro segundos Oeste, con una distancia de cinco punto setenta y cinco metros. Del mojón cincuenta y ocho al mojón cincuenta y nueve rumbo Norte cincuenta y siete grados treinta y seis minutos cincuenta y cuatro segundos Oeste, con una distancia de diez punto veintitrés metros. Del mojón cincuenta y nueve al mojón sesenta rumbo Norte quince grados cuarenta y siete minutos treinta segundos Oeste, con una distancia de cinco punto catorce metros. Del

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PAPEL PARA PROTOCOLO

DE H.

DOS COLONES

mojón sesenta al mojón sesenta y uno rumbo Norte sesenta y cuatro grados cero dos minutos treinta segundos Oeste, con una distancia de trece punto noventa y cuatro metros. Del mojón sesenta y uno al mojón sesenta y dos rumbo Norte cincuenta y ocho grados treinta y tres minutos cuarenta y ocho segundos Oeste, con una distancia de trece punto sesenta y nueve metros. Del mojón sesenta y dos al mojón sesenta y tres rumbo Sur ochenta y tres grados catorce minutos dieciocho segundos Oeste, con una distancia de treinta y cuatro punto veintitrés metros , Del mojón sesenta y tres al mojón sesenta y cuatro rumbo Norte catorce grados doce minutos cuarenta y dos segundos Este, con una distancia de catorce punto noventa y nueve metros. Del mojón sesenta y cuatro al mojón sesenta y cinco rumbo Norte quince grados cero tres minutos treinta segundos Oeste, con una distancia de cinco punto ochenta y cinco metros. Del mojón sesenta y cinco al mojón sesenta y seis rumbo Norte sesenta y cinco grados cero dos minutos treinta segundos Oeste, con una distancia de ocho punto noventa y tres metros. Del mojón sesenta y seis al mojón sesenta y siete rumbo Norte cero ocho grados cuarenta y siete minutos doce segundos Este, con una distancia de tres punto veintiún metros. Del mojón sesenta y siete al mojón sesenta y ocho rumbo Norte ochenta y nueve grados veintitrés minutos treinta y seis segundos Este, con una distancia de siete punto cincuenta y cinco metros. Del mojón sesenta y ocho al mojón sesenta y nueve rumbo Norte veintidós grados cero cinco minutos veinticuatro segundos Este, con una distancia de cuarenta punto veintinueve metros. Del mojón sesenta y nueve al mojón setenta rumbo Norte diecisiete grados treinta y siete minutos veinticuatro segundos Oeste, con una distancia de trece punto dieciocho metros. Del mojón setenta al mojón

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setenta y uno rumbo Norte sesenta y un grados treinta y siete minutos cincuenta y cuatro segundos Oeste, con una distancia de seis punto veinticinco metros. Del mojón setenta y uno al mojón setenta y dos rumbo Norte diez grados treinta y cinco minutos cincuenta y cuatro segundos Oeste, con una distanciad e once punto veinte metros. Del mojón setenta y dos al mojón setenta y tres rumbo Norte cuarenta y seis grados cuarenta y ocho minutos treinta segundos Oeste, con una distancia de veinte punto ochenta y cinco metros. Del mojón setenta y tres al mojón setenta y cuatro rumbo Norte sesenta y un grados cero dos minutos treinta y seis segundos Oeste, con una distancia de cincuenta y tres punto catorce metros. Del mojón setenta y cuatro al mojón setenta y cinco rumbo Norte ochenta y siete grados veinte minutos cincuenta y cuatro segundos Oeste, con una distanciad e diez punto dieciséis metros. Del mojón setenta y cinco al mojón setenta y seis rumbo Norte veinticinco grados cuarenta y cinco minuto treinta y seis segundos Este, con una distancia de quince punto veintiocho metros. Del mojón setenta y seis al mojón setenta y siete rumbo Norte cero seis grados treinta y dos minutos treinta y seis segundos Oeste, con una distancia de treinta y siete punto sesenta y cinco metros. Del mojón setenta y siete al mojón setenta y ocho rumbo Norte treinta y tres grados diecisiete minutos cero segundos Oeste, con una distancia de catorce punto cero siete metros. Del mojón setenta y ocho al mojón setenta y nueve rumbo Norte sesenta y dos grados treinta y tres minutos cuarenta y ocho segundos Oeste, con una distancia de veintinueve punto trece metros. Del mojón setenta y nueve al mojón ochenta rumbo Norte ochenta y tres grados cuarenta y seis minutos cincuenta y cuatro segundos Oeste, con una distancia de veintiséis punto cincuenta y nueve metros.

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Del mojón ochenta al mojón ochenta y uno rumbo Norte sesenta y nueve grados treinta y tres minutos cincuenta y cuatro segundos Oeste, con una distancia de diez punto cincuenta y un metros, con el cual se llega al vértice Suroeste del terreno que se describe; lindando en estos tramos con terreno propiedad Almacenadora Centroamericana Sociedad Anónima de Capital Variable (ALCASA), con terreno propiedad de HARISA, y con el Océano Pacífico, y luego continua. LINDERO PONIENTE. A partir del vértice Suroeste, esta formado por línea de ciento dieciocho tramos rectos los cuales tiene los siguientes rumbos y distancias: Del mojón ochenta y uno al mojón ochenta y dos rumbo Norte dieciséis grados cero nueve minutos cuarenta y siete segundos Este con una distancia de diecisiete punto treinta y tres metros. Del mojón ochenta y dos al mojón ochenta y tres rumbo Norte cuarenta y nueve grados veinticinco minutos cuarenta y ocho segundos Este, con una distancia de dieciséis punto veintiún metros. Del mojón ochenta y tres al mojón ochenta y cuatro rumbo Norte treinta y nueve grados cuarenta y cuatro minutos cuarenta y dos segundos Oeste, con una distancia de nueve punto sesenta y cinco metros. Del mojón ochenta y cuatro al mojón ochenta y cinco rumbo Norte setenta y siete grados cincuenta y cinco minutos treinta segundos Este, con una distancia de nueve punto ochenta y cinco metros. Del mojón ochenta y cinco al mojón ochenta y seis rumbo Norte sesenta y tres grados dieciocho minutos cincuenta y cuatro segundos Este, con una distancia de veintitrés punto cuarenta y siete metros. Del mojón ochenta y seis al mojón ochenta y siete rumbo Norte veinte grados trece minutos dieciocho segundos Este, con una distancia de ocho punto ochenta y dos metros. Del mojón ochenta y siete al mojón ochenta y ocho rumbo Norte cero siete grados cuarenta

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y seis minutos dieciocho segundos Oeste, con una distancia de cuarenta y seis punto ochenta y ocho metros. Del mojón ochenta y ocho al mojón ochenta y nueve rumbo Norte cincuenta y siete grados cero tres minutos cuarenta y ocho segundos Oeste, con una distancia de ocho punto cero dos metros. Del mojón ochenta y nueve al mojón noventa rumbo Norte doce grados cincuenta y cuatro minutos doce segundos Oeste, con una distancia de diecinueve punto ochenta y ocho metros. Del mojón noventa al mojón noventa y uno rumbo Norte treinta y nueve grados cero siete minutos cero segundos Este, con una distancia de catorce punto veintiocho metros. Del mojón noventa y uno al mojón noventa y dos rumbo Norte setenta y dos grados veintiocho minutos dieciocho segundos Este, con una distancia de doce punto cincuenta y ocho metros. Del mojón noventa y dos al mojón noventa y tres rumbo Norte sesenta y dos grados treinta y siete minutos cero seis segundos Este, con una distancia de diez punto cero cinco metros. Mojón noventa y tres al mojón noventa y cuatro rumbo Norte veintiocho grados cincuenta y un minutos doce segundos Este, con una distancia de veintiséis punto treinta y dos metros. Del mojón noventa y cuatro al mojón noventa y cinco rumbo Norte ochenta y un grados treinta y ocho minutos cero segundos Este, con una distancia de ocho punto cincuenta y nueve metros. Del mojón noventa y cinco al mojón noventa y seis rumbo Norte quince grados cuarenta y seis minutos cero seis segundos Este, con una distanciad de veinte punto noventa y cuatro metros. Del mojón noventa y seis al mojón noventa y siete rumbo Norte veintitrés grados cincuenta y cinco minutos treinta y seis segundos Oeste, con una distancia de doce punto setenta y dos metros. Del mojón noventa y siete al mojón noventa y ocho rumbo Norte diez grados treinta y dos minutos cero seis segundos Este, con

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una distancia de cuarenta y siete punto setenta y cuatro metros. Del mojón noventa y ocho al mojón noventa y nueve rumbo Norte veinte grados treinta y cinco minutos cero seis segundos Oeste, con una distancia de once punto veintinueve metros. Del mojón noventa y nueve al mojón cien rumbo Norte veinticinco grados veintiocho minutos treinta segundos Oeste, con una distancia de cuarenta y ocho punto diecisiete metros. Del mojón cien al mojón ciento uno rumbo Norte sesenta y cuatro grados cuarenta y siete minutos doce segundos Este, con una distancia de treinta punto treinta y tres metros. Del mojón ciento uno al mojón ciento dos rumbo Norte veintitrés grados cuarenta y ocho minutos cero segundos Este, con una distancia de veintinueve punto setenta y seis metros. Del mojón ciento dos al mojón ciento tres rumbo Norte cero grados veintiocho minutos doce segundos Este, con una distancia de veintiuno punto noventa y tres metros. Del mojón ciento tres al mojón ciento cuatro rumbo Norte veintiún grados veinte minutos cincuenta y cuatro segundos Oeste, con una distancia de veintitrés punto setenta y seis metros. Del mojón ciento cuatro al mojón ciento cinco rumbo Norte cero cuatro grados doce minutos treinta y seis segundos Oeste, con una distancia de veinte punto noventa y ocho metros. Del mojón ciento cinco al mojón ciento seis rumbo Norte cuarenta y cuatro grados cuarenta y un minutos dieciocho segundos Oeste, con una distancia de sesenta y tres punto sesenta y nueve metros. Del mojón ciento seis al mojón ciento siete rumbo Norte cero ocho grados cuarenta y siete minutos cero segundos Oeste, con una distancia de veinticuatro punto cincuenta y seis metros. Del mojón ciento siete al mojón ciento ocho rumbo Norte veinte grados treinta y cinco minutos cuarenta y ocho segundos Oeste, con una distancia de

diez punto cero seis metros. Del mojón ciento ocho al mojón ciento nueve rumbo Norte sesenta y nueve grados cincuenta y nueve minutos veinticuatro segundos Este, con una distancia de quince punto noventa y nueve metros Del mojón ciento nueve al mojón ciento diez rumbo Norte veintiún grados cincuenta y cinco minutos cero seis segundos Este, con una distancia de veintitrés punto cincuenta y siete metros. Del mojón ciento diez al mojón ciento once rumbo Sur setenta y cuatro grados quince minutos cero segundos Este, con una distancia de treinta y nueve punto cero un metros. Del mojón ciento once al mojón ciento doce rumbo Norte catorce grados treinta y ocho minutos veinticuatro segundos Oeste, con una distancia de veintisiete punto dieciocho metros. Del mojón ciento doce al mojón ciento trece rumbo Norte cero grados treinta y nueve minutos treinta y seis segundos Oeste, con una distancia de sesenta punto ochenta y dos metros. Del mojón ciento trece al mojón ciento catorce rumbo Norte cuarenta y nueve grados cincuenta y tres minutos cuarenta y dos segundos Oeste, con una distancia de veintiuno punto trece metros. Del mojón ciento catorce al mojón ciento quince rumbo Sur ochenta y tres grados cincuenta y siete minutos cuarenta y ocho segundos Oeste, con una distancia de diecinueve punto noventa y siete metros. Del mojón ciento quince al mojón ciento dieciséis rumbo Norte cuarenta y tres grados treinta y cinco minutos cuarenta y un segundos Oeste, con una distancia de veintisiete punto cuarenta y seis metros. Del mojón ciento dieciséis al mojón ciento diecisiete rumbo Norte veintiún grados treinta y seis minutos treinta y ocho segundos Oeste, con una distancia de dieciocho punto veintinueve metros. Del mojón ciento diecisiete al mojón ciento dieciocho rumbo Norte veintisiete grados cincuenta y nueve minutos

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treinta y seis segundos Oeste, con una distancia de dieciocho punto ochenta y tres metros. Del mojón ciento dieciocho al mojón ciento diecinueve rumbo Norte catorce grados treinta y un minutos cuarenta y seis segundos Este, con una distancia de veintidós punto veintiséis metros. Del mojón ciento diecinueve al mojón ciento veinte rumbo Norte quince grados veinticinco minutos cero segundos Oeste, con una distancia de doce punto doce metros. Del mojón ciento veinte al mojón ciento veintiuno rumbo Norte doce grados treinta y cuatro minutos cero dos segundos este, con una distancia de cinco punto ochenta y cinco metros. Del mojón ciento veintiuno al mojón ciento veintidós rumbo Norte diez grados cuarenta y dos minutos treinta y un segundos Oeste, con una distancia de once punto noventa y siete metros. Del mojón ciento veintidós al mojón ciento veintitrés rumbo Norte sesenta y dos grados cuarenta y cinco minutos diecisiete segundos Oeste, con una distancia de diez punto ochenta y cuatro metros. Del mojón ciento veintitrés al mojón ciento veinticuatro rumbo Norte veintidós grados cincuenta y cinco minutos veintinueve segundos Oeste, con una distancia de nueve punto cero ocho metros. Del mojón ciento veinticuatro al mojón ciento veinticinco rumbo Norte veinticuatro grados treinta y dos minutos cuarenta y dos segundos Oeste, con una distancia de veintiuno punto cincuenta y ocho metros. Del mojón ciento veinticinco al mojón ciento veintiséis rumbo Sur ochenta y un grados cincuenta y un minutos treinta y cuatro segundos Oeste, con una distancia de cinco punto ochenta y cinco metros. Del mojón ciento veintiséis al mojón ciento veintisiete rumbo Norte setenta y nueve grados treinta y dos minutos cero dos segundos Oeste, con una distancia de quince punto cincuenta y seis metros. Del mojón ciento veintisiete al mojón ciento

veintiocho rumbo Norte ochenta y seis grados treinta y cinco minutos cero tres segundos Oeste, con una distancia de treinta y dos punto setenta y cuatro metros. Del mojón ciento veintiocho al mojón ciento veintinueve rumbo Norte dieciséis grados treinta y un minutos veintidós segundos Oeste, con una distancia de diez punto dieciséis metros. Del mojón ciento veintinueve al mojón ciento treinta rumbo Norte veintiocho grados cuarenta minutos cero nueve segundos Este, con una distancia de veintiuno punto treinta y ocho metros. Del mojón ciento treinta al mojón ciento treinta y uno rumbo Norte sesenta y cuatro grados treinta y un minutos veinticuatro segundos Este, con una distancia de siete punto treinta y cinco metros. Del mojón ciento treinta y uno al mojón ciento treinta y dos rumbo Norte setenta y ocho grados veinticinco minutos cincuenta y ocho segundos Este, con una distancia de veintiséis punto sesenta y dos metros. Del mojón ciento treinta y dos al mojón ciento treinta y tres rumbo Norte cincuenta grados veintiocho minutos cincuenta y nueve segundos Este, con una distancia de siete punto cuarenta y tres metros. Del mojón ciento treinta y tres al mojón ciento treinta y cuatro rumbo Norte ochenta y ocho grados cero un minutos veintisiete segundos Este, con una distancia de ocho punto ochenta y ocho metros. Del mojón ciento treinta y cuatro al mojón ciento treinta y cinco rumbo Norte cero cinco grados treinta y tres minutos cero nueve segundos Este, con una distancia de quince punto dieciséis metros. Del mojón ciento treinta y cinco al mojón ciento treinta y seis rumbo Norte cero un grados cuarenta y cuatro minutos veinticuatro segundos Oeste, con una distancia de veinte punto treinta y tres metros. Del mojón ciento treinta y seis al mojón ciento treinta y siete rumbo Norte cuarenta y ocho grados cuarenta y un minutos diecisiete

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segundos Este, con una distancia de nueve punto cincuenta y cinco metros. Del mojón ciento treinta y siete al mojón ciento treinta y ocho rumbo Norte diez grados veintidós minutos cuarenta y siete segundos Este, con una distancia de veinticuatro punto cuarenta y nueve metros. Del mojón ciento treinta y ocho al mojón ciento treinta y nueve rumbo Norte sesenta grados cincuenta y un minutos treinta y seis segundos Oeste, con una distancia de nueve punto sesenta y dos metros. Del mojón ciento treinta y nueve al mojón ciento cuarenta rumbo Norte ochenta y ocho grados cuarenta y ocho minutos cincuenta y siete segundos Oeste, con una distancia de tres punto setenta metros. Del mojón ciento cuarenta al mojón ciento cuarenta y uno rumbo Norte sesenta y ocho grados treinta y un minutos cuarenta y siete segundos Oeste, con una distancia de nueve metros. Del mojón ciento cuarenta y uno al mojón ciento cuarenta y dos rumbo Norte cincuenta y dos grados dieciséis minutos veintiséis segundos Oeste, con una distancia de dos punto noventa y ocho metros. Del mojón ciento cuarenta y dos al mojón ciento cuarenta y tres rumbo Norte treinta y seis grados dieciocho minutos cincuenta y siete segundos Oeste, con una distancia de veintitrés punto noventa y dos metros. Del mojón ciento cuarenta y tres al mojón ciento cuarenta y cuatro rumbo Norte cuarenta y seis grados diez minutos diecisiete segundos Oeste, con una distancia de veinticinco punto setenta y cinco metros. Del mojón ciento cuarenta y cuatro al mojón ciento cuarenta y cinco rumbo Norte treinta grados cero tres minutos cero dos segundos Oeste, con una distancia de veinte punto cero tres metros. Del mojón ciento cuarenta y cinco al mojón ciento cuarenta y seis rumbo Norte cincuenta y seis grados cero nueve minutos veintinueve segundos Este, con una distancia de once punto catorce metros. Del

mojón ciento cuarenta y seis al mojón ciento cuarenta y siete rumbo Norte treinta y dos grados once minutos cero ocho segundos Este, con una distancia de nueve punto cincuenta y tres metros. Del mojón ciento cuarenta y siete al mojón ciento cuarenta y ocho rumbo Norte cero tres grados cuarenta y seis minutos dieciocho segundos Oeste, con una distancia de tres punto ochenta y cinco metros. Del mojón ciento cuarenta y ocho al mojón ciento cuarenta y nueve rumbo Norte cuarenta y dos grados cuarenta y ocho minutos cuarenta y cuatro segundos Este, con una distancia de cero punto noventa y dos metros. Del mojón ciento cuarenta y nueve al mojón ciento cincuenta rumbo Norte cero seis grados treinta y siete minutos cero ocho segundos Oeste, con una distancia de siete punto treinta y dos metros. Del mojón ciento cincuenta al mojón ciento cincuenta y uno rumbo Norte diecisiete grados veintiún minutos trece segundos Oeste, con una distancia de tres punto quince metros. Del mojón ciento cincuenta y uno al mojón ciento cincuenta y dos rumbo Norte treinta y tres grados cero siete minutos cuarenta y ocho segundos Oeste, con una distancia de cuatro punto noventa y tres metros. Del mojón ciento cincuenta y dos al mojón ciento cincuenta y tres rumbo Norte veintidós grados treinta minutos treinta segundos Oeste, con una distancia de cuatro punto noventa y dos metros. Del mojón ciento cincuenta y tres al mojón ciento cincuenta y cuatro rumbo Norte dieciséis grados cuarenta y cinco minutos cincuenta y tres segundos Este, con una distancia de nueve punto treinta y cinco metros. Del mojón ciento cincuenta y cuatro al mojón ciento cincuenta y cinco rumbo Norte sesenta grados cincuenta y ocho minutos veintitrés segundos Este, con una distancia de nueve punto cincuenta y ocho metros. Del mojón ciento cincuenta y cinco al mojón ciento

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cincuenta y seis rumbo Norte treinta y ocho grados dieciséis minutos once segundos Este, con una distancia de doce punto cero cuatro metros. Del mojón Ciento cincuenta y seis al mojón ciento cincuenta y siete rumbo Norte cero cinco grados veintiocho minutos cincuenta y un segundos Oeste, con una distancia de catorce punto noventa y dos metros. Del mojón ciento cincuenta y siete al mojón ciento cincuenta y ocho rumbo Norte once grados cincuenta y un minutos veintiocho segundos Oeste, con una distancia de seis punto cero seis metros. Del mojón ciento cincuenta y ocho al mojón ciento cincuenta y nueve rumbo Norte once grados cincuenta y cuatro minutos cero segundos Este, con una distancia de veintidós punto ochenta y seis metros. Del mojón ciento cincuenta y nueve al mojón ciento sesenta rumbo Norte veinticuatro grados veinticinco minutos once segundos Oeste, con una distancia de dos punto sesenta y seis metros. Del mojón ciento sesenta al mojón ciento sesenta y uno rumbo Norte doce grados cero minutos cero cuatro segundos Oeste, con una distancia de veinte punto cero nueve metros. Del mojón ciento sesenta y uno al mojón ciento sesenta y dos rumbo Norte cincuenta y seis grados cero dos minutos treinta y un segundos Oeste, con una distancia de veintinueve punto ochenta y cuatro metros. Del mojón ciento sesenta y dos al mojón ciento sesenta y tres rumbo Norte veintidós grados cincuenta y ocho minutos cero siete segundos Este, con una distancia de veinte punto cero un metros. Del mojón ciento sesenta y tres al mojón ciento sesenta y cuatro rumbo Norte sesenta y seis grados cincuenta y un minutos cincuenta y seis segundos Este, con una distancia de veinticinco punto diecinueve metros. Del mojón ciento sesenta y cuatro al mojón ciento sesenta y cinco rumbo Norte cero siete grados cincuenta y siete minutos cincuenta y cinco

segundos Oeste, con una distancia de veintisiete punto noventa y cuatro metros. Del mojón ciento sesenta y cinco al mojón ciento sesenta y seis rumbo Norte setenta y cinco grados veinte minutos treinta segundos Este, con una distancia de quince punto catorce metros. Del mojón ciento sesenta y seis al mojón ciento sesenta y siete rumbo Norte sesenta y seis grados treinta y siete minutos treinta y tres segundos Este, con una distancia de nueve punto cero tres metros. Del mojón ciento sesenta y siete al mojón ciento sesenta y ocho rumbo Norte sesenta y cinco grados treinta minutos treinta y cuatro segundos Este, con una distancia de dos punto noventa y tres metros. Del mojón ciento sesenta y ocho al mojón ciento sesenta y nueve rumbo Norte sesenta y dos grados veintiún minutos veinticinco segundos Este, con una distancia de catorce punto noventa y seis metros. Del mojón ciento sesenta y nueve al mojón ciento setenta rumbo Norte cincuenta y ocho grados diecisiete minutos veintinueve segundos Este, con una distancia de once punto dieciséis metros. Del mojón ciento setenta al mojón ciento setenta y uno rumbo Norte quince grados cero seis minutos once segundos Oeste, con una distancia de dos punto cero nueve metros. Del mojón ciento setenta y uno al mojón ciento setenta y dos rumbo Norte veintisiete grados cincuenta minutos veintisiete segundos Oeste, con una distancia de dos punto veinticuatro metros. Del mojón ciento setenta y dos al mojón ciento setenta y tres rumbo Norte veintiséis grados treinta y un minutos treinta y tres segundos Oeste, con una distancia de seis punto cero ocho metros. Del mojón ciento setenta y tres al mojón ciento setenta y cuatro rumbo Norte sesenta y un grados veintiocho minutos veintinueve segundos Este, con una distancia de seis punto noventa y un metros. Del mojón ciento setenta y cuatro

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al mojón ciento setenta y cinco rumbo Norte cero un grados cero minutos once segundos Oeste, con una distancia de veintitrés punto treinta y dos metros. Del mojón ciento setenta y cinco al mojón ciento setenta y seis rumbo Sur sesenta y siete grados veintiséis minutos cero tres segundos Este, con una distancia de ocho punto ochenta y tres metros. Del mojón ciento setenta y seis al mojón ciento setenta y siete rumbo Sur setenta y un grados cincuenta y ocho minutos cincuenta y nueve segundos Este, con una distancia de nueve punto quince metros. Del mojón ciento setenta y siete al mojón ciento setenta y ocho rumbo Norte cero ocho grados cincuenta minutos cincuenta y siete segundos Este, con una distancia de cuarenta y cinco punto diecisiete metros. Del mojón ciento setenta y ocho al mojón ciento setenta y nueve rumbo Sur ochenta y cuatro grados cincuenta y nueve minutos cincuenta y un segundos Este, con un distancia de veintitrés punto noventa y cinco metros. Del mojón ciento setenta y nueve al mojón ciento ochenta rumbo Sur treinta grados cincuenta y siete minutos veintisiete segundos Oeste, con una distancia de siete punto treinta y cinco metros. Del mojón ciento ochenta al mojón ciento ochenta y uno rumbo Sur cuarenta y ocho grados veintitrés minutos cuarenta segundos Este, con una distancia de dieciséis punto ochenta y nueve metros. Del mojón ciento ochenta y uno al mojón ciento ochenta y dos rumbo Sur sesenta y nueve grados veintiún minutos cero un segundos Este, con una distancia de veinte punto veintisiete metros. Del mojón ciento ochenta y dos al mojón ciento ochenta y tres rumbo Norte setenta y ocho grados cero nueve minutos cincuenta segundos Este, con una distancia de dieciséis punto ochenta y dos metros. Del mojón ciento ochenta y tres al mojón ciento ochenta y cuatro rumbo Norte cuarenta y dos grados

cincuenta y tres minutos cuarenta y un segundos Este, con una distancia de veintisiete punto diecisietes metros. Del mojón ciento ochenta y cuatro al mojón ciento ochenta y cinco rumbo Norte sesenta y siete grados treinta y un minutos cero dos segundos Este, con una distancia de veinticinco punto noventa y siete metros. Del mojón ciento ochenta y cinco al mojón ciento ochenta y seis rumbo Norte ochenta y siete grados treinta y un minutos treinta y seis segundos Este, con una distancia de veintitrés punto cero dos metros. Del mojón ciento ochenta y seis al mojón ciento ochenta y siete rumbo Norte cuarenta grados treinta y dos minutos cuarenta y cuatro segundos Este, con una distancia de cuarenta y cuatro punto veinte metros. Del mojón ciento ochenta y siete al mojón ciento ochenta y ocho rumbo Norte cuarenta y tres grados cero siete minutos cuarenta y cinco segundos Este, con una distancia de veinticinco punto setenta y cinco metros. Del mojón ciento ochenta y ocho al mojón ciento ochenta y nueve rumbo Norte cero tres grados diecisiete minutos cincuenta y seis segundos Este, con una distancia de dieciocho punto diecinueve metros. Del mojón ciento ochenta y nueve al mojón ciento noventa rumbo Norte doce grados trece minutos cero cinco segundos Este, con una distancia de cinco punto sesenta y ocho metros. Del mojón ciento noventa al mojón ciento noventa y uno rumbo Norte cero un grados cuarenta y seis minutos treinta y un segundos Este, con una distancia de siete punto cuarenta y cuatro metros. Del mojón ciento noventa y uno al mojón ciento noventa y dos rumbo Norte setenta y siete grados cero minutos treinta y siete segundos Oeste, con una distancia de cincuenta y uno punto cuarenta y seis metros. Del mojón ciento noventa y dos al mojón ciento noventa y tres rumbo Norte setenta y un grados cuarenta y siete minutos

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treinta y un segundos Oeste, con una distancia de veinticinco punto veinticuatro metros. Del mojón ciento noventa y tres al mojón ciento noventa y cuatro rumbo Norte ochenta grados cincuenta y ocho minutos catorce segundos Oeste, con una distancia de cuarenta y siete punto sesenta y siete metros. Del mojón ciento noventa y cuatro al mojón ciento noventa y cinco rumbo Norte cero tres grados veintiún minutos cero cuatro segundos Oeste, con una distancia de catorce punto treinta y tres metros. Del mojón ciento noventa y cinco al mojón ciento noventa y seis rumbo Norte setenta y nueve grados cero siete minutos cincuenta y cuatro segundos Oeste, con una distancia de quince punto cero seis metros. Del mojón ciento noventa y seis al mojón ciento noventa y siete rumbo Sur treinta grados doce minutos cincuenta y ocho segundos Oeste, con una distancia de diez punto cero seis metros. Del mojón ciento noventa y siete al mojón ciento noventa y ocho rumbo Sur setenta y cuatro grados treinta y un minutos cuarenta y un segundos Oeste, con una distancia de veintisiete punto cincuenta y dos metros. Del mojón ciento noventa y ocho al mojón ciento noventa y nueve rumbo Norte setenta y seis grados cero siete minutos veintiocho segundos Oeste, con una distancia de dos punto setenta y dos metros. Del mojón ciento noventa y nueve al mojón uno rumbo Norte dieciséis grados veintinueve minutos cuarenta y seis segundos Este, con una distancia de cuarenta y nueve punto ochenta y tres metros, con la cual se llega al vértice Noroeste antes mencionado que es donde dio inicio la presente descripción; lindando en estos tramos con el Océano Pacífico y el Cementerio General de la ciudad de Acajutla.- La extensión superficial general de este inmueble es de ciento cinco hectáreas veintiséis áreas sesenta y cuatro punto cero nueve centiáreas,

equivalentes a ciento cincuenta manzanas seis mil ciento cincuenta y uno punto setenta y ocho varas cuadradas; pero por desmembración de una porción interna hacia el rumbo sur -oriente de noventa y seis áreas, veintitrés punto cero ocho centiáreas, equivalentes a una manzana tres mil setecientos sesenta y ocho punto setenta varas cuadradas, vendida en el año de mil novecientos noventa y siete al Instituto Nacional del Azúcar (INAZUCAR), hoy propiedad de Puma, El Salvador, Sociedad Anónima de Capital Variable, su superficie ha quedado reducida a un área de CIENTO CUATRO HECTÁREAS, TREINTA ÁREAS, CUARENTA Y UNO PUNTO CERO UNA CENTIÁREAS, equivalentes a CIENTO CUARENTA Y NUEVE MANZANAS, DOS MIL TRESCIENTAS OCHENTA Y TRES PUNTO CERO OCHO VARAS CUADRADAS. Dicha porción interna desmembrada se describe de la siguiente manera: inicia en el vértice Noroeste, denominado mojón número uno, el cual esta definido por las coordenadas Geodésicas proporcionadas por el Instituto Geográfico Nacional (IGN), las cuales son Latitud: doscientos setenta y tres mil ciento sesenta y siete punto setenta y tres y una longitud: cuatrocientos diez mil ciento noventa y cuatro punto setenta y nueve, y sus linderos se describen de la siguiente manera: LINDERO NORTE: A partir del vértice Noroeste, antes mencionado, esta formado por línea de nueve tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón uno al mojón dos rumbo Norte ochenta grados siete minutos cincuenta y cuatro segundos Este, con una distancia de diecisiete punto sesenta y dos metros. Del mojón dos al mojón tres rumbo Norte nueve grados dieciséis minutos cuarenta y dos segundos Oeste, con una distancia de siete punto sesenta y nueve metros. Del mojón tres al mojón cuatro rumbo Norte setenta y nueve grados cuarenta y tres minutos cuarenta y

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ocho segundos Este, con una distancia de veintiuno punto noventa y tres metros. Del mojón cuatro al mojón cinco rumbo Norte diez grados dos minutos treinta segundos Oeste, con una distancia de veintiséis punto cincuenta metros. Del mojón cinco al mojón seis rumbo Norte setenta y nueve grados dieciocho minutos treinta segundos Este, con una distancia de ocho punto ochenta y nueve metros. Del mojón seis al mojón siete rumbo Norte setenta y nueve grados cincuenta y ocho minutos cincuenta y cuatro segundos Este, con una distancia de diez punto dieciocho metros. Del mojón siete al mojón ocho rumbo Norte ochenta grados catorce minutos cincuenta y cuatro segundos Este, con una distancia de trece punto setenta metros. Del mojón ocho al mojón nueve rumbo Norte ochenta grados quince minutos veinticuatro segundos Este, con una distancia de diecisiete punto setenta y nueve metros. Del mojón nueve al mojón diez rumbo Norte ochenta grados veintiún minutos cincuenta y cuatro segundos Este, con una distancia de uno punto setenta y ocho metros, con la cual se llega al vértice Noreste del terreno que se describe; y luego continua. LINDERO ORIENTE: A partir del vértice Noreste, antes mencionado, esta formado por línea de dos tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón diez al mojón once rumbo Sur nueve grados treinta y cinco minutos cincuenta segundos Este, con una distancia de ciento dos punto diecinueve metros. Del mojón once al mojón doce rumbo Sur cuarenta y dos grados cincuenta y ocho minuto veinticuatro segundos Oeste, con una distancia de uno punto veinticuatro metros, con la cual se llega al vértice Sureste del terreno que se describe; y luego continua. LINDERO SUR: A partir del vértice Sureste, antes mencionado, esta formado por línea de ocho tramos rectos, los cuales tienen los siguientes rumbos y

distancias: Del mojón doce al mojón trece rumbo Sur cuarenta y nueve grados quince minutos treinta segundos Oeste, con una distancia de dieciséis metros. Del mojón trece al mojón catorce rumbo Sur treinta y ocho grados nueve minutos seis segundos Oeste, con una distancia de cinco punto sesenta y tres metros. Del mojón catorce al mojón quince rumbo Sur cincuenta y siete grados cuarenta y nueve minutos treinta segundos Oeste, con una distancia de seis punto ocho metros. Del mojón quince al mojón dieciséis rumbo Sur sesenta y dos grados quince minutos cero segundos Oeste, con una distancia de seis punto seis metros. Del mojón dieciséis a mojón diecisiete rumbo Sur sesenta y siete grados tres minutos cuarenta y ocho segundos Este, con una distancia de cuatro punto ochenta y ocho metros. Del mojón diecisiete al mojón dieciocho rumbo Sur setenta grados treinta y seis minutos cincuenta y cuatro segundos Oeste, con una distancia de cinco punto quince metros. Del mojón dieciocho al mojón diecinueve rumbo Sur setenta y cinco grados veintiocho minutos seis segundos Oeste, con una distancia e diecinueve punto treinta y tres metros. Del mojón diecinueve al mojón veinte rumbo Sur ochenta y tres grados veintiún minutos seis segundos Oeste, con una distancia de treinta y uno punto setenta y ocho metros con el cual se llega al vértice Suroeste del terreno que se describe; y luego continua. LINDERO PONIENTE. A partir del vértice Suroeste, esta formado por línea de dos tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón veinte al mojón veintiuno rumbo Norte diez grados dos minutos cero segundos Oeste, con una distancia de cincuenta y siete punto ochenta y cinco metros. Del mojón veintiuno al mojón uno rumbo Norte diez grados cinco minutos cuarenta y cuatro segundos Oeste, con una distancia de

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veintiocho punto cincuenta y cuatro metros, con la cual se llega al vértice Noroeste antes mencionado que es donde dio inicio la presente descripción.- La Porción antes descrita linda en todo sus rumbos con la Porción A, propiedad de la CEPA, y como ya se dijo tiene una extensión superficial de noventa y seis áreas, veintitrés punto cero ocho centiáreas, equivalentes a una manzana, tres mil setecientos sesenta y ocho punto setenta varas cuadradas.- **III.) PUERTO DE ACAJUTLA.** Por otra parte, el Señor Presidente de la CEPA, Licenciado **JUAN JOSE LLORT CHOUSSY** me manifiesta que entre los mojones ochenta y uno y ochenta y dos de la Descripcion Tecnica del "PERIMETRO GENERAL" de la presente Reunion de Inmuebles, hacia el rumbo Sur Poniente con dirección al Oceano Pacifico se encuentra el **"PUERTO DE ACAJUTLA"**, el cual esta compuesto por tres Muelles, denominados Muelle A, Muelle B, y Muelle C, cuya Descripcion Tecnica, para efectos propios de la Comision, no del Registro de la Propiedad, es la siguiente: """""**DESCRIPCION TÉCNICA DE AREA DE MUELLES, PROPIEDAD DE LA COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA), UBICADA EN EL MUNICIPIO DE ACAJUTLA, DEPARTAMENTO DE SONSONATE.** La presente descripción, inicia en el vértice Noroeste, denominado mojón número uno, el cual esta definido por las coordenadas Geodésicas proporcionadas por el Instituto Geográfico Nacional (IGN), las cuales son Latitud: doscientos setenta y tres mil ciento nueve punto cero nueve y una longitud: cuatrocientos ocho mil ochocientos cincuenta y cuatro punto cincuenta y nueve, y sus linderos se describen de la siguiente manera: LINDERO NORTE: A partir del vértice Noroeste, antes mencionado, esta formado por línea de treinta y dos tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón uno al mojón dos rumbo Sur setenta y

siete grados cuarenta y un minutos treinta segundos Este, con una distancia de punto cuarenta y ocho metros. Del mojón dos al mojón tres rumbo Sur cuarenta y cinco grados cincuenta y tres minutos dos segundos Este, con una distancia de dos punto setenta y siete metros. Del mojón tres al mojón cuatro rumbo Sur veinticuatro grados cincuenta y un minutos treinta y dos segundos Este, con una distancia de doscientos sesenta y uno punto cinco metros. Del mojón cuatro al mojón cinco rumbo Sur veintiún grados cuarenta y cinco minutos cuarenta y tres segundos Oeste, con una distancia e punto cuarenta y tres metros. Del mojón cinco al mojón seis rumbo Sur veintisiete grados veinte minutos once segundos Este, con una distancia de punto ochenta y un metros. Del mojón seis al mojón siete rumbo Norte setenta y dos grados treinta minutos cuarenta y cuatro segundos Este, con una distancia de punto carenta y nueve grados. Del mojón siete al mojón ocho rumbo Sur cincuenta y tres grados cuarenta y seis minutos veinte segundos Este, con una distancia de treinta y uno punto setenta y ocho metros. Del mojón ocho al mojón nueve rumbo Norte treinta y siete grados cincuenta y ocho minutos treinta y cuatro segundos Este, con una distancia de uno punto noventa y un metros. Del mojón nueve al mojón diez rumbo Norte cincuenta y tres grados cincuenta y seis minutos quince segundos Este, con una distancia de cuatro punto cero un metros. Del mojón diez al mojón once rumbo Norte seis grados diecisiete minutos diez segundos Oeste, con una distancia de punto cuarenta metros. Del mojón once al mojón doce rumbo Norte setenta y siete grados treinta y seis minutos treinta y tres segundos Este, con una distancia de nueve punto setenta y cinco metros. Del mojón doce al mojón trece rumbo Sur cero ocho grados veintiséis minutos dieciséis segundos Este, con una distancia

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de punto cuarenta y siete metros. Del mojón trece al mojón catorce rumbo Sur setenta y nueve grados treinta y nueve minutos veintidós segundos Este, con una distancia de tres punto treinta y un metros. Del mojón catorce al mojón quince rumbo Sur sesenta y un grados treinta y un minutos cincuenta y cuatro segundos Este, con una distancia de cinco punto setenta y un metros. Del mojón quince al mojón dieciséis rumbo sur cincenta y ocho grados cincuenta y un minutos cuarenta y tres segundos Este, con una distancia de cinco punto cincuenta y cinco metros. Del mojón dieciséis al mojón diecisiete rumbo Sur cincuenta y cinco grado doce minutos ocho segundos Este, con una distancia de cinco punto treinta y dos metros. Del mojón diecisiete al mojón dieciocho rumbo Sur cincuenta y cuatro grados cincuenta y dos minutos cincuenta y dos segundos Este, con una distancia de doscientos ochenta y siete punto seis metros. Del mojón dieciocho al mojón diecinueve rumbo Sur setenta y seis grados diez minutos cuarenta y cuatro segundos Este, con una distancia de dieciséis punto treinta metros. Del mojón diecinueve al mojón veinte rumbo Norte ochenta y seis grados veinticuatro minutos cuarenta y cinco segundos Este, con una distancia de doce punto veintisiete metros. Del mojón veinte al mojón veintiuno rumbo Norte setenta y nueve grados cuarenta y ocho minutos veinticinco segundos Este, con una distancia de ciento veinte metros. Del mojón veintiuno al mojón veintidós rumbo Norte diez grados treinta y un minutos treinta y ocho segundos Oeste, con una distancia de tres punto cincuenta y nueve metros. Del mojón veintidós al mojón veintitrés rumbo Norte setenta y dos grados veintiocho minutos cuarenta y cuatro segundos Este, con una distancia de punto sesenta y un metros. Del mojón veintitrés al mojón veinticuatro rumbo Norte treinta y

cinco grados doce minutos veintinueve segundos Este, con una distancia de diecinueve punto cero tres metros. Del mojón veinticuatro al mojón veinticinco rumbo Norte cero nueve grados catorce minutos treinta segundos Oeste, con una distancia de tres punto cero dos metros. Del mojón veinticinco al mojón veintiséis rumbo Norte cincuenta y cuatro grados cuarenta y ocho minutos cuarenta y tres segundos Oeste, con una distancia de trescientos veintisiete punto noventa y un metros. Del mojón veintiséis al mojón veintisiete rumbo Norte cero nueve grados cuarenta y un minutos cuarenta y cuatro segundos Oeste, con una distancia de cinco punto sesenta y seis metros. Del mojón veintisiete al mojón veintiocho rumbo Norte treinta y cinco grados diez minutos cero segundos Este, con una distancia de diecinueve punto noventa y ocho metros. Del mojón veintiocho al mojón veintinueve rumbo Norte ochenta grados catorce minutos cincuenta y nueve segundos Este, con una distancia de cinco punto sesenta y ocho metros. Del mojón veintinueve al mojón treinta rumbo Sur cincuenta y cuatro grados cuarenta y ocho minutos veintiún segundos Este, con una distancia de trescientos cincuenta y siete punto ochenta y ocho metros. Del mojón treinta al mojón treinta y uno rumbo Sur sesenta y seis grados quince minutos dos segundos Este, con una distancia de dieciséis punto treinta y siete metros. Del mojón treinta y uno al mojón treinta y dos rumbo Sur setenta y ocho grados diecisiete minutos treinta y cuatro segundos Este, con una distancia de catorce punto ochenta y seis metros. Del mojón treinta y dos al mojón treinta y tres rumbo Norte ochenta grados nueve minutos treinta y nueve segundos Este, con una distancia de doscientos veinte punto sesenta metros, con la cual se llega al vértice Noreste del terreno que se describe, lindando en estos tramos

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con el Océano Pacífico; y luego continua. LINDERO ORIENTE: A partir del vértice Noreste, antes mencionado, esta formado por línea de un tramo recto el cual tiene los siguientes rumbos y distancias: Del mojón treinta y tres al mojón treinta y cuatro rumbo Sur dieciséis grados diez minutos dos segundos Oeste, con una distancia de quince punto dieciséis metros, con la cual se llega al vértice Sureste del terreno que se describe, lindando en este último tramo con instalaciones de la comisión Ejecutiva Portuaria Autónoma (CEPA); y luego continua. LINDERO SUR: A partir del vértice Sureste, antes mencionado, esta formado por línea de veintiocho tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón treinta y cuatro al mojón treinta y cinco rumbo Sur ochenta grados un minuto cuarenta y un segundos Oeste, con una distancia de doscientos catorce punto cuarenta metros. Del mojón treinta y cinco al mojón treinta y seis rumbo sur diez grados once minutos cuarenta y tres segundos Este, con una distancia de dieciséis punto noventa y seis metros. Del mojón treinta y seis al mojón treinta y siete rumbo Sur setenta y nueve grados cincuenta y dos minutos quince segundos Oeste, con una distancia de veintidós punto noventa y siete metros. Del mojón treinta y siete al mojón treinta y ocho rumbo Sur sesenta y siete grados cuarenta y tres minutos treinta segundos Oeste, con una distancia de tres punto seis metros. Del mojón treinta y ocho al mojón treinta y nueve rumbo sur setenta y cinco grados veintidós minutos veintiséis segundo Oeste, con una distancia de veinticinco punto veinte metros. Del mojón treinta y nueve al mojón cuarenta rumbo Sur ochenta y cinco grados treinta y dos minutos treinta y seis segundos Oeste, con una distancia de veintitrés punto sesenta y dos metros. Del mojón cuarenta al mojón cuarenta y

uno rumbo Norte cuarenta y ocho grados cincuenta y seis minutos doce segundos Oeste, con una distancia de siete punto setenta y un metros. Del mojón cuarenta y uno a mojón cuarenta y dos rumbo Norte cuarenta y nueve grados cuarenta y dos minutos trece segundos Oeste, con una distancia de dieciséis punto veinticuatro metros. Del mojón cuarenta y dos al mojón cuarenta y tres rumbo Sur setenta y nueve grados cincuenta minutos dieciocho segundos Oeste, con una distancia de dieciocho punto ochenta y dos metros. Del mojón cuarenta y tres al mojón cuarenta y cuatro rumbo Sur trece grados siete minutos treinta y seis segundos Este, con una distancia de dos punto veintisiete metros. Del mojón cuarenta y cuatro al mojón cuarenta y cinco rumbo Sur setenta y nueve grados cuarenta y siete minutos cuarenta y cinco segundos Oeste, con una distancia e cincuenta y cuatro punto setenta y cuatro metros. Del mojón cuarenta y cinco al mojón cuarenta y seis rumbo Norte trece grados once minutos cuarenta y dos segundos Oeste, con una distancia de dos punto cuarenta y seis metros. Del mojón cuarenta y seis al mojón cuarenta y siete rumbo Sur ochenta y un grados treinta y siete minutos ocho segundos Oeste, con una distancia de treinta y nueve punto sesenta y seis metros. Del mojón cuarenta y siete al mojón cuarenta y ocho rumbo Sur sesenta y siete grados nueve minutos cuarenta y siete segundos Oeste, con una distancia de once punto sesenta y ocho metros. Del mojón cuarenta y ocho al mojón cuarenta y nueve rumbo Sur ochenta grados once minutos diecisiete segundo Oeste, con una distancia de cuarenta metros. Del mojón cuarenta y nueve al mojón cincuenta rumbo Sur ochenta y seis grados dieciocho minutos quince segundos Oeste, con una distancia de nueve punto diecinueve metros. Del mojón cincuenta al mojón cincuenta y uno rumbo Norte sesenta grados cincuenta y cinco

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minutos cuarenta y cinco segundos Oeste, con una distancia de cuatro punto ochenta y siete metros. Del mojón cincuenta y uno al mojón cincuenta y dos rumbo Norte cincuenta y seis grados cuarenta y cinco minutos doce segundos Oeste, con una distancia de diez punto cero cuatro metros. Del mojón cincuenta y dos al mojón cincuenta y tres rumbo Norte cincuenta y cuatro grados cincuenta y dos minutos veintiséis segundos Oeste, con una distancia de doscientos cincuenta y nueve punto noventa y dos metros. Del mojón cincuenta y tres al mojón cincuenta y cuatro rumbo Norte cincuenta y cinco grados veinticinco minutos un segundo Oeste, con una distancia e cinco punto cincuenta y tres metros. Del mojón cincuenta y cuatro al mojón cincuenta y cinco rumbo Norte cuarenta y ocho grados cuarenta y dos minutos cincuenta y nueve segundos Oeste, con una distancia de diez punto dieciocho metros. Del mojón cincuenta y cinco al mojón cincuenta y seis rumbo Norte treinta grados treinta y cinco minutos cuarenta y nueve segundos Oeste, con una distancia de tres punto sesenta y cuatro metros. Del mojón cincuenta y seis al mojón cincuenta y siete rumbo Norte cincuenta y tres grados cuarenta y un minutos cincuenta y un segundos Oeste, con una distancia de once punto treinta metros. Del mojón cincuenta y siete al mojón cincuenta y ocho rumbo Norte cincuenta y tres grados treinta y ocho minutos veintisiete segundos Oeste, con una distancia de treinta y cuatro punto cincuenta y cuatro metros. Del mojón cincuenta y ocho al mojón cincuenta y nueve rumbo Norte veinticuatro grados cincuenta y cinco minuto cuarenta segundos Oeste, con una distancia de doscientos treinta y seis punto cincuenta y cinco metros. Del mojón cincuenta y nueve al mojón sesenta rumbo Norte sesenta y ocho grados cincuenta y tres minutos cuarenta y seis segundos Oeste,

con una distancia de uno punto sesenta y siete metros. Del mojón sesenta al mojón sesenta y uno rumbo Norte veinticinco grados cincuenta y siete minutos cincuenta y dos segundos. Oeste, con una distancia de treinta y uno punto cuarenta y nueve metros. Del mojón sesenta y uno al mojón sesenta y dos rumbo Norte treinta y un grados veintiocho minutos treinta y cinco segundos Oeste, con una distancia de punto ochenta y un metros, con el cual se llega al vértice Suroeste del terreno que se describe, lindando en estos tramos con el Océano Pacífico; y luego continua. LINDERO PONIENTE. A partir del vértice Suroeste, esta formado por línea de cuatro tramos rectos los cuales tienen los siguientes rumbos y distancias: Del mojón sesenta y dos al mojón sesenta y tres rumbo Norte cincuenta y nueve grados cincuenta y tres minutos cincuenta y ocho segundos Este, con una distancia de punto noventa y cuatro metros. Del mojón sesenta y tres al mojón sesenta y cuatro rumbo Norte sesenta y cinco grados cuarenta y ocho minutos veinte segundos Este, con una distancia de siete punto veintiocho metros. Del mojón sesenta y cuatro al mojón sesenta y cinco rumbo Norte sesenta y cuatro grados cincuenta y cinco minutos cuarenta y nueve segundos Este, con una distancia de ocho punto treinta metros. Del mojón sesenta y cinco al mojón uno rumbo Norte setenta y tres grados treinta y tres minutos cincuenta segundos Este, con una distancia de tres punto diez metros, con la cual se llega al vértice Noroeste antes mencionado que es donde dio inicio la presente descripción, lindando en estos tramos con el Océano Pacífico. **La extensión superficial del Puerto antes descrito es de TRES HECTÁREAS, CINCUENTA Y UN ÁREAS, CERO NUEVE PUNTO CERO TRES CENTIÁREAS, equivalentes a CINCO MANZANAS, DOSCIENTOS TREINTA Y CUATRO VARAS**

Asociación Cooperativa de Servicios Gráficos
ACOASERGRAC DE R.L.

PAPEL PARA PROTOCOLO

DE H.

DOSCIENTOS TREINTA Y SIETE

6820799

DOS COLONES

CUADRADAS"""""".- Siendo en dicha area en la que se ejecutan las principales funciones de la Comision en el Puerto de Acajutla.- Asimismo, el compareciente me manifiesta que dentro del Inmueble que se ha reunido se encuentra construida toda la Estructura y la Superestructura Porturia y Extraportuaria del Puerto de Acajutla, el cual es a la fecha el Puerto de mayor importancia en el pais, y ha contribuido, desde que fue inaugurado el veintiuno de abril de mil novecientos sesenta y uno, al desarrollo de la actividad economica y productiva de nuestro pais. Así se expresó el compareciente, a quien expliqué los efectos legales de este Instrumento, y leído que se lo hube en forma integra, en un solo acto sin interrupciones, manifiesta su conformidad, ratifica su contenido, y para constancia firma, juntamente conmigo. **DE TODO, DOY FE.**-

JOSE ALBERTO ORTIZ HERRERA
NOTARIO
REPUBLICA DE EL SALVADOR

MARIO ENRIQUE CAMACHO MONTOYA
NOTARIO
REPUBLICA DE EL SALVADOR

SO ANTE MI, del Folio **DOSCIENTOS TRES FRENTE** al Folio **DOSCIENTOS TREINTA Y SIETE FRENTE**, del Libro **OCTAVO**, de mí Protocolo que vence el día diecinueve de noviembre de dos mil cinco, y para ser entregado **A LA COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)**, extiendo, firmo y sello el presente Testimonio de la **ESCRITURA PUBLICA DE REUNION DE INMUEBLES**, en la ciudad de San Salvador, a los veintiún días del mes de julio de dos mil cinco.-

JOSE ALBERTO ORTIZ HERRERA
NOTARIO
REPUBLICA DE EL SALVADOR

REGISTRO DE LA PROPIEDAD RAIZ E HIPOTECAS
TERCERA SECCION DE OCCIDENTE
REPUBLICA DE EL SALVADOR EN LA AMERICA CENTRAL
Rep. de El Salvador
SONSONATE

Lic. José Ricardo Landaverde
REGISTRADOR JEFE

CENTRO NACIONAL DE REGISTROS

No. 1680132

MARIO ENRIQUE CAMACHO MONTOYA NOTARIO REPUBLICA DE EL SALVADOR

RAZON Y CONSTANCIA DE INSCRIPCION
REUNION DE INMUEBLES

Centro Nacional de Registros, Tercera Sección de Occidente, el Registrador que suscribe, deja constancia que se ha inscrito a las 11:57:11 horas, del día Diez de Octubre del año Dos Mil Cinco , en el sistema de Folio Real Automatizado, en la(s) Matrícula(s) detallada(s) a continuación:

Se ha segregado de la 1 .- Matrícula 10148075-00000, con un área de 2,086,082.0200 metros cuadrados, ubicada en PUERTO DE ACAJUTLA,ZONA INDUSTRIAL, -, correspondiente a la ubicación geográfica de ACAJUTLA, SONSONATE, en el asiento 1.

, del documento de REUNION DE INMUEBLES.

A Favor de :

1 .- COMISION EJECUTIVA PORTUARIA AUTONOMA - CEPA; con un porcentaje de 100% de derecho de Propiedad.

Resolución:

SOBRE EL INMUEBLE REUNIDO PESAN TRES SERVIDUMBRES DE GASODUCTO, A FAVOR DE REFINERIA PETROLERA DE ACAJUTLA, S.A DE C.V., TEXACO CARIBBEAN INC., Y ALMACENADORA DEL PACIFICO S.A DE C.V

El Instrumento que dió mérito a ésta inscripción fué presentado bajo el asiento de presentación N° 200503013923 a las 13:36:29 horas del día Veintinueve de Julio del año Dos Mil Cinco .

Sonsonate, Diez de Octubre del año Dos Mil Cinco .-

REGISTRO DE LA PROPIEDAD RAIZ E HIPOTECAS TERCERA SECCION DE OCCIDENTE REPUBLICA DE EL SALVADOR EN LA AMERICA CENTRAL Rep. de El Salvador SONSONATE

Lic. José Ricardo Landaverde
REGISTRADOR JEFE

REPUBLICA DE EL SALVADOR EN LA AMERICA CENTRAL

Lic. José Ricardo Landaverde
REGISTRADOR JEFE

No. 3960598

Centro Nacional de Registros (CNR)

GOBIERNO DE EL SALVADOR
UNIR, CRECER, INCLUIR

MARIO ENRIQUE CAMACHO MONTOYA
NOTARIO
REPUBLICA DE EL SALVADOR

REPUBLICA DE EL SALVADOR EN LA AMERICA CENTRAL

RAZON Y CONSTANCIA DE INSCRIPCION
RECTIFICACION DE INSCRIPCION

Centro Nacional de Registros, Tercera Sección de Occidente, el Registrador que suscribe, deja constancia que se ha inscrito a las 15:11:40 horas, del día Veinte de Junio del año Dos Mil Once , en el sistema de Folio Real Automatizado, en la(s) Matrícula(s) detallada(s) a continuación:

1 .- Matrícula 10148075-00000, con un área de 2,086,082.0200 metros cuadrados, ubicada en AVENIDA PEDRO DE ALVARADO, PUERTO DE ACAJUTLA, ZONA INDUSTRIAL,, LOTE S/N,, correspondiente a la ubicación geográfica de ACAJUTLA, SONSONATE, en el asiento 6.

, del documento de RECTIFICACION DE INSCRIPCION.

Resolución:
SE INSCRIBE LA PRESENTE COMO RECTIFICACION DE INSCRIPCION, YA QUE POR UN ERROR REGISTRAL AL MOMENTO DE SU INSCRIPCION EL AREA DEL INMUEBLE REUNIDO SE DIJO QUE ERA DE 2,086,082.0200 METROS CUADRADOS, CUANDO REGISTRALMENTE EL AREA CORRECTA DEL INMUEBLE REUNIDO ES DE 1,043,041.01 METROS CUADRADOS, LA PRESENTE NO CAUSA DERECHOS DE REGISTRO, ARTS. 42 Y 43 DEL REGLAMENTO DE LA LEY DE CREACION DE LA UNIDAD DEL REGISTRO SOCIAL DE INMUEBLES.-

El Instrumento que dió mérito a ésta inscripción fué presentado bajo el asiento de presentación N° 201103009143 a las 14:38:17 horas del día Siete de Junio del año Dos Mil Once .
Sonsonate, Veinte de Junio del año Dos Mil Once .-

REGISTRO DE LA PROPIEDAD RAIZ E HIPOTECAS TERCERA SECCION DE OCCIDENTE SONSONATE

Lic. José Ricardo Landaverde
REGISTRADOR JEFE

EL INFRASCRITO NOTARIO CERTIFICA: QUE EL DOCUMENTO ANTERIOR, QUE CONSTA DE treinta y ocho FOLIOS ES COPIA FIEL Y CONFORME CON SU ORIGINAL CON EL CUAL SE CONFRONTÓ, FIRMO Y SELLO LA PRESENTE EN LA CIUDAD DE SAN SALVADOR, A LOS diez DÍAS DEL MES DE abril DE dos mil catorce.

MARIO ENRIQUE CAMACHO MONTOYA
NOTARIO
REPUBLICA DE EL SALVADOR

Appendix 6D–
CEPA Property Letting Document

NÚMERO: VEINTICINCO **LIBRO: UNO**

AÑO 2014

TESTIMONIO DE ESCRITURA PÚBLICA DE ARRENDAMIENTO.

OTORGADO POR:

COMISIÓN EJECUTIVA PORTUARIA AUTÓNOMA

A FAVOR DE:

ENERGÍA DEL PACÍFICO, S.A. DE C.V.

ANTE LOS OFICIOS DEL NOTARIO:

MARIO EDUARDO AYALA CLAROS

San Salvador, El Salvador, C.A.

PAPEL PARA PROTOCOLO

TREINTA Y OCHO

M. DE H.

Nº 15777720

DOS COLONES

MARIO EDUARDO AYALA CLAROS - NOTARIO - REPUBLICA DE EL SALVADOR

MARIO EDUARDO AYALA CLAROS - NOTARIO - REPUBLICA DE EL SALVADOR

NÚMERO VEINTICINCO. En la ciudad de San Salvador, a las once horas del día quince de julio del año dos mil catorce. Ante mí, **MARIO EDUARDO AYALA CLAROS,** Notario, del domicilio de Antiguo Cuscatlán, departamento de La Libertad, comparecen: el señor **EMÉRITO DE JESÚS VELÁSQUEZ MONTERROZA,** conocido por **EMÉRITO DE JESÚS VELÁSQUEZ MONTERROSA,** de cincuenta y ocho años de edad, Ingeniero Agrícola, del domicilio de Colón, departamento de La Libertad, persona a quien no conozco pero identifico mediante su Documento Único de Identidad número cero cero cuatro tres ocho cinco seis dos-dos, y con Número de Identificación Tributaria cero seis uno cuatro-dos cinco uno dos cinco cinco-cero cero cinco-cero, actuando en nombre y en representación en su calidad de Gerente General y Apoderado General Administrativo de la Comisión Ejecutiva Portuaria Autónoma, Institución Autónoma, de Derecho Público y Personalidad Jurídica, de este domicilio, con Número de Identificación Tributaria cero seis uno cuatro-uno cuatro /cero dos tres siete – cero cero siete – ocho personería que más/ /

adelante relacionaré, y que en adelante se denominará indistintamente "la Arrendante", "CEPA" o "la Comisión"; y por otra parte, el señor**EDUARDO ANTONIO ZABLAH HASBÚN**, conocido por **EDUARDO ANTONIO ZABLAH TOUCHÉ HASBÚN**, de cincuenta y ocho años de edad, Economista, de nacionalidad salvadoreña, de este domicilio, de mi conocimiento, portador del Documento Único de Identidad número cero uno cero ocho cuatro tres cero tres-seisy con Número de Identificación Tributaria cero cinco uno uno-cero nueve cero seis cinco seis-cero cero uno-nueve, actuando en nombre y representación, en su calidad de Presidente de la Junta Directiva y Representante Legal de **"ENERGÍA DEL PACÍFICO, SOCIEDAD ANÓNIMA DE CAPITAL VARIABLE"**, que puede abreviarse **"ENERGÍA DEL PACÍFICO, S.A. DE C.V."** y **"EDP, S.A. DE C.V."** de nacionalidad salvadoreña, de este domicilio, con Número de Identificación Tributaria cero cinco cero uno-doce doce trece-ciento uno-seis, personería que más adelante relacionaré, y que en el transcurso de este instrumento podrá denominarse indistintamente "la Arrendataria" o "ENERGÍA DEL PACÍFICO";y **ME DICEN:** Que en el carácter en que actúan celebran el presente Contrato de Arrendamiento, el cual se regirá por las siguientes cláusulas: **PRIMERA: ANTECEDENTES:A)**Conforme al numeral nueve punto uno de las Bases de Licitación Pública Internacional Número DELSUR-CLP-CERO CERO UNO-DOS MIL DOCE, denominado "Referencia de Terrenos para Evaluación de Ubicación de Posibles Proyectos", la CEPA puso a disposición varios inmuebles de su propiedad para que, luego de ser evaluados, se suscribiera el respectivo Contrato de Arrendamiento a fin de construir sobre éste el proyecto de generación de energía eléctrica; en ese sentido, la Comisión y "Quantum Energy, S.A. de C.V." suscribieron un Contrato de Promesa de Arrendamiento de un inmueble con un área de cien mil metros cuadrados ubicado dentro de las instalaciones del Puerto de Acajutla, mediante la Escritura Pública otorgada en esta ciudad a lasquince horas del día cinco de junio del año dos mil doce, ante los oficios del Notario Luis Alonso Medina López; dicho Contrato se otorgó para el plazo de doce meses, período comprendido a partir del día de su suscripción, siendo prorrogable por seis meses adicionales a petición la arrendataria, facultándola a

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tener acceso a dicho terreno para realizar estudios, trabajos de investigación y mediciones en el interior del mismo. B) Mediante la Escritura Pública de Rectificación otorgada el día diez de diciembre de dos mil doce, por esa Comisión y "Quantum Energy, S.A. de C.V.", se rectificó la descripciónténcica de dicho inmueble y para ello se redactó de nuevo el Romano II), cuya redacción correcta quedo consignada en dicho instrumento y así rectificada la Escritura Pública relacionada en el párrafo anterior, quedando las demás cláusulas y condiciones sin alteración alguna, estando vigentes y con plena validez. C) Mediantela Escritura Pública otorgada en esta ciudad a las diez horas del día veintitrés de mayo del año dos mil trece, ante los oficios del Notario Piero Antonio Rusconi Gutiérrez, se otorgó una Escritura Pública de Modificación del Contrato de Promesa de Arrendamiento antes citado, esa Comisión y "Quantum Energy, S.A. de C.V. acordando ampliar el período contractual por seis meses adicionales, el cual comprendía desde el cinco de mayo al cuatro de diciembre, ambas fechas de ese mismo año, quedando las demás cláusulas y condiciones sin alteración alguna.D)Mediante el Punto Cuarto del Acta número dos mil quinientos setenta y cuatro de la Sesión celebrada el día tres de diciembre de dos mil trece por la Junta Directiva de la Comisión, acordó autorizar la suscripción de un Contrato de Arrendamiento entre dicha Comisión y la Sociedad "Quantum Energy, Sociedad Anónima de Capital Variable", que abrevia "Quantum Energy, S.A. de C.V.", de un terreno con un área de cien mil metros cuadrados, de su propiedad, ubicado en las instalaciones del Puerto de Acajutla, departamento de Sonsonate, por el plazo de veinticuatro años con veintiséis días contados a partir del día cinco de diciembre del año dos mil trece al día treinta y uno de diciembre del año dos mil treinta y siete, con un canon de cuatro dólares de los Estados Unidos de América con cuatro centavos de dólar el metro cuadrado anual, más el Impuesto a la Transferencia de Bienes Muebles y a la Prestación de Servicios (IVA), el cual será ajustable cada año de acuerdo al índice de inflación acumulado al mes de octubre, el plazo de dicho contrato podría prorrogarse por periodos iguales, de conformidad a la conveniencia de ambas partes. En el

citado acuerdo se establecieron las demás condiciones del referido contrato de arrendamiento, mismo que debía suscribirse en el plazo máximo de sesenta días posteriores a la fecha de la notificación del acuerdo a "Quantum Energy, S.A. de C.V.", caso contrario quedaría sin efecto el acuerdo.E)Mediante el Punto Cuarto del Acta número dos mil quinientos noventa y tres de la Sesión celebrada el día veintiocho de enero del corriente año por la Junta Directiva de la Comisión, se acordó autorizar el otorgamiento de una prórroga de sesenta días adicionales al plazo otorgado para la suscripción del Contrato de Arrendamiento entre la Comisión y "Quantum Energy, S.A. de C.V.", contándose el mismo a partir del cinco de febrero de este mismo año;F)Mediante Punto Cuarto del Acta dos mil seiscientos veintitrés de la Sesión celebrada el díados de abril del corriente año por la Junta Directiva de la Comisión, se acordó el otorgamiento de una prórroga de sesenta días adicionales para la suscripción del Contrato de Arrendamiento entre la Comisión y "Quantum Energy, S.A. de C.V.", contándose el mismo a partir del seis de abril de este mismo año. G)Con fecha doce de mayo del corriente año, el Apoderado General Administrativo de Quantum Energy, S.A. de C.V. remitió una carta a la Junta Directiva de CEPA manifestando que, según el numeral veinte inciso séptimo de las Bases de Licitación Pública Internacional Número DELSUR-CLP-CERO CERO UNO-DOS MIL DOCE, en caso que dicha licitación fuese adjudicada total o parcialmente a un Asocio, éste, previo a la firma del contrato de abastecimiento, deberá constituir en El Salvador una sociedad mercantilcon un giro que considere, entre otros, la generación de energía eléctrica, la cual deberá estar inscrita en el Registro de Electricidad y Telecomunicaciones adscrito a la SIGET;en ese sentido, a fin de darle cumplimiento a lo establecido en las Bases de Licitación antes mencionadas, expresan que no debe ser Quantum Energy quien debe suscribir el Contrato de Arrendamiento de largo plazo con la CEPA, sino la sociedad mercantil requerida en tal documento, por lo que solicitaron a esta Comisión la sustitución de esa Sociedad como firmante del presente contrato, y se proceda a suscribir el mismo teniendo como arrendataria a ENERGÍA DEL PACIFICO, S.A. DE C.V.H)De igual manera, con fecha doce de mayo del corriente año, el

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PAPEL PARA PROTOCOLO

CUARENTA

M. DE H.

Nº 15777722

DOS COLONES

Apoderado General Administrativo de ENERGÍA DEL PACÍFICO, S.A. DE C.V. envió una carta a la Junta Directiva de la CEPA, en la cual hace referencia a la solicitud de Quantum Energy, S.A. de C.V. mencionada en el literal anterior, exponiendo que la Sociedad que representa fue constituida en cumplimiento al numeral veinte inciso séptimo de las Bases de Licitación Pública Internacional Número DELSUR-CLP-CERO CERO UNO-DOS MIL DOCE, mediante la Escritura Pública otorgada en San Salvador, a las nueve horas del día doce de diciembre del año dos mil trece e inscrita el día trece de ese mismo mes y año, al número CUARENTA Y DOS del Libro TRES MIL CIENTO NOVENTA Y CINCO del Registro de Sociedades y, en talsentido, solicitan se considerara como arrendataria a ENERGIA DEL PACIFICO, S.A. DE C.V., a finde que sea ésta quien suscriba el Contrato de Arrendamiento con la Comisión, aceptando los términos y condiciones establecidos y autorizados por la Junta Directiva de esta última en el punto Cuarto del Actados mil quinientos setenta y cuatro del tres de diciembre de dos mil trece, además de las solicitudes presentadas por QUANTUM a través de su carta de fecha doce de mayo del corriente año, relativas al incremento del área de cien mil metros cuadrados a ciento veintiséis mil cuatrocientos treinta y uno punto cero nueve metros cuadrados;de igual forma, aceptan asumir la responsabilidad de pagar los respectivos cánones de arrendamiento a partir del último mes pagado por Quantum Energy, S.A. de C.V., expresando además que están informados sobre los tarifarios vigentes para el arrendamiento de terrenos propiedad de la CEPA.E I) Mediante el Punto Segundo del Acta número dos mil seiscientos cuarenta de la sesión celebrada el día veintinueve de mayo de dos mil catorce por la Junta Directiva de la Comisión,se acordó: i) Autorizarsuscribir Contrato de Arrendamiento con ENERGÍA DEL PACÍFICO, S.A. DE C.V., en sustitución de la Sociedad "Quantum Energy, S.A. de C.V.";ii)Incrementar el área de arrendamiento de cien mil metros cuadrados a ciento veintiséis mil cuatrocientos treinta y uno punto cero nueve metros cuadrados, dentro de la propiedad de CEPA en las instalaciones del Puerto de Acajutla, mencionada anteriormente; iii)La arrendataria será responsable de reforestar el área

correspondiente que es parte de los veintiséis mil cuatrocientos treinta y uno punto cero nueve metros cuadrados que se agregan al terreno arrendado, según lo requerido a la CEPA por el Ministerio de Medio Ambiente y Recursos Naturales, siempre y cuando no se afecte el desarrollo normal del proyecto;**iv)**Modificar la condición del plazo del contrato, en el sentido que este podrá prorrogarse por períodos iguales, lo cual deberá ser solicitado por la Arrendataria al menos con noventa días antes de la finalización del Contrato, a lo cual se resolverá favorablemente, siempre y cuando la Arrendataria haya cumplido con todas las obligaciones contractuales a satisfacción de la Arrendante, asimismo, la solicitud de prórroga anterior deberá ser resuelta por la CEPA dentro de los sesenta días a su recepción; **v)**Que en caso de otorgarse la prórroga del plazo contractual, la Arrendataria reconoce que todas las condiciones económicas del contrato deberán renegociarse en el momento en que se proceda a gestionar la materialización de la misma;**vi)**ENERGÍA DEL PACIFICO S.A. DE C.V., en su calidad de arrendataria, será la responsable de asumir las condiciones autorizadas por la Junta Directiva de la CEPA, mediante el punto Cuarto del Acta número dos mil quinientos setenta y cuatro, de fecha tres de diciembre de dos mil trece; y **vii)**En consecuencia de lo anterior, ENERGIA DEL PACIFICO S.A. DE C.V.reconoce y asume las obligaciones pasadas, presentes y futuras, derivadas del presente Contrato de Arrendamiento, las cuales antes estaban a cargo de "Quantum Energy, S.A. de C.V."**SEGUNDA: OBJETO DEL CONTRATO:** Que en este acto la CEPA, por medio de su representante, entrega en arrendamiento a la Arrendataria un inmueble de CIENTO VEINTISEIS MIL CUATROCIENTOS TREINTA Y UNO PUNTO CERO NUEVE METROS CUADRADOS, equivalentes a CIENTO OCHENTA MIL OCHOCIENTOS NOVENTA Y SIETE PUNTO SESENTA VARAS CUADRADAS, del cual declara es dueña y actual poseedora según Matrícula del sistema de folio real computarizado Número UNO CERO UNO CUATRO OCHO CERO SIETE CINCO-CERO CERO CEROCEROCERO, en el Asiento SEIS, del Registro de la Propiedad Raíz e Hipotecas de la Tercera Sección de Occidente del Centro Nacional de Registros, el cual se encuentra ubicado en la Avenida Pedro de Alvarado, Puerto de Acajutla, Zona Industrial, Lote S/N, Municipio de Acajutla,

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M. DE H.

Nº 15777723

DOS COLONES

departamento de Sonsonate, para que la arrendataria construya y opere el proyecto de generación de energía eléctrica derivado del Proceso deLicitación Pública Internacional Número DELSUR-CLP-CERO CERO UNO-DOS MIL DOCE.**TERCERA: DECLARACIÓN DEL DOMINIO:** CEPA manifiesta por medio de su representante que, según Matrícula del sistema de folio real computarizado Número UNO CERO UNO CUATRO OCHO CERO SIETE CINCO-CERO CERO CEROCEROCERO, en el Asiento SEIS del Registro de la Propiedad Raíz e Hipotecas de la Tercera Sección de Occidente del Centro Nacional de Registros, es dueña y actual poseedora de un inmueble situado en la Avenida Pedro de Alvarado, Puerto de Acajutla, Zona Industrial, Lote S/N, Municipio de Acajutla, departamento de Sonsonate, el cual se describe así: El terreno a describir tiene un área de CIENTO VEINTISEIS MIL CUATROCIENTOS TREINTA Y UNO PUNTO CERO NUEVE METROS CUADRADOS, equivalentes a CIENTO OCHENTA MIL OCHOCIENTOS NOVENTA Y SIETE PUNTO SESENTA VARAS CUADRADASy éste se describe así: A partir del Mojón de concreto del Banco de Marca identificado como MKZ NOA UNO con coordenadas Lambert TRESP ES, Norte doscientos setenta y tres mil quinientos ocho punto treinta y nueve y Este cuatrocientos diez mil treinta y ocho punto ochenta y uno, con rumbo Norte sesenta y seis grados cuarenta y tres minutos cuarenta y dos segundos Este y una distancia de setenta punto sesenta metros, se llega al Punto Auxiliar uno, desde este punto se mide con rumbo Norte doce grados cincuenta y tres minutos veintidós segundos Este una distancia de trescientos cuarenta y cinco punto doce metros llegando al punto auxiliar dos, desde este punto se mide con rumbo Sur ochenta y nueve grados cincuenta y un minutos veintiocho segundos Este una distancia de treinta y cuatro punto setenta y dos metros, se llega al punto auxiliar tres, en este punto hacemos una deflexión derecha de noventa grados con rumbo Sur cero grados ocho minutos treinta y dos segundos Oeste y una distancia de siete punto cuarenta y dos metros llegando al mojón M UNO con coordenadas Lambert TRESP ES, Norte doscientos setenta y tres mil ochocientos sesenta y cinco punto veinte y Este cuatrocientos diez mil doscientos quince punto treinta y cinco,

siendo este el esquinero Nor-Oeste en el cual comienza la presente descripción: **AL NORTE**, partiendo del vértice Nor-Oeste identificado como mojón M UNO está formado por cuatro tramos con los siguientes rumbos y distancias: el primer tramo, con rumbo Norte ochenta y ocho grados dieciséis minutos cincuenta y nueve segundos Este, de cinco punto veintiún metros, llegando al mojón M DOS, el segundo tramo, con rumbo Sur ochenta y nueve grados cuarenta y siete minutos veinticuatro segundos Este, de sesenta y cuatro punto veintinueve metros, llegando al mojón M TRES, el tercer tramo, con rumbo Sur ochenta y nueve grados cincuenta minutos quince segundos Este, de ciento setenta y cuatro punto quince metros, llegando al mojón M CUATRO, el cuarto tramo, con rumbo Sur ochenta y nueve grados cuarenta y tres minutos treinta y tres segundos Este, de noventa punto ochenta y nueve metros, llegando al mojón M CINCO, que corresponde al vértice Nor-Este. Lindando los tres primeros tramos con terreno propiedad de CEPA con calle veinticuatro de octubre de por medio y el último tramo con terreno propiedad de CEPA arrendado a CENERGICA con calle veinticuatro de octubre de por medio. **AL ESTE**, partiendo del vértice Nor-Este identificado como mojón M CINCO está formado por seis tramos rectos con los siguientes rumbos y distancias: el primer tramo, con rumbo Sur cero grados dieciséis minutos veintisiete segundos Oeste, de diecisiete punto sesenta y siete metros, llegando al mojón M SEIS, el segundo tramo, con rumbo Sur cuarenta y siete grados cincuenta y nueve minutos treinta segundos Este, de veintiocho punto veinte metros, llegando al mojón M SIETE, el tercer tramo, con rumbo Sur veintidós grados dieciocho minutos seis segundos Oeste, de treinta y tres punto cincuenta metros, llegando al mojón M OCHO, el cuarto tramo, con rumbo Sur cuarenta grados seis minutos treinta y ocho segundos Oeste, de setenta y tres punto treinta y cinco metros, llegando al mojón M NUEVE, el quinto tramo, con rumbo Sur cuarenta y seis grados cincuenta minutos doce segundos Este, de veintinueve punto noventa y tres metros, llegando al mojón M DIEZ, el sexto tramo, con rumbo Sur cuarenta y tres grados treinta y cinco minutos cuarenta y siete segundos Oeste, de trescientos noventa y tres punto setenta y cuatro metros, llegando al mojón M ONCE que corresponde

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al vértice Sur-Este. Lindando los primeros cinco tramos con terreno propiedad de CEPA donde se ubica el Pozo número dos y en un futuro el pozo número tres y el último tramo con franja de terreno propiedad de CEPA donde está instalada la tubería de impelencia de agua potable de CEPA. **AL SUR**, partiendo del vértice Sur-Este identificado como mojón M ONCE está formado por un tramo recto, con rumbo Oeste franco, de ciento veinticuatro punto setenta y seis metros, llegando al mojón M DOCE, que corresponde al vértice Sur-Oeste. Lindando con terreno propiedad de CEPA. **AL OESTE**, partiendo del vértice Sur-Oeste identificado como mojón M DOCE está formado por veinticinco tramos con los siguientes rumbos y distancias: el primer tramo, con rumbo Norte once grados veintiún minutos veintidós segundos Oeste, de treinta y cuatro punto veintitrés metros, llegando al mojón M TRECE, el segundo tramo, con rumbo Norte tres grados cuarenta y siete minutos ocho segundos Oeste, de veinticinco punto catorce metros, llegando al mojón M CATORCE, el tercer tramo, con rumbo Norte tres grados veintitrés minutos cincuenta y cinco segundos Oeste, de veinticuatro punto treinta y siete metros, llegando al mojón M QUINCE, el cuarto tramo, con rumbo Norte tres grados veinticinco minutos cuarenta y nueve segundos Oeste, de veintidós punto veintitrés metros, llegando al mojón M DIECISEIS, el quinto tramo, con rumbo Norte cinco grados cincuenta y tres minutos cincuenta y dos segundos Este, de diecinueve punto veintisiete metros, llegando al mojón M DIECISIETE, el sexto tramo, con rumbo Norte doce grados un minuto cuarenta segundos Este, de veintinueve punto cincuenta y cuatro metros, llegando al mojón M DIECIOCHO, el séptimo tramo, con rumbo Norte trece grados veintitrés minutos cuarenta y seis segundos Este, de diecinueve punto cero dos metros, llegando al mojón M DIECINUEVE, el octavo tramo, con rumbo Norte trece grados veintiséis minutos veinticuatro segundos Este, de dieciséis punto sesenta y cuatro metros, llegando al mojón M VEINTE, el noveno tramo, con rumbo Norte trece grados veinticinco minutos nueve segundos Este, de veintiuno punto ochenta y siete metros, llegando al mojón M VEINTIUNO, el décimo tramo, con rumbo Norte doce grados cincuenta y siete minutos

diecisiete segundos Este, de veinticuatro punto cuarenta y cuatro metros, llegando al mojón M VEINTIDOS, el decimoprimer tramo, con rumbo Norte trece grados trece minutos diez segundos Este, de veinte punto setenta y dos metros, llegando al mojón M VEINTITRÉS, el decimosegundo tramo, con rumbo Norte doce grados cuatro minutos doce segundos Este, de veintiuno punto cincuenta y seis metros, llegando al mojón M VEINTICUATRO, el decimotercer tramo, con rumbo Norte once grados cuarenta minutos seis segundos Este, de ciento tres punto sesenta y un metros, llegando al mojón M VEINTICINCO, el decimocuarto tramo, con rumbo Norte dieciocho grados cincuenta y cinco minutos cincuenta y dos segundos Este, de cinco punto veintidós metros, llegando al mojón M VEINTISEIS, el decimoquinto tramo, con rumbo Norte catorce grados siete minutos cuatro segundos Este, de diecinueve punto sesenta y nueve metros, llegando al mojón M VEINTISIETE, el decimosexto tramo, con rumbo Norte cuarenta y dos grados diez minutos cuarenta y dos segundos Este, de cinco punto noventa metros, llegando al mojón M VEINTIOCHO, el decimoséptimo tramo, con rumbo Norte treinta y dos grados cincuenta y seis minutos veintinueve segundos Este, de nueve punto cero siete metros, llegando al mojón M VEINTINUEVE, el decimoctavo tramo, con rumbo Norte veinticinco grados cero minutos veinticinco segundos Este, de tres punto cero cero metros, llegando al mojón M TREINTA, el decimonoveno tramo, con rumbo Norte trece grados cincuenta y tres minutos quince segundos Este, de tres punto cero un metros, llegando al mojón M TREINTA Y UNO, el vigésimo tramo, con rumbo Norte treinta y cuatro grados treinta y siete minutos cuarenta y un segundos Este, de tres punto cero dos metros, llegando al mojón M TREINTA Y DOS, el vigesimoprimer tramo, con rumbo Norte veintinueve grados cuarenta y ocho minutos treinta y ocho segundos Este, de dos punto noventa y tres metros, llegando al mojón M TREINTA Y TRES, el vigesimosegundo tramo, con rumbo Norte treinta y ocho grados veintiún minutos cuarenta y seis segundos Este, de tres punto once metros, llegando al mojón M TREINTA Y CUATRO, el vigesimotercer tramo, con rumbo Norte cincuenta y dos grados cuarenta y dos minutos cincuenta y ocho segundos Este, de cinco punto noventa y un metros, llegando al mojón M

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PAPEL PARA PROTOCOLO

M. DE H.

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TREINTA Y CINCO, el vigesimocuarto tramo, con rumbo Norte sesenta y ocho grados diecinueve minutos tres segundos Este, de tres punto trece metros, llegando al mojón M TREINTA Y SEIS, el vigesimoquinto tramo, con rumbo Norte setenta y seis grados veintidós minutos veintinueve segundos Este, de tres punto cero cero metros, llegando al mojón M UNO donde comenzó esta descripción. Lindando con Estacionamiento para rastras propiedad de CEPA con calle interna de por medio. **CUARTA: DECLARACIONES:**ENERGÍA DEL PACIFICO declara conocer los acuerdos emitidos por la Junta Directiva de CEPA relacionados en la anterior CLÁUSULA PRIMERA yque son recogidos en el presente instrumento. **QUINTA: OBLIGACIONES Y DERECHOS DE LA ARRENDATARIA:A)**ENERGÍA DEL PACIFICO se compromete a destinar el inmuebie objeto de arrendamiento para construir y operar el proyecto de generación de energía eléctrica derivado del Licitación Pública Internacional Número DELSUR-CLP-CERO CERO UNO-DOS MIL DOCE. El área objeto del arrendamiento podrá ser ampliada de común acuerdo entre las partes, en áreas aledañas al mismo, manteniéndose las mismas condiciones derivadas del contrato vigente. La Arrendataria y la CEPA acuerdan que toda la infraestructura del muelle que construirá ENERGÍA DEL PACIFICOpasará a ser propiedad de la Comisión al finalizar el plazo del contrato de arrendamiento, el cual es de veinticuatro años con veintiséis días contados a partir del día cinco de diciembre de dos mil trece al día treinta y uno de diciembre de dos mil treinta y siete. Las Plantas de Regasificación y de Generación de Energía Eléctrica deberán ser construidas conforme planos, especificaciones técnicas y normas vigentes nacionales e internacionales en materia de instalaciones de plantas generadoras de energía, los cuales deberán ser presentados a la CEPA debidamente aprobados por todos los organismos pertinentes del Gobierno de la República de El Salvador. Una copia de dichos planos quedará en poder de la Comisión, la cual deberá estar debidamente firmada y sellada por los profesionales responsables contratados por dicha empresa, y la Arrendataria no podrá hacer variación alguna sin hacerla de conocimiento previo a la CEPA,

siendo obligatorio que cualquier cambio sustancial a los documentos del proyecto cuenten con los permisos gubernamentales respectivos. **B)ENERGÍA DEL PACIFICO**se compromete a garantizar que en la planificación, ejecución y operación de su proyecto se asegurará de: **Uno)** Obtener todos los permisos y licencias necesarias para la construcción y operación del proyecto antes mencionado, ante las carteras de Estado e Instituciones de Gobierno pertinentes, comprometiéndose especialmente a obtener los Permisos Ambientales que sean necesarios ante el Ministerio del Medio Ambiente y Recursos Naturales y los permisos correspondientes a la Autoridad Marítima Portuaria (AMP); así como la no objeción por parte de CEPA; **Dos)** Cumplir todas las medidas preventivas y de mitigación ordenadas en la resolución de autorización que les emita el Ministerio de Medio Ambiente y Recursos Naturales, tanto para la etapa constructiva, operativa y de cierre del proyecto, por lo que será sujeto de inspecciones de verificación por parte del personal de la CEPA-Puerto de Acajutla; **Tres)** Las operaciones de los buques que manejarán el Gas Natural Licuado se realizarán en el muelle que ENERGÍA DEL PACIFICO construirá para ese fin, el cual estará ubicado en el borde costero contiguo a la propiedad del Puerto de Acajutla, asegurándose que en ningún momento se afecte cualquier actividad de mantenimiento del puerto a consecuencia de dicho muelle, ni las operaciones de arribo, atraque y desatraque y zarpe, estiba o desestiba de otros buques que operen simultáneamente en otros muelles del Puerto de Acajutla, limitándose la afectación de las operaciones de los buques de Gas Natural Licuado a la franja de protección de cincuenta metros alrededor del buque, mientras éste se encuentre en operación manejando el citado combustible; **Cuatro)** Para la realización de las operaciones de los buques, deberá contar con un Plan de Seguridad Industrial que garantice la atención inmediata de cualquier evento extraordinario que se presente, el cual deberá ser avalado por la CEPA-Puerto de Acajutla y demás autoridades competentes; y **Cinco)** El arribo, atraque, desatraque y zarpe de los buques que manejen Gas Natural Licuado no requerirá la suspensión de operaciones y/o retiro de los buques que puedan estar operando en las diferentes terminales marítimas ubicados alrededor del

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Puerto de Acajutla, tal como se establece en el número "Tres" del presente literal. C) La Arrendataria se obliga a desocupar y devolver el inmueble entregado en arrendamiento a la finalización del plazo consignado en el presente contrato o su prórroga, así como cuando por cualquier otra causa el contrato fuere declarado terminado. En caso de terminación del contrato por finalización del plazo, la Arrendataria deberá iniciar y completar la entrega material del inmueble a la CEPA dentro de los ciento ochenta días siguientes a dicha finalización. Si la terminación del contrato fuere declarada por mutuo acuerdo o por declaratoria judicial, la Arrendataria deberá ejecutar la entrega material del inmueble dentro de los ciento ochenta días subsiguientes a la terminación o declaratoria. En cualquier caso, la Arrendataria se obliga a seguir pagando en las mismas condiciones todas las obligaciones correspondientes al objeto del presente contrato, hasta que desaloje totalmente y lo entregue materialmente a satisfacción de CEPA. D) La Arrendataria tendrá derecho a instalar rótulos para su publicidad sin ningún costo adicional, dentro del espacio arrendado.E) Si durante la vigencia del contrato la Arrendataria decidiera no continuar con el mismo, deberá cancelar el valor que restare del contrato hasta finalizar el año en que se tome tal decisión, comunicando a la CEPA dicha situación y, si requiriese reducir el área, también deberá cancelar el diferencial que corresponda a la reducción por el tiempo antes mencionado, es decir, por el año en que se comunicó tal decisión. F) La Arrendataria deberá dar cumplimiento a todas las medidas aplicables de seguridad necesarias que establecen las leyes, reglamentos y normas de seguridad reconocidas nacional e internacionalmente, incluyendo las medidas de seguridad que indique la Comisión. G) Si la operatividad de la Arrendataria, en cualquier momento provocase un incremento en los costos del seguro comprendido dentro de la Póliza Paquete de la CEPA, el correspondiente diferencial correrá por cuenta de la Arrendataria, únicamente en el porcentaje del riesgo derivado directamente de sus actividades, el cual será previamente consultado por CEPA a la sociedad de seguros correspondiente. H) En caso de que la

Arrendataria tenga reclamos que hacer a terceros o terceros a ésta, la CEPA le proporcionará los informes, documentos y/o cualquier otra prueba de que disponga, a fin de cooperar con el esclarecimiento del caso, siempre y cuando sean derivados directamente del cometimiento u omisión de alguna conducta realizada por y/o en contra de la Arrendataria. I) La Arrendataria se obliga a reparar y resarcir a la Comisión inmediatamente cualquier daño que ésta hubiere sufrido en su propiedad por cualquier causa que, de conformidad con este contrato, sea responsabilidad directa de la Arrendataria reparar. La Arrendataria comenzará las obras de reparación sin esperar que la sociedad de seguros pertinente dé respuesta a su reclamo. J) La CEPA podrá facilitar a la Arrendataria la utilización de los servicios que sean requeridos, siempre que corresponda a la CEPA prestarlos, los cuales deberán ser pagados de conformidad con su régimen tarifario vigente. K) La Arrendataria podrá instalar registros, relojes, e instrumentos o aparatos de cualquier clase que sean necesarios para la operación de las Plantas, siempre y cuando se encuentren dentro de la franja de terreno arrendada. L) La Arrendataria deberá tener el equipo y personal suficientemente preparados para atender cualquier emergencia correspondiente a la protección contra riesgos de la clase y naturaleza requeridos, en razón de la índole del Proyecto. M) El personal empleado por la Arrendataria en el manejo de las instalaciones está sujeto, desde que ingrese al recinto portuario, a las regulaciones y disciplinas establecidas y comunicadas por laCEPA. N) La Arrendataria se obliga a mantener sus instalaciones en buen estado de presentación y conservar el espacio de las mismas razonablemente limpio, tomando en cuenta los estándares del rubro del negocio, estando a su cargo los gastos que el mantenimiento y aseo causen. O) La Arrendataria deberá pagar toda clase de impuestos, tasas y contribuciones fiscales, así como municipales que dieren lugar por la construcción y operación de las Plantas.Y P) La Arrendataria será responsable de reforestar el área correspondiente de la porción número TRES incluida en los veintiséis mil cuatrocientos treinta y uno punto cero nueve metros cuadrados agregados al terreno arrendado, según lo requerido por el Ministerio de Medio Ambiente y Recursos Naturales a la CEPA,

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siempre y cuando con ello no se afecte el desarrollo normal del proyecto.**SEXTA:OBLIGACIONES Y DERECHOS DE CEPA: A)** Independientemente del canon de arrendamiento, cualquier servicio básico (energía eléctrica o agua potable) que la Arrendataria requiriese y que la CEPAtenga factibilidad de proveerlo, tendrá que ser pagado conforme el régimen tarifario vigente del Puerto de Acajutla,por lo que en caso de ser requeridos, éstos deberán ser pagados conforme las disposiciones del mismo; así también, correrá por su cuenta el mantenimiento del área arrendada desde el momento que inicia la relación contractual. **B)** Todo permiso que corresponda otorgar a CEPA y que fuese solicitado por la Arrendataria, esta última deberá solicitarlo por escrito con al menos cuarenta y ocho horas de anticipación y su procedencia será analizada por la Comisión, debiendo ser concedido siempre que cumpla con los requisitos legales y normativos, y no afecte las operaciones portuarias y/o los intereses de la Comisión. **C)** LaCEPA se reserva el derecho de objetar e impedir únicamente aquellos trabajos propios del inmueble arrendado que pudieran afectar la seguridad del muelle y las instalaciones portuarias en tierra y en mar. **D)** Es expresamente entendido que la CEPA no asume responsabilidad alguna de tipo laboral o de cualquier otra clase, respecto al personal técnico y operarios que la Arrendataria emplee en el mantenimiento y operación del proyecto de generación de energía eléctrica, siendo la Arrendataria directamente responsable de la conducta de su propio personal y de las medidas de seguridad y prevención respectivas, para el mejor desempeño de las funciones que le correspondan al mismo. **E)** Previo aviso a la Arrendataria, laCEPA tendrá el derecho de supervisar el tipo y la calidad de las obras que ésta ejecute, así como de señalarle los puntos técnicos a cumplir en donde la Comisión tenga interés, por existir la posibilidad que puedan interferir en las operaciones del Puerto. **SÉPTIMA:PRECIO DEL ARRENDAMIENTO: A)** ENERGÍA DEL PACIFICOpagará a la CEPA, en concepto de canon del presente arrendamiento, la cantidad de **CUATRO DÓLARES DE LOS ESTADOS UNIDOS DE AMÉRICA CON CUATRO CENTAVOS DE DÓLAR** por metro cuadrado al año,

más el respectivo Impuesto a la Transferencia de Bienes Muebles y a la Prestación de Servicios (IVA). Dicho canon será ajustable anualmente de acuerdo al índice de inflación acumulado al mes de octubre de cada año publicado por el Banco Central de Reserva de El Salvador, aplicable a partir del uno de enero de dos mil catorce y, en su defecto, al que proporcione cualquier otra Institución Gubernamental competente en esa materia. Los cánones antes mencionados se pagarán por cuotas trimestrales, anticipadas y sucesivas, pagaderas durante los primeros treinta y cinco días calendario del inicio de cada trimestre. Y **B)** La Arrendataria acepta pagar a la CEPA un incremento en términos reales del canon de arrendamiento a partir del año once de la operación comercial (año calendario dos mil veintiocho). La forma de materializar dicho incremento será que el canon (dólares de los Estados Unidos de América por metro cuadrado el año) vigente para el año dos mil veintiocho, será igual al mayor de los dos valores siguientes: **Uno)** Canon del año dos mil veintisiete, multiplicado por (Uno más Inflación publicada por el Banco Central de Reserva de El Salvador); o **Dos)** Canon del año dos mil veintisiete, multiplicado por (Uno más veinticinco por ciento). A partir del año dos mil veintinueve, los ajustes retomarán el formato habitual de inflación publicada por el Banco Central de Reserva de El Salvador. **OCTAVA:PLAZO DEL CONTRATO:** El plazo del presente arrendamiento es del período comprendido a partir del día cinco de diciembre de dos mil trece hasta el día treinta y uno de diciembre de dos mil treinta y siete, ambas fechas incluidas.El plazo del contrato podrá prorrogarse por períodos iguales y deberá ser solicitado por la Arrendataria al menos con noventa días de anticipación a la finalización del contrato, a lo cual se resolverá favorablemente siempre y cuando la Arrendataria haya cumplido a satisfacción de la Arrendante con todas las obligaciones contractuales. Asimismo, la solicitud de prórroga anterior deberá ser resuelta por la CEPA dentro de los sesenta días siguientes a su recepción. En caso de otorgarse la prórroga del plazo del contrato, la Arrendataria reconoce que todas las condiciones económicas derivadas del mismo deberán renegociarse en el momento en que se proceda a gestionar la materialización de dicha prorroga.

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NOVENA:CONTRATACIÓN DE SEGURO: La Arrendataria deberá contratar una Póliza de Seguro de Responsabilidad Civil (en adelante PRC) emitida a su nombre, con cobertura de daños a terceros, en sus bienes y personas, incluyendo los daños a bienes propiedad de la Comisión y lesiones o muerte a empleados de la CEPA o que se encuentren a su servicio, siempre y cuando ocurran dentro del inmueble objeto del presente contrato y sean directamente atribuibles a la Arrendataria; además deberá incluir la cláusula de Responsabilidad Civil Cruzada y de Contaminación. Dicha póliza deberá estar vigente por el plazo contractual y/o renovarse anualmente hasta la finalización del mismo en forma anticipada a la finalización de cada año fiscal o bien, presentar un documento equivalente que ampare la cobertura mencionada, la que deberá ser de conformidad a la evaluación de las actividades de la Arrendataria, según lo determinen los asesores de seguros de la CEPA. La PRC referida será escalonada correspondiendo la primera parte a la fase previa a la construcción de las instalaciones, a fin de que los asesores de seguro de CEPA determinen el monto de la misma en función de la información que ENERGÍA DEL PACIFICO provea al respecto, esta Póliza deberá presentarse sesenta días después de haber notificado la CEPA el monto requerido y deberá estar vigente hasta que se presente la PRC de la fase de construcción. Tres meses calendario antes de iniciar la fase de construcción, la Arrendataria deberá suministrar información detallada de las actividades del proceso de construcción que permitan a los asesores de seguro de la CEPA establecer el monto de la PRC durante esa fase, esta Póliza deberá presentarse sesenta días después de haber notificado la CEPA el monto requerido y deberá estar vigente hasta que se presente la PRC de la fase de operación. Tres meses calendario antes de iniciar la fase de operación, la Arrendataria deberá suministrar información detallada de las actividades del proceso de operación que permitan a los asesores de seguro de la CEPA establecer el monto de la PRC durante esa fase, esta Póliza deberá presentarse sesenta días después de haber notificado la CEPA el monto requerido y deberá estar vigente hasta sesenta días después del vencimiento del Contrato. Por último, en aras de evitar

que debido a la operatividad de la Arrendataria se incrementen los costos del seguro comprendido dentro de la Póliza Paquete de CEPA, al momento de contratar la PRC los asesores de seguros de las Partes deberán realizar las diligencias pertinentes a fin de armonizar las coberturas de ambas pólizas, es decir, de la PRC y la Póliza Paquete de CEPA, a fin de limitar los riesgos y costos derivados de las mismas. **DÉCIMA: CESIÓN Y FINANCIAMIENTO DEL PROYECTO:A)** Los derechos del presente contrato podrán ser cedidos o traspasados por la Comisión, a cualquier título, si la cesión o traspaso fuere a una entidad o institución que por disposición expresa de las leyes salvadoreña fuere encargada o cesionaria de la operación del Puerto de Acajutla, siempre y cuando las obligaciones de la CEPA y los derechos de la Arrendataria que deriven del presente Contrato se mantengan en las mismas condiciones y términos pactados. **B)**ENERGÍA DEL PACIFICO podrá ceder los derechos y obligaciones que deriven del presente Contrato a una nueva sociedad, previa la autorización por escrito concedida por la CEPA y para lo cual, deberá presentar copia certificada de la aprobación otorgada por parte de la Superintendencia General de Electricidad y Telecomunicaciones o quien haga sus veces para ese mismo propósito, a fin de realizar la modificación contractual respectiva. La CEPA dispondrá de treinta días calendario para dar su respuesta a la petición de cesión presentada por ENERGÍA DEL PACIFICO. En caso que sean cedidos los derechos y obligaciones del presente Contrato, el cesionario deberá comunicar a la Comisión sobre cualquier situación que implique o afecte sus obligaciones en el presente Contrato, relacionadas con obligaciones adquiridas en procesos licitatorios vinculados con la generación y/o suministro de energía eléctrica. **DÉCIMA PRIMERA:TERMINACIÓN DEL CONTRATO:** El plazo del presente Contrato finaliza el día treinta y uno de diciembre del año dos mil treinta y siete, según se estipula en la cláusulaOCTAVAanterior, pero podrá darse por terminado antes de su vencimiento por mutuo acuerdo de las partes o debido al incumplimiento de cualquiera de las obligaciones contraídas por las partes según este Contrato. **DÉCIMA SEGUNDA: GARANTÍA DE CUMPLIMIENTO DE CONTRATO:** La Arrendataria deberá presentar, a más tardar cuarenta y cinco

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días calendario después de la fecha de suscripción del Contrato, una Garantía de Cumplimiento de Contrato por un monto inicial de **DOSCIENTOS VEINTINUEVE MIL DÓLARES DE LOS ESTADOS UNIDOS DE AMÉRICA** exactos, equivalente a seis meses de arrendamiento más el Impuesto a la Transferencia de Bienes Muebles y a la Prestación de Servicios (IVA) respectivo, la cual estará vigente por el plazo de un año más sesenta días adicionales y deberá renovarse anualmente durante el plazo del Contrato o en su defecto, la Arrendataria podrá pagar por adelantado el canon total del arrendamiento correspondiente a cada año, en cuyo caso no deberá rendirse dicha garantía. Esta garantía se hará pagadera al primer requerimiento de la Comisión a la Arrendataria y deberá constituirse en la forma y el contenido indicado por ésta. La ejecución de la presente garantía como consecuencia del incumplimiento de las obligaciones derivadas del presente Contrato constituye causa de terminación anticipada del mismo, sin responsabilidad para la Comisión. De no existir reclamos pendientes de ser pagados por parte de ENERGÍA DEL PACIFICO, la garantía le será devuelta por la CEPA dentro de los treinta días calendario siguientes contados desde la fecha de finalización del plazo de su vigencia. **DÉCIMA TERCERA: OTRAS OBLIGACIONES DE LAS PARTES: A)** CEPA se compromete a otorgar un Contrato de Servidumbre a favor de ENERGÍA DEL PACIFICO, a partir de la fecha de inicio de la construcción de la conexión entre la Planta Generadora de Energía Eléctrica y el muelle. A dicha servidumbre se le aplicará el canon vigente a ese momento por ese tipo de contratos, que rigen para franjas de terrenos de setenta centímetros de ancho por cada tubería que se instale y por cada metro lineal de recorrido de la misma; la franja de terreno para dicha servidumbre será determinada por mutuo acuerdo. **B)** ENERGÍA DEL PACIFICO pagará a la CEPA, además del correspondiente canon derivado del Contrato de Servidumbre y en concepto de derecho de otorgamiento de contrato de largo plazo, la suma de diez centavos de dólar de los Estados Unidos de América por cada barril de producto descargado porENERGÍA DEL PACIFICO, a partir de la fecha de inicio de la operación (en dólares de

los Estados Unidos de América por unidad de volumen), más el Impuesto a la Transferencia de Bienes Muebles y a la Prestación de Servicios (IVA), el cual será ajustable anualmente de acuerdo al índice de inflación acumulado al mes de octubre de cada año publicado por el Banco Central de Reserva de El Salvador, aplicable a partir del día uno de enero de dos mil catorce. Además, ENERGÍA DEL PACIFICOpagará el uso de servicios que requiriese para su operación, de acuerdo al régimen tarifario vigente. **DÉCIMA CUARTA:OBEDIENCIA A REGULACIONES DE LA CEPA.** La Arrendataria observará y obedecerá todas las regulaciones, planes de seguridad e instructivos que la CEPA emita para el Puerto de Acajutla y que sean notificados en debida forma; asimismo, será responsable de que éstos sean acatados por su personal, clientes, visitantes y suministrantes. Queda expresamente convenido que la Arrendataria no tendrá derecho a formular reclamación alguna por cualquier daño, molestia o inconveniente que pudieren surgir como consecuencia del incumplimiento de dichas regulaciones. **DÉCIMA QUINTA: MODIFICACIONES.** La Comisión y ENERGÍA DEL PACIFICO podrán mediantemutuo acuerdo modificar, enmendar o cambiar el presente Contrato de Arrendamiento y demás documentos que lo integran, debiendo documentarlo para que surta efectos legales por medio de instrumentos debidamente autorizados y suscritos por ambas Partes. Las modificaciones, enmiendas o cambios adoptados por las Partes de conformidad a lo acordado en esta cláusula formarán parte integrante del Contrato de Arrendamiento y por lo tanto, serán de estricto cumplimiento. **DÉCIMA SEXTA:REGISTRO.** Sin que en ninguna medida se afecte la validez y vigencia del Contrato de Arrendamiento y sus efectos frente a terceros, las Partes convienen en que la Arrendataria podrá efectuar la inscripción del presente Contrato de Arrendamiento en el Registro de la Propiedad correspondiente y se cerciorará de que se efectúen las anotaciones correspondientes, de modo que las cargas o limitaciones que se imponen para la enajenación o gravamen del inmueble sean oponibles a terceros. Los costos de la inscripción correrán por cuenta de la Arrendataria. **DÉCIMA SÉPTIMA:SOLUCIÓN DE CONFLICTOS CONTRACTUALES: A)**Trato Directo: En caso de surgir

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diferencias o conflictos entre las Partes durante la ejecución del presente contrato, éstas acuerdan procurar la solución de tales diferencias amigablemente mediante el Trato Directo, sin otra intervención que la de ellos mismos, sus representantes o delegados especialmente acreditados. B)Arbitraje: Cualquier controversia, excepto las establecidas en la letra C) abajo relacionada, que dentro de un plazo de treinta días hábiles no hubiere podido ser resuelta en la fase de Trato Directo, será sometida a conocimiento de árbitros de derecho, nombrados de acuerdo a lo dispuesto en la legislación vigente. El tribunal de arbitraje estará integrado por tres árbitros, nombrados uno por cada parte y dentro de los quince días hábiles siguientes a la fecha en que una de las partes notifique por escrito a la otra su decisión de someter a arbitraje la controversia; y el tercer árbitro, quién actuará como presidente del tribunal, será nombrado por los dos primeros árbitros, quienes tendrán un plazo no mayor a diez días hábiles para designarlo. Si una de las partes no procede a la designación de su árbitro dentro del plazo de quince días hábiles o si los árbitros ya designados no logran ponerse de acuerdo en el nombramiento del tercero dentro de los diez días hábiles que antes se indican, cualquiera de las partes podrá acudir al Centro de Mediación, Conciliación y Arbitraje de la Cámara de Comercio e Industria de El Salvador, para que se haga la designación correspondiente. La sede del arbitraje será en El Salvador, se regirá bajo la legislación salvadoreña y deberá conducirse en idioma castellano. Los gastos de arbitraje serán pagados por cada una de las partes según corresponda, con excepción del tercer árbitro, cuyos costos serán cubiertos en un cincuenta por ciento por cada una de las partes. C) No podrá ser materia de arbitraje el cobro de lo adeudado a CEPA en concepto de cánones de arrendamiento, tarifas aplicables por este Contrato y toda otra suma adeudada en cualquier concepto, pudiendo en este caso la CEPA reclamarlos por la vía ejecutiva. **DÉCIMA OCTAVA: CASO FORTUITO O FUERZA MAYOR:** No se considerará que las partes hayan incumplido las obligaciones del presente Contrato, si tales incumplimientos derivan o son consecuencia directa de eventos de fuerza mayor o caso

fortuito de acuerdo con la ley. Para ello, la parte afectada por cualquiera de tales hechos tendrá que notificar a la otra dicha situación por escrito, a fin de suspender sus obligaciones según lo establecido en esta Cláusula. **DÉCIMANOVENA: LUGAR PARA RECIBIR NOTIFICACIONES:** La Comisión señala como dirección para recibir notificaciones o comunicaciones sus oficinas situadas en el cuarto nivel del Edificio Torre Roble, ciudad y departamento de San Salvador, las cuales deberán ser dirigidas con atención al Gerente Legal de la CEPA y ENERGÍA DEL PACIFICOseñala para el mismo fin sus oficinas situadas en Edificio Avante, Nivel siete, Oficina setecientos nueve, Calle Llama del Bosque Poniente, Urbanización Madreselva III Etapa, Antiguo Cuscatlán, departamento de La Libertad, las cuales deberán ser dirigidas con atención al Licenciado Eduardo Antonio Zablah TouchеHasbún. Ambas partes se comprometen a notificar a la otra sobre cualquier cambio de dirección, de lo contrario se tendrán por válidas las notificaciones realizadas en la dirección indicada en este instrumento. **VIGÉSIMA:DOMICILIO Y RENUNCIAS.** El presente contrato estará sujeto y se interpretará de acuerdo a las leyes de la República de El Salvador. Designan los contratantes como domicilio especial el de esta ciudad, a la competencia de cuyos tribunales se someten para la ejecución del laudo respectivo. Así se expresaron los comparecientes, a quienes expliqué los efectos legales de la presente escritura, y yo, el suscrito Notario, **DOY FE:** De ser legítimas y suficientes las personerías con que comparecen: **A)**El señor **EMÉRITO DE JESÚS VELÁSQUEZ MONTERROZA**, conocido por **EMÉRITO DE JESÚS VELÁSQUEZ MONTERROSA**, en calidad de Gerente General y Apoderado General Administrativo de la **COMISIÓN EJECUTIVA PORTUARIA AUTÓNOMA**, por haber tenido a la vista: I) Testimonio de Escritura Pública de Poder General Administrativo, otorgado en esta ciudad, a las catorce horas del día seis de junio de dos mil catorce, ante los oficios notariales de José Rafael Larromana Escobar, del cual consta que el Ingeniero Nelson Edgardo Vanegas Rodríguez, en su calidad de Presidente y Representante Legal de la Comisión, confirió Poder General Administrativo a favor del señor Emérito De Jesús Velásquez Monterroza, conocido por Emérito De Jesús Velásquez Monterrosa, teniendo dentro

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de sus facultades la realización de actos como el presente. Asimismo, el notario autorizante dio fe de la existencia legal de CEPA, así como de la personería y facultades con que actuó el Ingeniero Nelson Edgardo Vanegas Rodríguez en su calidad antes expresada, por lo que el compareciente se encuentra ampliamente facultado para otorgar el presente instrumento. Dicho Poder no será agregado al legajo de anexos por no agotarse con el otorgamiento de la presente Escritura Pública; II)Certificación del Punto SEGUNDO del Acta Número DOS MIL SEISCIENTOS CUARENTA de la Sesión de Junta Directiva de la Comisión Ejecutiva Portuaria Autónoma celebrada el día veintinueve de mayo del corriente año, extendida en esta ciudad el día catorce de los corrientes y por medio de la cual, entre otros puntos,consta que se autorizó al Gerente General de esa Comisiónpara firmar el presente instrumento; y, **B)**El señor**EDUARDO ANTONIO ZABLAH HASBÚN**, conocido por **EDUARDO ANTONIO ZABLAH TOUCHÉ HASBÚN**, actuando en nombre y representación, en su calidad de Presidente de la Junta Directiva y Representante Legal de **"ENERGÍA DEL PACÍFICO, SOCIEDAD ANÓNIMA DE CAPITAL VARIABLE"**, que puede abreviarse **"ENERGÍA DEL PACÍFICO, S.A. DE C.V."** y **"EDP, S.A. DE C.V."**, por haber tenido a la vista: I)Testimonio de la Escritura Pública de Constitución de la sociedad "ENERGÍA DEL PACÍFICO, SOCIEDAD ANÓNIMA DE CAPITAL VARIABLE", que puede abreviarse "ENERGÍA DEL PACÍFICO, S.A. DE C.V." y "EDP, S.A. DE C.V.", otorgada en Antiguo Cuscatlán, departamento de La Libertad, a las nueve horas del día doce de diciembre de dos mil trece, ante los oficios del Notario Piero Antonio Rusconi Gutiérrez e inscrita en el Registro de Comercio bajo el Número CUARENTA Y DOS del Libro TRES MIL CIENTO NOVENTA Y CINCO del Registro de Sociedades, el día trece de diciembre de dos mil trece, de la cual consta que su naturaleza, denominación y domicilio son los que se han expresado con anterioridad, que su plazo es indefinido, que dentro de sus finalidades se encuentran el otorgamiento de actos como el presente, que la administración de dicha Sociedad le ha sido conferida a una Junta Directiva, que la Representación Judicial y Extrajudicial y el uso de la firma social le corresponden al Presidente de la

misma, quien durará en el desempeño de su cargo por un periodo de cinco años, constando además en dicho instrumento el nombramiento del compareciente como Director Presidente, estando vigente dicho nombramiento; yii)Certificación del PUNTO TERCERO del Acta número OCHO de Junta Directiva, extendida en Antiguo Cuscatlán el día catorce de los corrientes, de la que consta que en la Sesión de Junta Directiva celebrada el día diez de junio del corriente año, se autorizó al compareciente para firmar el presente contrato en las condiciones expresadas, por lo que se encuentra facultado legalmente para comparecer a otorgar este instrumento. Leído que les hube todo lo escrito, íntegramente y en un solo acto ininterrumpido, manifiestan su conformidad, ratifican su contenido y firmamos. **DOY FE.** Entrelínea: cero dos tres siete – cero cero siete – ocho personería que mas. Valen.

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MARIO EDUARDO AYALA CLAROS NOTARIO REPUBLICA DE EL SALVADOR

SO ANTE MÍ, del folio treinta y ocho frente al folio cuarenta y nueve vuelto de mi Libro de Protocolo número UNO, que caduca el día veinticinco de marzo del año dos mil quince y, para ser entregado a la sociedad ENERGÍA DEL PACÍFICO, SOCIEDAD ANÓNIMA DE CAPITAL VARIABLE, extiendo, firmo y sello el presente Testimonio en la ciudad de San Salvador, a los quince días del mes de julio del año dos mil catorce.

MARIO EDUARDO AYALA CLAROS - NOTARIO - REPUBLICA DE EL SALVADOR

EL **SUSCRITO** NOTARIO CERTIFICA: Que la presente fotocopia es fiel y conforme con su original, con el cual confronté. y que consta de tres folios, y para los efectos del Artículo treinta de la Ley del Ejercicio Notarial de la Jurisdicción Voluntaria y de Otras Diligencias, firmo y sello la presente, en la ciudad de Antiguo Cuscatlán a los seis días del mes de octubre del año dos mil catorce.

MARIO EDUARDO AYALA CLAROS - NOTARIO - REPUBLICA DE EL SALVADOR

Appendix 6E–
CEPA Laydown Area Property Letting Document

NÚMERO: ONCE **LIBRO: TERCERO**

AÑO 2016

TESTIMONIO DE ESCRITURA PÚBLICA DE PROMESA DE ARRENDAMIENTO

OTORGADO POR:

COMISIÓN EJECUTIVA PORTUARIA AUTÓNOMA

A FAVOR:

ENERGÍA DEL PACÍFICO, LTDA. DE C.V.

ANTE LOS OFICIOS DEL NOTARIO:

MARIO EDUARDO AYALA CLAROS

San Salvador, El Salvador, C.A.

002500

PAPEL PARA PROTOCOLO

DOS COLONES

CORTE SUPREMA DE JUSTICIA SECCIÓN DEL NOTARIADO REPÚBLICA DE EL SALVADOR, C.A.

VEINTISEIS DE H.

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MARIO EDUARDO AYALA CLARO'S
NOTARIO
REPUBLICA DE EL SALVADOR

LIBRO TERCERO. NÚMERO ONCE. PROMESA DE ARRENDAMIENTO. En la ciudad de San Salvador, a las quince horas con treinta minutos del día dieciocho de mayo de dos mil dieciséis. Ante mí, MARIO EDUARDO AYALA CLAROS, Notario, del domicilio de Antiguo Cuscatlán, departamento de La Libertad, se otorga el presente instrumento que contiene un contrato de PROMESA DE ARRENDAMIENTO, compareciendo: Por una parte el señor EMÉRITO DE JESÚS VELÁSQUEZ MONTERROZA, conocido por EMÉRITO DE JESÚS VELÁSQUEZ MONTERROSA, de sesenta años de edad, Ingeniero Agrícola, del domicilio de Colón, departamento de La Libertad, de mi conocimiento, portador de su Documento Único

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de Identidad número cero cero cuatro tres ocho cinco seis dos-dos, y con Número de Identificación Tributaria cero seis uno cuatro–dos cinco uno dos cinco cinco-cero cero cinco-cero, actuando en nombre y en representación en su calidad de Gerente General y Apoderado General Administrativo de la Comisión Ejecutiva Portuaria Autónoma, Institución Autónoma, de Derecho Público y Personalidad Jurídica, de este domicilio, con Número de Identificación Tributaria cero seis uno cuatro-uno cuatro cero dos tres siete-cero cero siete-ocho, personería que más adelante relacionaré, y que en adelante se denominará indistintamente "la Promisoria Arrendante", "CEPA" o "la Comisión"; y por otra parte, el señor EDUARDO ANTONIO ZABLAH HASBUN conocido por EDUARDO ANTONIO ZABLAH TOUCHÉ HASBUN, de cincuenta y nueve años edad, de nacionalidad salvadoreña, Economista, del domicilio de San Salvador, departamento de San Salvador, de mi conocimiento, con Documento Único de Identidad número cero uno cero ocho cuatro tres cero tres-seis, y Número de Identificación Tributaria cero cinco uno uno-cero nueve cero seis cinco seis-cero cero uno-nueve, actuando en su calidad de Gerente General y Representante Legal de la sociedad que gira bajo la denominación "ENERGÍA DEL PACÍFICO, LIMITADA DE CAPITAL VARIABLE" que podrá abreviarse "ENERGÍA DEL PACÍFICO, LTDA. DE C.V." y "EDP, LTDA. DE C.V.", de nacionalidad salvadoreña y del domicilio de San Salvador, departamento de San Salvador, con Número de Identificación Tributaria cero cinco cero uno-uno dos uno dos uno tres-uno cero uno-seis, personería que más adelante relacionaré, y que en el transcurso de este instrumento podrá denominarse indistintamente "la Promisoria Arrendataria", "ENERGÍA DEL PACÍFICO" o "EDP"; y ME DICEN: Que en el carácter en que actúan celebran el presente contrato de Promesa de Arrendamiento, el cual se regirá por las siguientes cláusulas: I) OBJETO DEL CONTRATO: El objeto de este contrato es la celebración de una Promesa de Arrendamiento del inmueble que se describe en la cláusula siguiente. II) DECLARACIÓN DEL DOMINIO: CEPA manifiesta por medio de su representante que es dueña y actual poseedora de un inmueble que tiene un área superficial de CUARENTA MIL OCHOCIENTOS SETENTA Y SEIS PUNTO CINCO MIL TRESCIENTOS VEINTIDÓS METROS CUADRADOS; inmueble que corresponde a la jurisdicción del municipio de Acajutla, departamento de Sonsonate, y en el cual se encuentra contenido el "Malecón Acaxual". III) PROMESA DE ARRENDAMIENTO: CEPA se compromete a arrendar a ENERGÍA DEL PACÍFICO, libre de gravamen, el inmueble relacionado en la cláusula II de este instrumento,

bajo las siguientes condiciones: a) Plazo del Contrato de Promesa de Arrendamiento: El plazo del presente Contrato de Promesa de Arrendamiento será de DOCE MESES contados a partir de su suscripción y podrá prorrogarse a potestad de CEPA por DOCE MESES, siempre que ENERGÍA DEL PACÍFICO comunique a CEPA por escrito su intención de prorrogarlo, por lo menos con noventa días de anticipación a la fecha de terminación del plazo original antes mencionado; b) Canon de la Promesa de Arrendamiento: El canon será de DIEZ CENTAVOS DE DÓLAR DE LOS ESTADOS UNIDOS DE AMÉRICA por metro cuadrado, más el respectivo Impuesto a la Transferencia de Bienes Muebles y a la Prestación de Servicios (IVA), anual, el cual en este acto es cancelado por la Sociedad ENERGÍA DEL PACÍFICO, LTDA. DE C.V. y la CEPA lo recibe a su entera satisfacción; y c) Destino del inmueble: ENERGÍA DEL PACÍFICO destinará el inmueble al desarrollo de los estudios y gestiones necesarios para la instalación de la o las tuberías de transporte de Gas Natural Licuado (GNL) y el muelle asociados al proyecto de montaje de una Planta de Regasificación de GNL y una Planta de Generación de Energía Eléctrica a su cargo y eventualmente poder ampliar la capacidad de recepción y almacenamiento de GNL del citado proyecto. IV) OBLIGACIONES DE ENERGÍA DEL PACÍFICO. La Promisoria Arrendataria se compromete a garantizar a que en la planificación y/o construcción del proyecto a su cargo, se asegurará de: a) Obtener todos los permisos y licencias necesarios para la construcción y operación del proyecto a su cargo, particularmente en lo que respecta a la o las tuberías de transporte de GNL y el muelle que servirá como terminal de recepción de dicho combustible, comprometiéndose especialmente a obtener los Permisos Ambientales que sean necesarios ante el Ministerio de Medio Ambiente y Recursos Naturales; b) Que el cumplimiento de todas las medidas preventivas y de mitigación ordenadas en la resolución de autorización del Ministerio de Medio Ambiente y Recursos Naturales, tanto para la etapa de construcción como para la etapa operativa, será sujeto de auditorías por parte del personal de CEPA – Puerto de Acajutla; c) Para la realización de las operaciones de los buques en muelles, deberá contar con un Plan de Seguridad y Salud Ocupacional así como un Plan de Contingencias que garantice la atención inmediata de cualquier evento extraordinario o emergencia que se presente, el cual será revisado y auditado por CEPA – Puerto de Acajutla; d) Las operaciones de los buques que manejarán el GNL se realizarán en el muelle que ENERGÍA DEL PACÍFICO construirá para ese fin, el cual estará ubicado en el borde costero contiguo a la

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propiedad del Puerto de Acajutla, asegurándose que en ningún momento se afecte cualquier actividad de mantenimiento del puerto a consecuencia de dicho muelle, ni las operaciones de arribo, atraque y desatraque y zarpe, estiba o desestiba de otros buques què operen simultáneamente en otros muelles del Puerto de Acajutla, limitándose la afectación de las operaciones de los buques de GNL a la franja de protección de cincuenta metros alrededor del buque, mientras éste se encuentre en operación manejando el citado combustible; e) El arribo, atraque, desatraque y zarpe de los buques que manejen GNL no requerirá la suspensión de operaciones y/o retiro de los buques que puedan estar operando en las diferentes terminales marítimas ubicados alrededor del Puerto de Acajutla; también ENERGÍA DEL PACÍFICO, se obliga a pagar toda clase de impuestos, tasas y contribuciones fiscales, así como municipales que dieren lugar por la construcción y operación del proyecto. Por otra parte, la CEPA tendrá el derecho de supervisar el tipo y la calidad de las obras que ejecute, así como indicarle los puntos técnicos a cumplir, en donde la Comisión tenga interés sobre ellas por existir la posibilidad que puedan interferir en las operaciones del Puerto. f) ENERGÍA DEL PACÍFICO deberá asumir la responsabilidad por cualquier daño que sufran las personas o bienes propios de CEPA y/o terceros que participen de los estúdios que se realicen para determinar la factibilidad de su proyecto o de cualquier otra actividad asociada a los mismos, que los obligue a estar presentes en el terreno bajo promesa de arrendamiento; g) Cualquier servicio básico (energía eléctrica o agua potable) que la Promisoria Arrendataria requiriese, tendrá que ser pagado conforme al régimen tarifario vigente del Puerto de Acajutla; h) ENERGÍA DEL PACÍFICO deberá dar cumplimiento a todas las medidas de seguridad necesarias que establecen las leyes, reglamentos y normas de seguridad reconocidas nacional e internacionalmente, incluyendo las medidas de seguridad que indique la CEPA. Y i) La Promisoria Arrendataria tiene la obligación de Reubicar y Construir con fondos propios el nuevo Malecón Acaxual, infraestructura que actualmente ocupa el área del inmueble objeto del contrato de promesa de arrendamiento. El Proyecto de reubicación y posterior construcción del nuevo Malecón Acaxual, debe ser presentado al décimo mes del plazo del presente contrato de promesa de arrendamiento y aprobado por las autoridades de CEPA, y deberá contar con los permisos y autorizaciones estatales y municipales que permitan la construcción de la infraestructura. Dicha obligación se adquiere como Condición Positiva para la suscripción del

correspondiente Contrato de Arrendamiento a la finalización del plazo del presente instrumento. V) OTRAS OBLIGACIONES: La CEPA se compromete a entregar a la Promisoria Arrendataria el inmueble objeto del presente Contrato de Promesa de Arrendamiento libre de todo gravamen y sin ocupación de ninguna oficina pública o privada, ni puestos de ventas u otros establecimientos comerciales; asimismo, dicho inmueble no deberá contar con áreas de acceso al público en general, ni tampoco mantener actividades que impidan el desarrollo de cualquier labor a realizar por ENERGÍA DEL PACÍFICO. VI) CESIÓN: a) Los derechos del presente contrato podrán ser cedidos o traspasados por la Comisión a cualquier título, si la cesión o traspaso fuere a una entidad o institución que por disposición expresa de las leyes salvadoreña fuere encargada o cesionaria de la operación del Puerto de Acajutla, siempre y cuando las obligaciones de la CEPA y los derechos de sociedad ENERGÍA DEL PACÍFICO que deriven del presente contrato se mantengan en las mismas condiciones y términos pactados. b) La sociedad ENERGÍA DEL PACÍFICO no podrá ceder los derechos y obligaciones que deriven del presente contrato sin la previa la autorización por escrito concedida por la CEPA. En el caso que ENERGÍA DEL PACÍFICO pretenda ceder los derechos y obligaciones del presente contrato, la CEPA dispondrá de treinta días calendario para dar su respuesta a la petición de cesión presentada por ENERGÍA DEL PACÍFICO. En caso que sean cedidos los derechos y obligaciones del presente contrato, el cesionario deberá comunicar a la Comisión sobre cualquier situación que implique o afecte sus obligaciones en el presente instrumento, relacionadas con obligaciones adquiridas en procesos licitatorios vinculados con la generación y/o suministro de energía eléctrica. VII) TERMINACIÓN DEL CONTRATO: a) La Comisión se reserva el derecho de dar por terminado el contrato de forma unilateral y anticipada o por la finalización del plazo, sin responsabilidad alguna para la CEPA y sin necesidad de acción judicial, cuando existan razones de interés nacional o de índole operativo del Puerto de Acajutla, y/o cuando la CEPA lo estime conveniente para los intereses propios de la Comisión, previa notificación por escrito a la Arrendataria con treinta días calendario de anticipación; b) Por mutuo acuerdo de las partes; c) Por incumplimiento de cualquiera de las obligaciones contraídas por ENERGÍA DEL PACÍFICO según el presente contrato; d) Si durante la vigencia del Contrato de Promesa de Arrendamiento, ENERGÍA DEL PACÍFICO decidiere no continuar con el contrato de forma unilateral y anticipada a la finalización del plazo; e) Si la Promisoria Arrendataria fuere declarada en quiebra

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o hiciere cesión general de sus bienes; f) Por embargo o cualquier otra clase de resolución judicial en que resulten afectados todos o parte de los equipos y demás bienes propiedad de la Promisoria Arrendataria; g) En el caso de disolución y liquidación de ENERGÍA DEL PACÍFICO por cualquiera de las causales que señala el Código de Comercio; y h) Si para cumplir con el contrato, la Promisoria Arrendataria violare o desobedeciere las leyes, reglamentos u ordenanzas de la República de El Salvador. VIII) GARANTÍA DE CUMPLIMIENTO DE CONTRATO: Para efectos de garantizar el cumplimiento de las obligaciones del Contrato de Promesa de Arrendamiento, la CEPA recibe a su entera satisfacción de parte de la Promisoria Arrendataria la cantidad de UN MIL DÓLARES DE LOS ESTADOS UNIDOS DE AMÉRICA, en concepto de Garantía de Cumplimiento de Contrato, vigente por el plazo contractual más noventa días adicionales. La Promisoria Arrendataria podrá solicitar que le sea devuelto el valor de los fondos correspondientes, contra entrega de una Garantía emitida por una afianzadora o un banco a favor y a satisfacción de la CEPA, la cual deberá estar vigente por el plazo contractual, más noventa días adicionales. IX) MODIFICACIONES. La Comisión y ENERGÍA DEL PACÍFICO podrán mediante mutuo acuerdo modificar, enmendar o cambiar el presente Contrato de Promesa de Arrendamiento y demás documentos que lo integran, debiendo documentarlo para que surta efectos legales por medio de instrumentos debidamente autorizados y suscritos por ambas partes. Las modificaciones, enmiendas o cambios adoptados por las partes de conformidad a lo acordado en esta cláusula formarán parte integrante del Contrato de Promesa de Arrendamiento y por lo tanto, serán de estricto cumplimiento. X) SOLUCIÓN DE CONFLICTOS CONTRACTUALES: a) Trato Directo: En caso de surgir diferencias o conflictos entre las Partes durante la ejecución del presente contrato, éstas acuerdan procurar la solución de tales diferencias amigablemente mediante el Trato Directo, sin otra intervención que la de ellos mismos, sus representantes o delegados especialmente acreditados. b) Arbitraje: Cualquier controversia que dentro de un plazo de treinta días hábiles no hubiere podido ser resuelta en la fase de Trato Directo, será sometida a conocimiento de árbitros de derecho nombrados de acuerdo a lo dispuesto en la legislación vigente. El tribunal de arbitraje estará integrado por tres árbitros nombrados uno por cada parte y dentro de los quince días hábiles siguientes a la fecha en que una de las partes notifique por escrito a la otra su decisión de someter a arbitraje la controversia, y el tercer árbitro, quién actuará como presidente del tribunal, será

nombrado por los dos primeros árbitros, quienes tendrán un plazo no mayor a diez días hábiles para designarlo. Si una de las partes no procede a la designación de su árbitro dentro del plazo de quince días hábiles o si los árbitros ya designados no logran ponerse de acuerdo en el nombramiento del tercero dentro de los diez días hábiles que antes se indican, cualquiera de las partes podrá acudir al Centro de Mediación, Conciliación y Arbitraje de la Cámara de Comercio e Industria de El Salvador para que se haga la designación correspondiente. La sede del arbitraje será en El Salvador, se regirá bajo la legislación salvadoreña y deberá conducirse en idioma castellano. Los gastos de arbitraje serán pagados por cada una de las partes según corresponda, con excepción del tercer árbitro, cuyos costos serán cubiertos en un cincuenta por ciento por cada una de las partes. XI) LUGAR PARA RECIBIR NOTIFICACIONES: La Comisión señala como dirección para recibir notificaciones o comunicaciones sus oficinas situadas en el cuarto nivel del Edificio Torre Roble, ciudad y departamento de San Salvador, las cuales deberán ser dirigidas con atención al Gerente Legal de la CEPA; y ENERGÍA DEL PACÍFICO señala para el mismo fin sus oficinas situadas en Edificio Avante, Nivel siete, Oficina setecientos nueve, Calle Llama del Bosque Poniente, Urbanización Madreselva III Etapa, Antiguo Cuscatlán, departamento de La Libertad, las cuales deberán ser dirigidas con atención al Director Ejecutivo. Ambas partes se comprometen a notificar a la otra sobre cualquier cambio de dirección, de lo contrario se tendrán por válidas las notificaciones realizadas en la dirección indicada en este instrumento. XII) DOMICILIO Y RENUNCIAS. El presente contrato estará sujeto y se interpretará de acuerdo a las leyes de la República de El Salvador. Designan los contratantes como domicilio especial el de esta ciudad, a la competencia de cuyos tribunales se someten para la ejecución del laudo respectivo. Así se expresaron los comparecientes, a quienes expliqué los efectos legales de la presente escritura, y yo, el suscrito Notario, DOY FE: De ser legítimas y suficientes las personerías con que comparecen: A) El señor EMÉRITO DE JESÚS VELÁSQUEZ MONTERROZA, conocido por EMÉRITO DE JESÚS VELÁSQUEZ MONTERROSA, en calidad de Gerente General y Apoderado General Administrativo de la COMISIÓN EJECUTIVA PORTUARIA AUTÓNOMA, por haber tenido a la vista: i) Testimonio de Escritura Pública de Poder General Administrativo otorgado en esta ciudad, a las catorce horas del día seis de junio de dos mil catorce, ante los oficios notariales de José Rafael Larromana Escobar, del cual consta que el Ingeniero Nelson Edgardo Vanegas Rodríguez, en

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su calidad de Presidente y Representante Legal de la Comisión, confirió Poder General Administrativo a favor del señor Emérito de Jesús Velásquez Monterroza, conocido por Emérito de Jesús Velásquez Monterrosa, teniendo dentro de sus facultades la realización de actos como el presente. Asimismo, el notario autorizante dio fe de la existencia legal de CEPA, así como de la personería y facultades con que actuó el ingeniero Nelson Edgardo Vanegas Rodríguez en su calidad antes expresada, por lo que el compareciente se encuentra ampliamente facultado para otorgar el presente instrumento. Dicho Poder no será agregado al legajo de anexos por no agotarse con el otorgamiento de la presente Escritura Pública; y ii) Certificación del Punto Octava del Acta Número Dos mil setecientos ochenta de la Sesión de Junta Directiva de la Comisión Ejecutiva Portuaria Autónoma, celebrada el día diecinueve de abril de dos mil dieciséis, donde consta que se autorizó al Gerente General de esa Comisión para firmar el presente instrumento; y B) El señor EDUARDO ANTONIO ZABLAH HASBÚN conocido por EDUARDO ANTONIO ZABLAH TOUCHÉ HASBÚN, en su calidad de Gerente General y Representante Legal de la sociedad que gira bajo la denominación "ENERGÍA DEL PACÍFICO, LIMITADA DE CAPITAL VARIABLE" que podrá abreviarse "ENERGÍA DEL PACÍFICO, LTDA. DE C.V." y "EDP, LTDA. DE C.V.", por haber tenido a la vista: i) Testimonio de la Escritura Pública de Modificación de la referida Sociedad, en la cual se reúne en un solo instrumento todas las cláusulas y estatutos que actualmente la rigen, otorgada en la ciudad de San Salvador a las catorce horas con treinta minutos del día dieciocho de abril del año dos mil dieciséis, ante mis oficios notariales, inscrita bajo el Número NOVENTA Y SIETE del Libro TRES MIL QUINIENTOS SETENTA Y UNO del Registro de Sociedades del Registro de Comercio, y de la que consta que la denominación, naturaleza y domicilio son los antes expresados, que su plazo es indeterminado, que dentro de su finalidad se encuentra comprendido el otorgamiento de actos como el presente, que la administración de la Sociedad está confiada a un Consejo de Gerentes conformado por el número de Gerentes determinado por la Junta General, el cual deberá incluir un Gerente General y cuyos miembros durarán en sus funciones por un tiempo indeterminado hasta su remoción, que la representación legal corresponde al Gerente General pudiendo otorgar actos como el presente; ii) Credencial de Nombramiento de Gerentes inscrita en el Registro de Comercio al número OCHENTA Y OCHO del Libro TRES MIL QUINIENTOS SETENTA Y CINCO del Registro de Sociedades, con fecha once de mayo de dos

mil dieciséis, en la que consta el nombramiento del compareciente como Gerente General, estando vigente dicho nombramiento a la fecha; y iii) Certificación del punto de acta de Consejo de Gerentes extendida en ésta ciudad el día once de los corrientes, de la que consta que en el punto TERCERO de la sesión de Consejo de Gerentes celebrada a las ocho horas con treinta minutos de ese mismo día, se autorizó al compareciente para firmar el presente contrato en las condiciones expresadas, por lo que se encuentra facultado legalmente para comparecer en el presente instrumento. DOY FE.

MARIO EDUARDO AYALA CLAROS
NOTARIO
REPÚBLICA DE EL SALVADOR

SO ANTE MÍ, del folio **VEINTISÉIS** vuelto al folio **TREINTA** vuelto de mi Libro de Protocolo número **TRES**, que caduca el día diecisiete de diciembre del año dos mil dieciséis, y para ser entregado a la **ENERGÍA DEL PACÍFICO, LTDA. de C.V.** extiendo, firmo y sello el presente Testimonio de Escritura Pública de Promesa de Arrendamiento. En la ciudad de San Salvador, a los dieciocho días del mes de mayo del año dos mil dieciséis.

MARIO EDUARDO AYALA CLAROS
NOTARIO
REPÚBLICA DE EL SALVADOR

Appendix 6F–
MARN Registry of Consultants

UNIDOS CRECEMOS TODOS

MARN RESOLUTION-RPSEA-PN No. 76/2014

Ministry of Environment and Natural Resources, San Salvador, twenty-seventh of August of two thousand fourteen. Considering the steps taken by the engineer José Rodolfo Montufar Guardo, in his capacity as Legal Representative of the Company ECO INGENIEROS, S.A. DE CV, of Salvadoran nationality, with Tax Identification Number zero six hundred fourteen - two hundred and forty thousand five hundred and ninety - five, who requests this Ministry that in compliance with the provisions of Article 47 of the General Regulation of the Law Of the Environment, for its registration to be renewed in the Registry of Service Providers of Studies of Environmental Impact and Environmental Diagnostics and Audits of Environmental Assessment. EA Ministry of Environment and Natural Resources through the General Direction of Environmental Assessment and Compliance.

CONSIDERING THAT:

I. On the thirteenth day of January of the year one thousand nine hundred and ninety-nine, this Ministry issued MARN-DCA-EIA-030/99, in which it was decided that the Company ECO INGENIEROS, SA DE CV, was registered under the number ONE (1), as Service Provider of Environmental Impact Study, Environmental Diagnostics.

II. On the twenty-fifth day of August of the year two thousand and fourteen, the application for renewal of the Registry of Service Provider, by the engineer JOSE RODOLFO MONTUF AR GUARDADO, in his capacity as Legal Representative of the company ECO INGENIEROS, S.A DE C.V. It was verified that the documentation presented complied with the requirements established in Article 47 of the General Regulation of the Environmental Law.

SO:

In accordance with the provisions of the previous recitals, the Environmental Law and its General Regulations.

RESOLVES:

1. GRANT THE RENEWAL OF REGISTRATION WITH THE **NUMBER ONE (1),** AS PROVIDER OF SERVICES OF ENVIRONMENTAL IMPACT STUDIES AND ENVIRONMENTAL DIAGNOSIS, to the company ECO INGENIEROS, SA DE CV, with Tax Identification Number zero six hundred fourteen - two hundred and forty thousand five hundred Ninety-five - hundred two - zero, legally represented by engineer Jose Rodolfo

Montufar Guardado, who meets the requirements established in Article 47 of the General Regulation of the Law of the Environment.

2. This resolution shall be valid for THREE (3) years counted from the date of its issuance, that is, from August twenty-seventh, two thousand fourteen, to August twenty-seventh of the year two thousand and seventeen, upon expiration of the term, it shall request its renewal, with the presentation of the corresponding form and its documentation attached to this Portfolio.

3. That the Lender of Environmental Services will keep the same number with which it was Certified and Registered in this State Portfolio.

4. That this resolution does not authorize the bearer to perform environmental technical services or activities related to Environmental Assessment Audits, solely from Environmental Impact Studies and Environmental Diagnostics.

5. The Provider of Environmental Impact Studies Services shall keep confidential and professional secrecy of the information and documentation to which they have access for the rendering of their services, in each particular case.

6. That any modification that the Service Provider intends to make to the present resolution, should request the Ministry of Environment and Natural Resources by means of a note with their respective annexes that justify such modification.

7. That the Service Provider may not be a reference of the holder in the Ministry of Environment and Natural Resources, to present or receive notifications or other documentation related to the Environmental Assessment Process, its operation will only consist of the Elaboration of the Study of Environmental Impact, the above with the purpose of avoiding conflicts of interest.

8. That the Service Provider must not provide their telephone numbers or office address, as a place of notification, all of the above must be information of the Project owner.
9. That the Lender of Environmental Services can only render its services within its professional specialization.

10. That the Service Provider, who for any reason enters the Ministry of Environment and Natural Resources, for any type of hiring; Must submit an Affidavit, duly notarized with the list of Projects of Environmental Impact Studies in which it has participated directly or indirectly; And so it is also made known that in compliance with what is established in Article 43 of the General Regulation of the Environmental Law, if for any reason to enter this State Portfolio, under any modality of contract will be temporarily disabled for the realization Of Environmental Impact Studies and Environmental Diagnostics, while providing its service in this Institution.

11. The Environmental Service Provider must have basic knowledge of the legal system that regulates the activity, work or project in which he will develop the Impact Study Environmental and Environmental Diagnosis.

12. That the Environmental Services Provider submitted to this Portfolio of State documents confirming the renewal of the registration of the Providers of Environmental Studies and Environmental Diagnostic Services and that it complies with the requirements established in Article 47 of the General Regulations of the Environmental Law.

13. The Ministry may unsubscribe from the Registry to the Environmental Impact Assessment Services Provider for any of the following causes: a) For having provided false or notoriously incorrect information for registration, b) For submitting to the Environmental Impact Studies and In the Environmental Diagnostics, false or incorrect information or omit information due to negligence, bad faith or fraud, that entails the commission of an environmental infraction in accordance with Article 86 of the Environmental Law, c) For presenting Environmental Impact Studies that do not Meet the relevant technical and scientific quality and that do not comply with the general characteristics established in the Law and its regulations, d) For non-compliance with the content of this resolution, e) And the others indicated in Article 47 A, Of the General Regulation of the Law of the Environment.

14. According to the above, the Ministry may at any time send to the Environmental Impact Study Service Provider, Administrative Sanctional note for infraction to the Environmental Medication Law, from which a copy will also be sent to your personal file Of Service Provider that is in this Ministry. And if the non-compliance of the Environmental Service Provider is persistently repeated, it will be submitted to the Desinscription Process established in Article 47 A of the General Regulation of the Environmental Law.

15. That the contents of note: MARN-DCA-EIA-030/99, of thirteenth of January of nineteen hundred and ninety-nine, is without effect.

The present Resolution is signed in two (2) original, and the same will come into effect as of the day of its issuance.- **COMMUNICATE – GENERAL DIRECTOR FOR ENVIRONMENTAL EVALUATION AND COMPLIANCE, SILVIA MARGARITA HERNANDEZ DE LARIOS (f).**

Lic. Silvia Margarita Hernández de Larios
Directora General de Evaluación y
Cumplimiento Ambiental

MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES
UNIDOS CRECEMOS TODOS

RESOLUCION MARN-RPSEA-PN No. 73/2014

Ministerio de Medio Ambiente y Recursos Naturales, San Salvador, dieciocho de agosto de dos mil catorce. Vistas las diligencias promovidas por LEONORA MARGARITA FERRER MORAN, Arquitecta, del domicilio San Salvador, departamento de San Salvador, y con Documento Único de Identidad Personal Número: cero cero nueve nueve cuatro seis seis nueve - tres, quien solicita a este Ministerio que en cumplimiento a lo establecido en el artículo 47 del Reglamento General de la Ley del Medio Ambiente, se le renueve su inscripción en el Registro de Prestadores de Servicios de Estudios de Impacto Ambiental y Diagnósticos Ambientales y Auditorias de Evaluación Ambiental. El Ministerio de Medio Ambiente y Recursos Naturales a través de la Dirección General de Evaluación y Cumplimiento Ambiental.

CONSIDERANDO QUE:

I. Con fecha uno de diciembre de mil novecientos noventa y ocho, este Ministerio emitió la nota MARN-CA-EIA-197/99, en la cual se resolvió que la profesional LEONORA MARGARITA FERRER MORAN, fuera inscrita bajo el número ONCE (11), como Prestador de Servicio de Estudio de Impacto Ambiental, Diagnósticos Ambientales.

II. Con fecha trece de agosto de dos mil catorce, ingresó a este Ministerio la Solicitud de renovación del Registro de Prestador de Servicios, por parte de la arquitecta LEONORA MARGARITA FERRER MORAN. Se verificó que la documentación presentada cumplió con los requisitos establecidos en el Artículo 47 del Reglamento General de la Ley del Medio Ambiente.

POR TANTO:

De conformidad a lo dispuesto en los considerando anteriores, la Ley del Medio Ambiente y su Reglamento General.

RESUELVE:

1. OTORGAR LA RENOVACIÓN DE LA INSCRIPCION CON EL **NUMERO ONCE (11),** COMO PRESTADOR DE SERVICIOS DE ESTUDIOS DE IMPACTO AMBIENTAL Y DIAGNÓSTICOS AMBIENTALES, a la arquitecta LEONORA MARGARITA FERRER MORAN, portadora de su documento Único de Identidad Número cero cero nueve nueve cuatro seis seis nueve - tres, quien cumple con los requisitos que establece el Artículo 47 del Reglamento General de la Ley del Medio Ambiente.

2. La presente resolución tendrá una vigencia de TRES (3) años contados a partir de su emisión, es decir del dieciocho de agosto de dos mil catorce, al dieciocho de agosto de dos mil diecisiete,

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una vez vencido el plazo deberá solicitar su renovación, con la presentación del correspondiente formulario y su documentación anexa ante esta Cartera de Estado.

3. Que el Prestador de Servicios Ambientales conservara el mismo número con el cual fue Certificado y Registrado en esta Cartera de Estado.

4. Que la presente resolución no autoriza al portador, a realizar servicios técnicos ambientales o actividades relacionadas con las Auditorias de Evaluación Ambiental, únicamente de Estudios de Impacto Ambiental y Diagnósticos Ambientales.

5. El prestador de Servicios de Estudios de Impacto Ambiental deberá guardar reserva y secreto profesional de la información y documentación a la que tengan acceso por la prestación de sus servicios, en cada caso en particular.

6. Que cualquier modificación que el Prestador de Servicios pretende realizar a la presente resolución, deberá solicitar al Ministerio de Medio Ambiente y Recursos Naturales mediante nota con sus respectivos anexos que justifiquen dicha modificación.

7. Que el Prestador de Servicios no podrá ser referente del titular en el Ministerio de Medio Ambiente y Recursos Naturales, para presentar o recibir notificaciones u otro tipo de documentación relacionada con el Proceso de Evaluación Ambiental, su funciona únicamente consistirá en la Elaboración del Estudio de Impacto Ambiental, lo anterior con la finalidad de evitar conflictos de intereses.

8. Que el Prestador de Servicios no debe proporcionar sus números telefónicos ni dirección de oficinas, como lugar de notificación, todo lo anterior debe ser información del titular del Proyecto.

9. Que el Prestador de Servicios Ambientales únicamente puede prestar sus servicios dentro de su especialización profesional.

10. Que el Prestador de Servicios, que por cualquier motivo ingrese a trabajar al Ministerio de Medio Ambiente y Recursos Naturales, por cualquier modalidad de contratación; deberá presentar una Declaración Jurada, debidamente notariada con el listado de los Proyectos de Estudios de Impacto Ambiental en los cuales ha participado directa o indirectamente; y así también se le hace del conocimiento que en cumplimiento lo establecido en el artículo 43 del Reglamento General de la Ley del Medio Ambiente, si por algún motivo ingreso a laborar esta Cartera de Estado, bajo cualquier modalidad de contratación quedará temporalmente inhabilitado para la Realización de Estudios de Impacto Ambiental y Diagnósticos Ambientales, mientras preste su servicio en esta Institución.

11. El Prestador de Servicio Ambientales, debe tener conocimiento básico del ordenamiento jurídico que regula la actividad, obra o proyecto en la cual desarrollará el Estudio de Impacto Ambiental, y el Diagnostico Ambiental.

12. Que el Prestador de Servicios Ambientales, presentó a esta Cartera de Estado los documentos que acreditan la renovación de la inscripción del Registro de Prestadores de Servicios de Estudios Ambientales y de Diagnósticos Ambientales, y que cumple con las requisitos establecidos en el artículo 47 del Reglamento General de la Ley del Medio Ambiente.

13. El Ministerio podrá des inscribir del Registro al Prestador de Servicios de Estudio de Impacto ambiental por cualesquiera de las siguientes causas: a) Por haber proporcionado información falsa o notoriamente incorrecta para su inscripción en el registro, b) Por presentar en los Estudios de Impacto Ambiental y en los Diagnósticos Ambientales, información falsa o incorrecta u omitir información por negligencia, mala fe o dolo, que conlleve el cometimiento de una infracción ambiental de conformidad al Artículo 86 De la Ley del Medio Ambiente, c) Por presentar Estudios de Impacto Ambiental que no reúnan la calidad técnica y científica pertinente y que no cumplan con las características generales establecidas en la Ley y sus reglamento, en forma reiterada, d) Por incumplimiento al contenido de la presente resolución, e) Y las demás señaladas en el artículo 47 A, del Reglamento General de la Ley del Medio Ambiente.

14. De acuerdo a lo detallado en el numeral anterior, el Ministerio en cualquier momento podrá enviar al Prestador de Servicios de Estudio de Impacto Ambiental, nota Sancionatoria Administrativa por infracción a la Ley del Medio Ambiente, de la cual también se enviará copia a su expediente personal de Prestador de Servicios que se encuentra en este Ministerio. Y de persistir el incumplimiento de forma reitera el Prestador de Servicios Ambientales se someterá al Proceso de desinscripción que establece el artículo 47 A, del Reglamento General de la Ley del Medio Ambiente.

15. Que el contenido de la nota MARN-CA-EIA-197/99, de uno de diciembre de mil novecientos noventa y ocho, queda sin efecto.

La presente Resolución se firman en dos (2) originales, y la misma entrará en vigencia a partir del día de su emisión.- **COMUNIQUESE.- LA DIRECTORA GENERAL DE EVALAUCION Y CUMPLIMIENTOAMBIENTAL, SILVIA MARGARITA HERNANDEZ DE LARIOS (f).**

EVALUACIÓN Y CUMPLIMIENTO AMBIENTAL
El Salvador, C.A.

Lic. Silvia Margarita Hernández de Larios
Directora General de Evaluación y
Cumplimiento Ambiental

DGECA-GEA-GM-JS

MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES
UNIDOS CRECEMOS TODOS

RESOLUCION MARN-RPSEA-PN No. 72/2014

Ministerio de Medio Ambiente y Recursos Naturales, San Salvador, dieciocho de agosto de dos mil catorce. Vistas las diligencias promovidas por JOSE RODOLFO MONTUFAR GUARDADO, Ingeniero Civil, del domicilio de Mejicanos, departamento de San Salvador, y con Documento Único de Identidad Personal Número: cero cero cinco seis dos tres dos uno - nueve, quien solicita a este Ministerio que en cumplimiento a lo establecido en el artículo 47 del Reglamento General de la Ley del Medio Ambiente, se le renueve su inscripción en el Registro de Prestadores de Servicios de Estudios de Impacto Ambiental y Diagnósticos Ambientales y Auditorias de Evaluación Ambiental. El Ministerio de Medio Ambiente y Recursos Naturales a través de la Dirección General de Evaluación y Cumplimiento Ambiental.

CONSIDERANDO QUE:

I. Con fecha siete de diciembre de mil novecientos noventa y ocho, este Ministerio emitió la nota MARN-CA-EIA-222/98, en la cual se resolvió que el profesional JOSE RODOLFO MONTUFAR GUARDADO, fuera inscrito bajo el número VEINTICINCO (25), como Prestador de Servicio de Estudio de Impacto Ambiental, Diagnósticos Ambientales.

II. Con fecha trece de agosto de dos mil catorce, ingresó a este Ministerio la Solicitud de renovación del Registro de Prestador de Servicios, por parte del ingeniero JOSE RODOLFO MONTUFAR GUARDADO. Se verificó que la documentación presentada cumplió con los requisitos establecidos en el Artículo 47 del Reglamento General de la Ley del Medio Ambiente.

POR TANTO:

De conformidad a lo dispuesto en los considerando anteriores, la Ley del Medio Ambiente y su Reglamento General.

RESUELVE:

1. OTORGAR LA RENOVACIÓN DE LA INSCRIPCION CON EL **NUMERO VEINTICINCO (25),** COMO PRESTADOR DE SERVICIOS DE ESTUDIOS DE IMPACTO AMBIENTAL Y DIAGNÓSTICOS AMBIENTALES, al ingeniero JOSE RODOLFO MONTUFAR GUARDADO, portador de su documento Único de Identidad Número cero cero cinco seis dos tres dos uno - nueve, quien cumple con los requisitos que establece el Artículo 47 del Reglamento General de la Ley del Medio Ambiente.

2. La presente resolución tendrá una vigencia de TRES (3) años contados a partir de su emisión, es decir del dieciocho de agosto de dos mil catorce, al dieciocho de agosto de dos mil diecisiete,

una vez vencido el plazo deberá solicitar su renovación, con la presentación del correspondiente formulario y su documentación anexa ante esta Cartera de Estado.

3. Que el Prestador de Servicios Ambientales conservara el mismo número con el cual fue Certificado y Registrado en esta Cartera de Estado.

4. Que la presente resolución no autoriza al portador, a realizar servicios técnicos ambientales o actividades relacionadas con las Auditorias de Evaluación Ambiental, únicamente de Estudios de Impacto Ambiental y Diagnósticos Ambientales.

5. El prestador de Servicios de Estudios de Impacto Ambiental deberá guardar reserva y secreto profesional de la información y documentación a la que tengan acceso por la prestación de sus servicios, en cada caso en particular.

6. Que cualquier modificación que el Prestador de Servicios pretende realizar a la presente resolución, deberá solicitar al Ministerio de Medio Ambiente y Recursos Naturales mediante nota con sus respectivos anexos que justifiquen dicha modificación.

7. Que el Prestador de Servicios no podrá ser referente del titular en el Ministerio de Medio Ambiente y Recursos Naturales, para presentar o recibir notificaciones u otro tipo de documentación relacionada con el Proceso de Evaluación Ambiental, su funciona únicamente consistirá en la Elaboración del Estudio de Impacto Ambiental, lo anterior con la finalidad de evitar conflictos de intereses.

8. Que el Prestador de Servicios no debe proporcionar sus números telefónicos ni dirección de oficinas, como lugar de notificación, todo lo anterior debe ser información del titular del Proyecto.

9. Que el Prestador de Servicios Ambientales únicamente puede prestar sus servicios dentro de su especialización profesional.

10. Que el Prestador de Servicios, que por cualquier motivo ingrese a trabajar al Ministerio de Medio Ambiente y Recursos Naturales, por cualquier modalidad de contratación; deberá presentar una Declaración Jurada, debidamente notariada con el listado de los Proyectos de Estudios de Impacto Ambiental en los cuales ha participado directa o indirectamente; y asi también se le hace del conocimiento que en cumplimiento lo establecido en el artículo 43 del Reglamento General de la Ley del Medio Ambiente, si por algún motivo ingreso a laborar esta Cartera de Estado, bajo cualquier modalidad de contratación quedará temporalmente inhabilitado para la Realización de Estudios de Impacto Ambiental y Diagnósticos Ambientales, mientras preste su servicio en esta Institución.

11. El Prestador de Servicio Ambientales, debe tener conocimiento básico del ordenamiento jurídico que regula la actividad, obra o proyecto en la cual desarrollará el Estudio de Impacto Ambiental, y el Diagnostico Ambiental.

12. Que el Prestador de Servicios Ambientales, presentó a esta Cartera de Estado los documentos que acreditan la renovación de la inscripción del Registro de Prestadores de Servicios de Estudios Ambientales y de Diagnósticos Ambientales, y que cumple con las requisitos establecidos en el artículo 47 del Reglamento General de la Ley del Medio Ambiente.

13. El Ministerio podrá des inscribir del Registro al Prestador de Servicios de Estudio de Impacto ambiental por cualesquiera de las siguientes causas: a) Por haber proporcionado información falsa o notoriamente incorrecta para su inscripción en el registro, b) Por presentar en los Estudios de Impacto Ambiental y en los Diagnósticos Ambientales, información falsa o incorrecta u omitir información por negligencia, mala fe o dolo, que conlleve el cometimiento de una infracción ambiental de conformidad al Artículo 86 De la Ley del Medio Ambiente, c) Por presentar Estudios de Impacto Ambiental que no reúnan la calidad técnica y científica pertinente y que no cumplan con las características generales establecidas en la Ley y sus reglamento, en forma reiterada, d) Por incumplimiento al contenido de la presente resolución, e) Y las demás señaladas en el artículo 47 A, del Reglamento General de la Ley del Medio Ambiente.

14. De acuerdo a lo detallado en el numeral anterior, el Ministerio en cualquier momento podrá enviar al Prestador de Servicios de Estudio de Impacto Ambiental, nota Sancionatoria Administrativa por infracción a la Ley del Medio Ambiente, de la cual también se enviará copia a su expediente personal de Prestador de Servicios que se encuentra en este Ministerio. Y de persistir el incumplimiento de forma reitera el Prestador de Servicios Ambientales se someterá al Proceso de desinscripción que establece el artículo 47 A, del Reglamento General de la Ley del Medio Ambiente.

15. Que el contenido de la nota MARN-CA-EIA-222/98, de fecha siete de diciembre de mil novecientos noventa y ocho, queda sin efecto.

La presente Resolución se firman en dos (2) originales, y la misma entrará en vigencia a partir del día de su emisión.- **COMUNÍQUESE.- LA DIRECTORA GENERAL DE EVALUACIÓN Y CUMPLIMIENTO AMBIENTAL, SILVIA MARGARITA HERNÁNDEZ DE LARIOS (f).**

MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES
DIRECCIÓN GENERAL DE
EVALUACIÓN Y CUMPLIMIENTO AMBIENTAL
El Salvador, C.A.

Lic. Silvia Margarita Hernández de Larios
Directora General de Evaluación y
Cumplimiento Ambiental

DGECA-GEA-GM-JS

MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES
UNIDOS CRECEMOS TODOS

RESOLUCION MARN-RPSEA-PN No. 62/2014

Ministerio de Medio Ambiente y Recursos Naturales, San Salvador, treinta de julio de dos mil catorce. Vistas las diligencias promovidas por ESTELA JEANNETTE CISNEROS DE CONTRERAS, Arquitecta, del domicilio San Salvador, departamento de San Salvador, y con Documento Único de Identidad Personal Número: cero uno seis seis uno siete dos siete - uno, quien solicita a este Ministerio que en cumplimiento a lo establecido en el artículo 47 del Reglamento General de la Ley del Medio Ambiente, se le renueve su inscripción en el Registro de Prestadores de Servicios de Estudios de Impacto Ambiental y Diagnósticos Ambientales y Auditorias de Evaluación Ambiental. El Ministerio de Medio Ambiente y Recursos Naturales a través de la Dirección General de Evaluación y Cumplimiento Ambiental.

CONSIDERANDO QUE:

I. Con fecha tres de diciembre de mil novecientos noventa y ocho, este Ministerio emitió la nota MARN-CA-EIA-190/98, en la cual se resolvió que la profesional ESTELA JEANNETTE CISNEROS DE CONTRERAS, fuera inscrita bajo el número CUATRO (4), como Prestador de Servicio de Estudio de Impacto Ambiental, Diagnósticos Ambientales.

II. Con fecha treinta de julio de dos mil catorce, ingresó a este Ministerio la Solicitud de renovación del Registro de Prestador de Servicios, por parte de la arquitecta ESTELA JEANNETTE CISNEROS DE CONTRERAS. Se verificó que la documentación presentada cumplió con los requisitos establecidos en el Artículo 47 del Reglamento General de la Ley del Medio Ambiente.

POR TANTO:

De conformidad a lo dispuesto en los considerando anteriores, la Ley del Medio Ambiente y su Reglamento General.

RESUELVE:

1. OTORGAR LA RENOVACIÓN DE LA INSCRIPCION CON EL NUMERO CUATRO (4), COMO PRESTADOR DE SERVICIOS DE ESTUDIOS DE IMPACTO AMBIENTAL Y DIAGNÓSTICOS AMBIENTALES, a la arquitecta ESTELA JEANNETTE CISNEROS DE CONTRERAS, portadora de su documento Único de Identidad Número cero uno seis seis uno siete dos siete – uno, quien cumple con los requisitos que establece el Artículo 47 del Reglamento General de la Ley del Medio Ambiente.

2. La presente resolución tendrá una vigencia de TRES (3) años contados a partir de su emisión, es decir del treinta de julio de dos mil catorce, al treinta de julio de dos mil diecisiete, una vez

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vencido el plazo deberá solicitar su renovación, con la presentación del correspondiente formulario y su documentación anexa ante esta Cartera de Estado.

3. Que el Prestador de Servicios Ambientales conservara el mismo número con el cual fue Certificado y Registrado en esta Cartera de Estado.

4. Que la presente resolución no autoriza al portador, a realizar servicios técnicos ambientales o actividades relacionadas con las Auditorias de Evaluación Ambiental, únicamente de Estudios de Impacto Ambiental y Diagnósticos Ambientales.

5. El prestador de Servicios de Estudios de Impacto Ambiental deberá guardar reserva y secreto profesional de la información y documentación a la que tengan acceso por la prestación de sus servicios, en cada caso en particular.

6. Que cualquier modificación que el Prestador de Servicios pretende realizar a la presente resolución, deberá solicitar al Ministerio de Medio Ambiente y Recursos Naturales mediante nota con sus respectivos anexos que justifiquen dicha modificación.

7. Que el Prestador de Servicios no podrá ser referente del titular en el Ministerio de Medio Ambiente y Recursos Naturales, para presentar o recibir notificaciones u otro tipo de documentación relacionada con el Proceso de Evaluación Ambiental, su funciona únicamente consistirá en la Elaboración del Estudio de Impacto Ambiental, lo anterior con la finalidad de evitar conflictos de intereses.

8. Que el Prestador de Servicios no debe proporcionar sus números telefónicos ni dirección de oficinas, como lugar de notificación, todo lo anterior debe ser información del titular del Proyecto.

9. Que el Prestador de Servicios Ambientales únicamente puede prestar sus servicios dentro de su especialización profesional.

10. Que el Prestador de Servicios, que por cualquier motivo ingrese a trabajar al Ministerio de Medio Ambiente y Recursos Naturales, por cualquier modalidad de contratación; deberá presentar una Declaración Jurada, debidamente notariada con el listado de los Proyectos de Estudios de Impacto Ambiental en los cuales ha participado directa o indirectamente; y así también se le hace del conocimiento que en cumplimiento lo establecido en el artículo 43 del Reglamento General de la Ley del Medio Ambiente, si por algún motivo ingreso a laborar esta Cartera de Estado, bajo cualquier modalidad de contratación quedará temporalmente inhabilitado para la Realización de Estudios de Impacto Ambiental y Diagnósticos Ambientales, mientras preste su servicio en esta Institución.

11. El Prestador de Servicio Ambientales, debe tener conocimiento básico del ordenamiento jurídico que regula la actividad, obra o proyecto en la cual desarrollará el Estudio de Impacto Ambiental, y el Diagnostico Ambiental.

12. Que el Prestador de Servicios Ambientales, presentó a esta Cartera de Estado los documentos que acreditan la renovación de la inscripción del Registro de Prestadores de Servicios de Estudios Ambientales y de Diagnósticos Ambientales, y que cumple con las requisitos establecidos en el artículo 47 del Reglamento General de la Ley del Medio Ambiente.

13. El Ministerio podrá des inscribir del Registro al Prestador de Servicios de Estudio de Impacto ambiental por cualesquiera de las siguientes causas: a) Por haber proporcionado información falsa o notoriamente incorrecta para su inscripción en el registro, b) Por presentar en los Estudios de Impacto Ambiental y en los Diagnósticos Ambientales, información falsa o incorrecta u omitir información por negligencia, mala fe o dolo, que conlleve el cometimiento de una infracción ambiental de conformidad al Artículo 86 De la Ley del Medio Ambiente, c) Por presentar Estudios de Impacto Ambiental que no reúnan la calidad técnica y científica pertinente y que no cumplan con las características generales establecidas en la Ley y sus reglamento, en forma reiterada, d) Por incumplimiento al contenido de la presente resolución, e) Y las demás señaladas en el artículo 47 A, del Reglamento General de la Ley del Medio Ambiente.

14. De acuerdo a lo detallado en el numeral anterior, el Ministerio en cualquier momento podrá enviar al Prestador de Servicios de Estudio de Impacto Ambiental, nota Sancionatoria Administrativa por infracción a la Ley del Medio Ambiente, de la cual también se enviará copia a su expediente personal de Prestador de Servicios que se encuentra en este Ministerio. Y de persistir el incumplimiento de forma reitera el Prestador de Servicios Ambientales se someterá al Proceso de desinscripción que establece el artículo 47 A, del Reglamento General de la Ley del Medio Ambiente.

15. Que el contenido de la nota MARN-CA-EIA-190/98, de tres de diciembre de mil novecientos noventa y ocho, queda sin efecto.

La presente Resolución se firman en dos (2) originales, y la misma entrará en vigencia a partir del día de su emisión.- **COMUNIQUESE.- LA DIRECTORA GENERAL DE EVALAUCION Y CUMPLIMIENTOAMBIENTAL, SILVIA MARGARITA HERNANDEZ DE LARIOS (f).**

MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES
DIRECCIÓN GENERAL DE
EVALUACIÓN Y CUMPLIMIENTO AMBIENTAL
El Salvador

Lic. Silvia Margarita Hernández de Larios
Directora General de Evaluación y
Cumplimiento Ambiental

DGECA-GEA-GM-JS

Ministerio de Medio Ambiente
y Recursos Naturales

RESOLUCION MARN-RPSEA-PN-No. 646/2014

Ministerio de Medio Ambiente y Recursos Naturales, San Salvador, diecinueve de agosto de dos mil catorce. Vistas las diligencias promovidas por LISBIA TERESA JARQUIN DELEON, salvadoreña, Arquitecta, del domicilio de San Salvador, departamento de San Salvador con Documento Único de Identidad número cero cero dos cero cinco uno tres uno - seis, quien solicita a este Ministerio que en cumplimiento a lo establecido en el artículo 23 de la ley del Medio Ambiente, se le inscriba en el Registro de Prestadores de Servicios de Estudios de Impacto Ambiental, Diagnósticos y Auditorias de Evaluación Ambiental.

CONSIDERANDO QUE:

I. Con fecha catorce de agosto de dos mil catorce, ingresó a este Ministerio la solicitud No.1038, para Registro de Prestadores de Servicios de Estudios de Impacto Ambiental, de Diagnósticos Ambientales y Auditorias de Evaluación Ambienta, por parte de la arquitecta Lisbia Teresa Jarquin Deleón.

II. Que se verificó por parte de la Dirección General de Evaluación y Cumplimiento Ambiental, la documentación presentada por la arquitecta Lisbia Teresa Jarquin Deleón, quién determinó que la peticionaria cumple con los requisitos para ser inscrita en el Registro relacionado en el considerando anterior, según lo establecido en el artículo 43 del Reglamento General de la Ley del Medio Ambiente.

III. Mediante Acta No. 646/2014, del diecinueve de agosto de dos mil catorce, el Comité Evaluador de solicitudes de Registro, recomienda se inscriba en el Registro de Prestadores de Servicios de Estudios de Impacto Ambiental, de Diagnósticos y Auditorías de evaluación ambiental a la arquitecta Lisbia Teresa Jarquin Deleón.

POR TANTO:

De conformidad a lo dispuesto en los considerando anteriores, y lo establecido por la Ley del Medio Ambiente y su Reglamento General,

RESUELVE:

1. Que LISBIA TERESA JARQUIN DELEON, salvadoreña, Arquitecta, del domicilio de San Salvador, departamento de San Salvador, con Documento Único de Identidad número cero cero dos cero cinco uno tres uno - seis, cumple con los requisitos establecidos en el artículo 23 de La Ley del Medio Ambiente y Art. 43 del Reglamento General de la Ley del Medio Ambiente, por lo que se le otorga el numero **SEISCIENTOS CUARENTA Y SEIS (646). COMO PRESTADOR DE SERVICIOS DE ESTUDIOS DE IMPACTO AMBIENTAL Y DIAGNÓSTICOS AMBIENTALES.**

2. La presente resolución tendrá una vigencia de TRES (3) años contados a partir de su emisión, es decir del diecinueve de agosto de dos mil catorce, al diecinueve de agosto de dos mil diecisiete, una vez vencido el plazo deberá solicitar su renovación, con la

9. El Prestador de Servicios Ambientales, únicamente puede prestar sus servicios dentro de su especialidad.

10. El Prestador de Servicios Ambientales si esta interesado deberá actualizar su situación ante el Ministerio de Medio Ambiente y Recursos Naturales, cuando este implemente el Sistema de Certificación y Registro de Prestadores de Servicios Ambientales, debiendo someterse al procedimiento que se determine para tal efecto, con la finalidad de ser incorporado en el mismo.

11. El incumplimiento al contenido de la presente Resolución, obliga a este Ministerio a iniciar los procedimientos administrativos establecidos en la Ley del Medio Ambiente; y de constituir delito la acción u omisión realizada por el Prestador de Servicios de Estudios Ambientales, de Diagnostico y Auditoría de Evaluación Ambiental, el Ministerio de Medio Ambiente y Recursos Naturales, certificará lo pertinente a la Fiscalía General de la República para que inicie los procedimientos legales correspondientes.

La presente Resolución entrará en vigencia a partir del día de su emisión.- **COMUNIQUESE.- LA DIRECTORA GENERAL DE EVALUACIÓN Y CUMPLIMIENTO AMBIENTAL, SILVIA MARGARITA HERNANDEZ DE LARIOS.----------**

MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES
DIRECCIÓN GENERAL DE
EVALUACIÓN Y CUMPLIMIENTO AMBIENTAL
El Salvador, C.A.

Lic. Silvia Margarita Hernández de Larios
Directora General de Evaluación y
Cumplimiento Ambiental

DGEC-GEA-GM-JS

MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES
UNIDOS CRECEMOS TODOS

RESOLUCION MARN-RPSEA-PN No. 71/2014

Ministerio de Medio Ambiente y Recursos Naturales, San Salvador, dieciocho de agosto de dos mil catorce. Vistas las diligencias promovidas por NELSON EDUARDO CABRERA CORDOVA, Ingeniero Químico, del domicilio de Mejicanos, departamento de San Salvador, y con Documento Único de Identidad Personal Número: cero dos siete uno ocho siete uno tres – dos, quien solicita a este Ministerio que en cumplimiento a lo establecido en el artículo 47 del Reglamento General de la Ley del Medio Ambiente, se le renueve su inscripción en el Registro de Prestadores de Servicios de Estudios de Impacto Ambiental y Diagnósticos Ambientales y Auditorias de Evaluación Ambiental. El Ministerio de Medio Ambiente y Recursos Naturales a través de la Dirección General de Evaluación y Cumplimiento Ambiental.

CONSIDERANDO QUE:

I. Con fecha tres de diciembre de mil novecientos noventa y ocho, este Ministerio emitió la nota MARN-CA-EIA-189/98, en la cual se resolvió que el profesional NELSON EDUARDO CABRERA CORDOVA, fuera inscrito bajo el número TRES (3), como Prestador de Servicio de Estudio de Impacto Ambiental, Diagnósticos Ambientales.

II. Con fecha trece de agosto de dos mil catorce, ingresó a este Ministerio la Solicitud de renovación del Registro de Prestador de Servicios, por parte del ingeniero NELSON EDUARDO CABRERA CORDOVA. Se verificó que la documentación presentada cumplió con los requisitos establecidos en el Artículo 47 del Reglamento General de la Ley del Medio Ambiente.

POR TANTO:

De conformidad a lo dispuesto en los considerando anteriores, la Ley del Medio Ambiente y su Reglamento General.

RESUELVE:

1. OTORGAR LA RENOVACIÓN DE LA INSCRIPCION CON EL **NUMERO TRES (3),** COMO PRESTADOR DE SERVICIOS DE ESTUDIOS DE IMPACTO AMBIENTAL Y DIAGNÓSTICOS AMBIENTALES, al ingeniero NELSON EDUARDO CABRERA CORDOVA, portador de su documento Único de Identidad Número cero dos siete uno ocho siete uno tres - dos, quien cumple con los requisitos que establece el Artículo 47 del Reglamento General de la Ley del Medio Ambiente.

2. La presente resolución tendrá una vigencia de TRES (3) años contados a partir de su emisión, es decir del dieciocho de agosto de dos mil catorce, al dieciocho de agosto de dos mil diecisiete,

una vez vencido el plazo deberá solicitar su renovación, con la presentación del correspondiente formulario y su documentación anexa ante esta Cartera de Estado.

3. Que el Prestador de Servicios Ambientales conservara el mismo número con el cual fue Certificado y Registrado en esta Cartera de Estado.

4. Que la presente resolución no autoriza al portador, a realizar servicios técnicos ambientales o actividades relacionadas con las Auditorias de Evaluación Ambiental, únicamente de Estudios de Impacto Ambiental y Diagnósticos Ambientales.

5. El prestador de Servicios de Estudios de Impacto Ambiental deberá guardar reserva y secreto profesional de la información y documentación a la que tengan acceso por la prestación de sus servicios, en cada caso en particular.

6. Que cualquier modificación que el Prestador de Servicios pretende realizar a la presente resolución, deberá solicitar al Ministerio de Medio Ambiente y Recursos Naturales mediante nota con sus respectivos anexos que justifiquen dicha modificación.

7. Que el Prestador de Servicios no podrá ser referente del titular en el Ministerio de Medio Ambiente y Recursos Naturales, para presentar o recibir notificaciones u otro tipo de documentación relacionada con el Proceso de Evaluación Ambiental, su funciona únicamente consistirá en la Elaboración del Estudio de Impacto Ambiental, lo anterior con la finalidad de evitar conflictos de intereses.

8. Que el Prestador de Servicios no debe proporcionar sus números telefónicos ni dirección de oficinas, como lugar de notificación, todo lo anterior debe ser información del titular del Proyecto.

9. Que el Prestador de Servicios Ambientales únicamente puede prestar sus servicios dentro de su especialización profesional.

10. Que el Prestador de Servicios, que por cualquier motivo ingrese a trabajar al Ministerio de Medio Ambiente y Recursos Naturales, por cualquier modalidad de contratación; deberá presentar una Declaración Jurada, debidamente notariada con el listado de los Proyectos de Estudios de Impacto Ambiental en los cuales ha participado directa o indirectamente; y asi también se le hace del conocimiento que en cumplimiento lo establecido en el artículo 43 del Reglamento General de la Ley del Medio Ambiente, si por algún motivo ingreso a laborar esta Cartera de Estado, bajo cualquier modalidad de contratación quedará temporalmente inhabilitado para la Realización de Estudios de Impacto Ambiental y Diagnósticos Ambientales, mientras preste su servicio en esta Institución.

11. El Prestador de Servicio Ambientales, debe tener conocimiento básico del ordenamiento jurídico que regula la actividad, obra o proyecto en la cual desarrollará el Estudio de Impacto Ambiental, y el Diagnostico Ambiental.

12. Que el Prestador de Servicios Ambientales, presentó a esta Cartera de Estado los documentos que acreditan la renovación de la inscripción del Registro de Prestadores de Servicios de Estudios Ambientales y de Diagnósticos Ambientales, y que cumple con las requisitos establecidos en el artículo 47 del Reglamento General de la Ley del Medio Ambiente.

13. El Ministerio podrá des inscribir del Registro al Prestador de Servicios de Estudio de Impacto ambiental por cualesquiera de las siguientes causas: a) Por haber proporcionado información falsa o notoriamente incorrecta para su inscripción en el registro, b) Por presentar en los Estudios de Impacto Ambiental y en los Diagnósticos Ambientales, información falsa o incorrecta u omitir información por negligencia, mala fe o dolo, que conlleve el cometimiento de una infracción ambiental de conformidad al Artículo 86 De la Ley del Medio Ambiente, c) Por presentar Estudios de Impacto Ambiental que no reúnan la calidad técnica y científica pertinente y que no cumplan con las características generales establecidas en la Ley y sus reglamento, en forma reiterada, d) Por incumplimiento al contenido de la presente resolución, e) Y las demás señaladas en el artículo 47 A, del Reglamento General de la Ley del Medio Ambiente.

14. De acuerdo a lo detallado en el numeral anterior, el Ministerio en cualquier momento podrá enviar al Prestador de Servicios de Estudio de Impacto Ambiental, nota Sancionatoria Administrativa por infracción a la Ley del Medio Ambiente, de la cual también se enviará copia a su expediente personal de Prestador de Servicios que se encuentra en este Ministerio. Y de persistir el incumplimiento de forma reitera el Prestador de Servicios Ambientales se someterá al Proceso de desinscripción que establece el artículo 47 A, del Reglamento General de la Ley del Medio Ambiente.

15. Que el contenido de la nota MARN-CA-EIA-189/98, de fecha tres de diciembre de mil novecientos noventa y ocho, queda sin efecto.

La presente Resolución se firman en dos (2) originales, y la misma entrará en vigencia a partir del día de su emisión.- **COMUNÍQUESE.- LA DIRECTORA GENERAL DE EVALUACIÓN Y CUMPLIMIENTO AMBIENTAL, SILVIA MARGARITA HERNÁNDEZ DE LARIOS (f).**

MEDIO AMBIENTE Y RECURSOS NATURALES DIRECCIÓN GENERAL DE EVALUACIÓN Y CUMPLIMIENTO AMBIENTAL

Lic. Silvia Margarita Hernández de Larios
Directora General de Evaluación y
Cumplimiento Ambiental

DGECA-GEA-GM-JS

Ministerio de Medio Ambiente
y Recursos Naturales

RESOLUCION MARN-RPSEA-PN-No. 602/2012

Ministerio de Medio Ambiente y Recursos Naturales, San Salvador, diez de diciembre de dos mil doce. Vistas las diligencias promovidas por el Licenciado OSCAR ARMANDO MOLINA LARA, salvadoreño, Licenciado en Biología, del domicilio de Mejicanos, departamento de San Salvador, con Documento Único de Identidad número cero cero nueve tres dos seis seis cero - siete, quien solicita a este Ministerio que en cumplimiento a lo establecido en el artículo 23 de la ley del Medio Ambiente, se le inscriba en el Registro de Prestadores de Servicios de Estudios de Impacto Ambiental, Diagnósticos y Auditorias de Evaluación Ambiental.

CONSIDERANDO QUE:

I. Con fecha nueve de noviembre de dos mil doce, ingresó a este Ministerio la solicitud No.990, para Registro de Prestadores de Servicios de Estudios de Impacto Ambiental, de Diagnósticos Ambientales y Auditorias de Evaluación Ambienta, por parte de la Licenciado Oscar Armando Molina Lara.

II. Que se verificó por parte de la Dirección General de Evaluación y Cumplimiento, la documentación presentada por el Licenciado Oscar Armando Molina Lara, quién determinó que el peticionario cumple con los requisitos para ser inscrito en el Registro relacionado en el considerando anterior, según lo establecido en el artículo 43 del Reglamento General de la Ley del Medio Ambiente.

III. Mediante Acta No. 602/2012, del diez de diciembre de dos mil doce, el Comité Evaluador de solicitudes de Registro, recomienda se inscriba en el Registro de Prestadores de Servicios de Estudios de Impacto Ambiental, de Diagnósticos y Auditorías de evaluación ambiental al Licenciado Oscar Armando Molina Lara.

POR TANTO:

De conformidad a lo dispuesto en los considerando anteriores, y lo establecido por la Ley del Medio Ambiente y su Reglamento General,

RESUELVE:

1. Que el Licenciado OSCAR ARMANDO MOLINA LARA, salvadoreño, Licenciado en Biología, del domicilio de Mejicanos, departamento de San Salvador, con Documento Único de Identidad número cero cero nueve tres dos seis seis cero – siete, cumple con los requisitos establecidos en el artículo 23 de La Ley del Medio Ambiente y Art. 43 del Reglamento General de la citada Ley, por lo que se le otorga el numero **SEISCIENTOS DOS (602). COMO PRESTADOR DE SERVICIOS DE ESTUDIOS DE IMPACTO AMBIENTAL Y DIAGNÓSTICOS AMBIENTALES.**

2. Que de conformidad a lo establecido en el artículo 43 del Reglamento General de La Ley del Medio Ambiente, los servidores públicos y municipales que cumplan con los requisitos podrán inscribirse como prestadores de servicio, siempre y cuando no exista prohibición en la ley respectiva o esa actividad no provoque conflicto de interés o entorpezca las labores

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para desempeñarse como servidor publico o municipal. No obstante aquellos que laboren para el Ministerio de Medio Ambiente y Recursos Naturales, bajo cualquier modalidad de contratación quedarán temporalmente inhabilitados mientras presten sus servicios en dicha Institución.

3. El Prestador de Servicios, que por cualquier motivo ingrese a trabajar al Ministerio de Medio Ambiente y Recursos Naturales, por cualquier modalidad de contratación; deberá presentar una Declaración Jurada, debidamente notariada con el listado de los Proyectos de Estudios de Impacto Ambiental o Diagnósticos Ambientales en los cuales ha participado directa o indirectamente.

4. Que la presente resolución no autoriza al portador, realizar servicios técnicos ambientales o actividades relacionadas con las Auditorias de Evaluación Ambiental, únicamente de Estudios de Impacto Ambiental y Diagnósticos Ambientales.

5. Que cualquier modificación que el Prestador de Servicio pretende realizar a la presente resolución, deberá solicitar al Ministerio de Medio Ambiente y Recursos Naturales mediante nota con sus respectivos anexos que justifiquen dicha modificación

6. El Prestador de Servicios Ambientales está obligado a guardar reserva y secreto profesional de la información y documentación a la que tengan acceso por la prestación de sus servicios, en cada caso en particular.

7. El Prestador de Servicio Ambientales, debe tener conocimiento básico del ordenamiento jurídico que regula la actividad, obra o proyecto en la cual desarrollará el Estudio de Impacto Ambiental, y el Diagnostico Ambiental.

8. Forman parte integrante de la presente Resolución el Currículum Vitae, documentos legales, Acta de Evaluación y demás anexos concernientes al Prestador de Servicios Ambientales en mención.

9. El Prestador de Servicios Ambientales, presentó a esta Cartera de Estado los documentos que acreditan la realización de los estudios y experiencia relacionada al tema para el cual es registrado.

10. El Ministerio podrá desinscribir del Registro al Prestador de Servicios de Estudios Ambientales, de Diagnostico y Auditoria de evaluación ambiental por cualesquiera de las siguientes causas siguiente: a) Por haber proporcionado información falsa o notoriamente incorrecta para su inscripción en el registro, b) Por presentar en los Estudios de Impacto Ambiental, de Diagnósticos y Auditorías Ambientales, información falsa o incompleta, c) Por presentar Estudios de Impacto Ambiental, de Diagnósticos y Auditorías Ambientales que no reúnan la calidad técnica y científica, requerida en el ordenamiento jurídico y demuestre ignorancia inexcusable, d) Por incumplimiento de cualquier otra obligación contenida en la Ley del Medio Ambiente y su Reglamento, e) Por incumplir el contenido de la presente Resolución.

11. El Prestador de Servicios Ambientales, únicamente puede prestar sus servicios dentro de su especialidad.

12. El Prestador de Servicios Ambientales si esta interesado deberá actualizar su situación ante el Ministerio de Medio Ambiente y Recursos Naturales, cuando este implemente el Sistema de Certificación y Registro de Prestadores de Servicios Ambientales, debiendo someterse al procedimiento que se determine para tal efecto, con la finalidad de ser incorporado en el mismo.

13. El incumplimiento al contenido de la presente Resolución, obliga a este Ministerio a iniciar los procedimientos administrativos establecidos en la Ley del Medio Ambiente y el Reglamento General de la citada Ley; y de constituir delito la acción u omisión realizada por el Prestador de Servicios de Estudios Ambientales, de Diagnostico y Auditoría de Evaluación Ambiental, el Ministerio de Medio Ambiente y Recursos Naturales, certificará lo pertinente a la Fiscalía General de la República para que inicie los procedimientos legales correspondientes.

La presente Resolución entrará en vigencia a partir del día de su notificación.- **COMUNIQUESE.- LA DIRECTORA GENERAL DE EVALUACIÓN Y CUMPLIMIENTO, SILVIA MARGARITA HERNANDEZ DE LARIOS.**----------

MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES DIRECCIÓN GENERAL DE EVALUACIÓN Y CUMPLIMIENTO San Salvador, C.A.

DGEC-GEA-GM

Energía del Pacífico

Environmental Impact Assessment
LNG to Power Project
TOME V

December 2016 16-3489

ECO INGENIEROS
LÍDERES EN CONSULTORÍA AMBIENTAL

DILLON CONSULTING

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Glossary

Acronym	Description
AAC	Civil Aviation Authority
ADESCO	Association of Community Development
AIP	Project Influence Area
AMP	Port Maritime Authority
ANDA	National Association of Aqueducts and Sewers- ANDA
AP	Project Area
BM	World Bank
CAMARASAL	Chamber of Commerce and Industry of El Salvador
CAS	Chemical Specialty Service
CCNIS	National Coordinating Council Salvadoran Indigenous
CEL	Hydroelectric Commission for the Lempa River
CEM	Electro Magnetic Fields
CENDEPESCA	Directorate General for Fisheries and Aquaculture Development
CENTA	National Center of Agricultural and Forestry Technology
CEPA	Autonomous Port Executive Commission
CN	National Censuses
CNE	National Energy Council
CNR	National Center of Records
CNSP	National Council of Public Security
COMURES	Corporation of Municipalities of the Republic of El Salvador
CONACYT	National Commission on Science and Technology
CONAMYPE	National Commission of the Micro and Small Business
CONCULTURA	National Council for Culture and Art
CORSATUR	Salvadoran Tourism Corporation
COV	Volatile Organic Compounds
CRETIB	Corrosive, Reactive, Explosive, Toxic, Flammable, Bioinfectious
CSSP	Higher Council of Public Health.
CSV	Chamber Valuators of El Salvador
dB(A)	Sound pressure levels measured in decibels on the scale A
DBO	Biochemical Oxygen Demand
DGDR	Directorate-General for Rural Development
DGFCR	General Direction of Forest Management Basins and Irrigations
DGOA	Direction of the Environmental Observatory
DGPC	Directorate-General for Civil Protection, Disaster Prevention and Mitigation
DIGESTYC	General Directorate of Statistics and Censuses
DQO	Chemical Oxygen Demand
DRHM	Regulatory Direction of Hydrocarbons and Mines

Acronym	Description
US-EPA	Environmental Protection Agency
EDP	Energy of the Pacific
EPP	Personal Protective Equipment
EsIA	Environmental Impact Study
FISDL	Social Investment Fund for Local Development
FOEX	Export Promotion Fund
FONAES	Environmental Fund of El Salvador
FONAVIPO	National Fund for Popular Housing
FSU	Floating Storage Unit
FSRU	Floating Storage and Regasification Unit
FSV	Social Fund for Housing
GEI	Greenhouse Gas
GNL	Liquefied natural gas
IDH	Human Development Index
IFC	International Finance Corporation
ISDEM	alvadoran Institute of Municipal Development
ISS	Salvadoran Institute of Social Security
ISTA	Salvadoran Institute for Agricultural Transformation
ISTU	Salvadoran Institute of Tourism
Kg	Kilograms
LDE	Electrical Distribution Line
LFI	Lower Flammable Limit
LMA	Maximum Limit Acceptable
LMP	Maximum Allowable Limit
LMT	Medium Voltage Line
LNGC	Liquefied Natural Gas Freighter
MAG	Ministry of Agriculture and Livestock
MARN	Ministry of Environment and Natural Resources
MIDE	Ministry of Defense
MIGOB	Ministry of Government
MINEC	Ministry of Economy
MINED	Ministry of Education
MINSAL	inistry of Public Health and Social Assistance
MOP	Ministry of Public Works
MTPS	Ministry of Labor and Social Welfare
MW	Mega Watt
MW/h	Mega Watt / hour
NMP	Most Probable Number

Acronym	Description
NOx	Nitrogen oxides
NO2	Nitrogen dioxide
NSO	Salvadoran Obligatory Standard
OMS	World Health Organization
PA	Acajutla Port
PH	Hydrogen Potential
PMA	Environmental Management Program
PM	Particulate Material
PM10	Articulate material less than 10 microns
PM2.5	Particulate material less than 2.5 microns
PNC	National Civil Police
PNUD	United Nations Development Program
PS	Performance Standard
PTS	Suspended Total Particles
RNPN	National Registry of Natural Persons
SC	Superintendence of Competition
SECULTURA	Secretary of Culture
SIGET	General Superintendence of Electricity and Communications
SNET	National Service of Territorial Studies
TDR	Terms of Reference
TDS	Total Solids
UFC	Colony Forming Unit
UTM	Universal Transverse Mercator

Energía del Pacífico

Appendix Chapter 7

2016 Diciembre 16-3489

ECO INGENIEROS
LÍDERES EN CONSULTORÍA AMBIENTAL

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Appendix 7A–
Grievance Mechanism

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1 Grievance Mechanism Outline

1.1 Introduction

The following presents a draft framework to guide formation and implementation of a Grievance Mechanism for the LNG to Power Project. This framework reflects International Finance Corporation (IFC) guidance materials including IFC's Good Practice Note: Addressing Grievances from Project-Affected Communities.

1.1.1 What Are Grievances?

A grievance is a project-related concern or complaint that has been submitted to the Project proponent (or an agent of the proponent) by an external stakeholder or party. Grievances are typically submitted by stakeholders that are directly affected by the Project, although any party may do so.

1.1.2 What is a Grievance Mechanism?

A grievance mechanism is a process of managing received grievances from external stakeholders. It provides a procedure for receiving, assessing and addressing the grievance. A grievance mechanism also includes procedures for documenting the grievance and for communicating back to the party that submitted the grievance as to how the proponent is redress the concern or complaint.

Stakeholder inputs and concerns will received as part of the EIA phase are not considered to be part of the grievance mechanism. The grievance mechanism will apply to the Project construction and operation phases, and certain pre-construction activities, most notably land acquisition if applicable. As such, it is currently contemplated that the grievance mechanism would be implemented once project implementation is initiated.

A grievance mechanism provides an alternative to external dispute resolution processes including legal or other administrative processes. These other processes may still be relied upon if the grievance mechanism fails to resolve the issue to the satisfaction of the stakeholder. As such, a grievance mechanism does not necessarily replace these other processes and they may still be relied upon for issue redress. The grievance mechanism should not impede access to these other processes.

Note that the grievance mechanism is not intended to address labour related concerns of project employees either during construction or operation periods. Other mechanism should be available for this stakeholder group.

1.1.3 Why Implement a Grievance Mechanism?

The need for a grievance mechanism is established in IFC Performance Standard 1 that states: "Where there are Affected Communities, the client will establish a grievance mechanism to receive and facilitate resolution of Affected Communities' concerns and grievances about the client's environmental and social performance." The Performance Standard and accompanying guidance notes do allow for flexibility in the design of the grievance mechanism which should be scaled to the potential risks and adverse impacts of the project.

In addition to fulfilling IFC requirements, benefits of the grievance mechanism include the potential for reduced negative visibility, better community relations, opportunity for improvements to project design/processes, reduced delays, and possibly saved costs.

1.2 Grievance Mechanism Principles

This grievance mechanism framework has considered the following principles for grievance mechanisms provided by IFC:

Principle 1: Scaled to risk and adverse impact on affected communities – More complex projects may require more advanced mechanisms and may require more resources to manage it. The needs of the grievance mechanism may also change during the lifecycle of the project.

Principle 2: Cultural Appropriateness – The grievance mechanism needs to be designed to accommodate the manner that takes into account customs/traditions as they relate to how community members express opinions/concerns. Reviewing the mechanism with community leaders may be appropriate. The mechanism may need to include measures that ensure equal access of the mechanism to women.

Principle 3: Accessibility – The mechanism needs to provide ease of access to information and there should be no cost to file a grievance. Further, the mechanism needs to be convenient to use and be sensitive to language, literacy and education levels. Consider the most appropriate means to communicate the grievance (e.g. phone, email, in-person, etc.)

Principle 4: Transparency and Accountability – A transparent mechanism results in a more useful process for resolving grievances. Transparency is achieved when stakeholders know who in the proponents organization is responsible for receiving/handling complaints, the community has had some input in the development of the process, and has sufficient information on how to access it. The engagement of a third party (e.g. witness NGO) can also assist in transparency.

Principle 5: Appropriate Protection – Stakeholders and community members need to be encouraged to provide their input to the project proponent and not be in fear of some form of retribution as a result of their feedback. Further, stakeholder involvement in the grievance mechanism should not limit or imped the use of other mechanism to resolve their concern such as legal means, if the concern is not adequately addressed.

1.3 Grievance Mechanism Development/Implementation

The following outlines the steps to be taken to establish and implement the grievance mechanism for the LNG to Power Project. The development and implementation of the program will evolve over time and be subject to the input received during the EIA/SEP process. As such, what is proposed here should be viewed as a starting point for the program.

1.3.1 Step 1 - Grievance Mechanism Publicizing

The following means to communicate the grievance mechanism are recommended:

Key Stakeholder Meetings – the availability of the grievance mechanism will be raised at the stakeholder/community leader meetings which are planned to introduce the project (including the representatives of each affected local municipality).

Project Notices – the public is to be notified of the availability of a grievance mechanism. The notice would identify the EDP contact person for grievances.

Posters/Display – the availability of the grievance mechanism can be communicated through posters that can be on presentation at the Acajutla Project Office and at the various municipal offices where the project is located. This could be combined with general project notice posters and/or posters advertising specific events (e.g. future community meeting).

Project Office – the Acajutla project office is to have on hand information related to the grievance mechanism including hard copies of a FAQs and grievance submission form. The Project Office should be set up to receive both verbal and written grievance submissions.

Project Website – Once established, the availability of the grievance mechanism can be published on the project web site which can also be used as a means to file a grievance. Project notices should highlight the availability of the project website as a means to learn about the process and file and grievance.

Community Meetings – Complaints can be received at community meetings either verbally on through written submissions. Contact information of the stakeholder providing the complaint, particularly if provided verbally, needs to be obtained to allow for follow-up with the stakeholder.

1.3.2 Step 2 - Receiving and Tracking Grievances

It is proposed that the following means would be available to stakeholders to file a grievance:

- Verbal through meetings/interviews with EDP
- Written (letter, emails, grievance form completion)
- By phone (through advertised EDP contact person/telephone "hotline")
- In person at Acajutla project office
- Though a witness NGO (if retained)

Received written grievances should be acknowledged as soon as possible. Preferably in writing that acknowledges the receipt of the grievance and the approximate amount of time expected it will take to review and provide an initial response. Grievances received in person should be acknowledged on the spot.

Once a grievance is received, by any means, it needs to be assigned a tracking number and entered into a log or tracking system. It is proposed that this be done by the local project office representative. The tracking system needs to be accessible by the project team and allow for search functions. The tracking system needs to be developed. This log should at a minimum describe: receipt date of the grievance, stakeholder contact information, description of the grievance, date and method of grievance acknowledgement, assigned response follow-up responsibility, date and response provided, and monitoring/description of grievance redress.

1.3.3 Step 3 - Reviewing and Investigating

Once the received grievance has been entered into the tracking system and the receipt acknowledged, the grievance is to then be reviewed (screened) and investigated. This is to involve:

- Initial screening of the grievance to confirm that it is a legitimate/related project issue (grievances that are of a criminal nature, labour related, commercial dispute, or government policy related should be dealt with through other means/mechanisms)
- Grievances of a straightforward nature (such as information request) should be dealt with immediately
- For more complex grievances, it may be necessary to engage other EDP staff (possibly including senior management) or consulting staff to seek input on the issue and to confirm its legitimacy. In some cases it may be necessary to seek clarification from the stakeholder who provided the grievance. In the most complex cases, including those that involve multiple parties, it may be desirable to engage a third party such as a witness NGO.

1.3.4 Step 4 - Grievance Resolving and Response

Once the grievance has been appropriately investigated and EDP has a clear understand of the issue, the next step is to develop and issue a response to the grievance. The response can be developed in a variety of ways including 1) by EDP, 2) through discussion and negotiation between EDP and the stakeholder(s), 3) through a third party (e.g. witness NGO), or 4) through local community customary practices. Ultimately, how the grievance is resolved will depend on the nature and complexity of the issue.

All received grievances should be issued a response, even if the grievance is initially rejected through the first screening step. In such cases, the reason for the rejection of the grievance should be provided. Responses can be either verbal or in writing. Whether verbal or in writing, a record should be made of the response, including its timing.

For legitimate grievances, a series of responses may be required including an initial acknowledgment of the grievance and then possibly a preliminary response (which might update the stakeholder on the actions being taken to resolve the issue, particularly for more complex issues), followed by a final response. If discussions/negotiations occurred with the stakeholder as part of the process to resolve the grievance, then these should be acknowledged in the response.

1.3.5 Step 5 - Monitoring and Reporting

Regular monitoring of the grievance mechanism and its implementation is recommended as it can provide:

- Information related to the effectiveness of the grievance mechanism allowing the opportunity to improve it/make it more efficient (e.g. community communication preferences may emerge);

- In the case of repeating similar grievances, may provide input regarding project construction or operation activities; and
- Provides data that can be reported back to the community to indicate EDP's responsiveness to concerns and help to build community relations and trust.

The frequency and form of the grievance mechanism monitoring by EDP will need to be determined as well as the monitoring parameters. The monitoring parameters should reflect the principles of the grievance mechanism including: accessibility, transparency, and cultural appropriateness. An appropriate person within the EDP management team will need to be assigned the responsibility to monitor the grievance mechanism. In some situations, it may be appropriate and/or desirable to assign the monitoring function to a third party such as a witness NGO. Having a third party involved in the monitoring can help build process credibility with external stakeholders, assuming that the selected third party monitor is acceptable/viewed as credible within the community.

Appendix 7B–
Quality and Installation Instruction, Earthworks

Wärtsilä Finland Oy

Power Plants

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QUALITY AND INSTALLATION INSTRUCTION, EARTHWORKS

1 GENERAL

1.1 Scope and General Requirements

This document provides installation instruction, quality assurance and, instructions for earthworks in Contractor power generation facilities with ground supported foundations. These Specifications shall form the basic framework for use in all Contractor facilities; however, in some cases project specific Specifications shall be required.

The scope of work for site and foundation preparation consists of the following general tasks:

- Survey and layout for construction
- Topsoil removal within the boundaries presented on the site plan
- General levelling consisting of cutting and filling to create a level working bench
- Excavation and preparation of foundation areas for powerhouse and auxiliary areas, fuel storage and treatment areas, and other structures on site.
- Construction of ditches for drainage.
- Construction of external slopes as shown on the plans

Specifications for construction of site works including utility networks are contained in a separate document.

If any additional work is required on site which is not specifically covered in this Specification, the work shall be executed according to generally-accepted standards. In the event that significant differences are noted between these Specifications and the conditions in the field during construction, the Contractor shall take contact with the Engineer.

1.2 Definitions

For the purposes of this Technical Specification, Contractor shall be taken to mean Wärtsilä, Owner shall be taken to mean the Wärtsilä's Customer, and Sub-contractor shall be taken to mean the Sub-contractor.

1.3 Limitations and Applicability

This Specification is intended as a construction Specification for ground supported foundation and earthwork construction. It is necessarily limited in scope. Some types of construction shall require a project-specific Specification, including:

- Deep foundations (piles or piers)
- Special ground conditions (swelling soil, collapsible soil, permafrost, etc.)

In cases of special considerations, a complimentary Specification shall be issued. The considerations of this Specification, where applicable, shall still apply.

1.4 Local Norms and Permits

Regulations and requirements provided in local norms and codes of practice shall be followed and fulfilled. Requirements of local authorities are to be followed. Sub-Contractor shall be responsible for obtaining permits for execution of his work.

1.5 Reference Drawings and Standards

The Contractor shall refer to the project specific design drawings throughout the course of the work.

Quality control testing in the field as well as in the laboratory shall be carried out in accordance with ASTM and DIN norms. Frequency of testing shall be in accordance with the requirements of the norms and of those contained in this Specification. ASTM and DIN standards required to complete earthworks and foundation construction are provided in Tables 1a and 1b.

Table 1a. ASTM Earthworks Quality and Construction Testing Requirements.

Item	**Number**	**Title**
USCS Soil Classification	D 2487	Classification of Soils for Engineering Purposes
Field Soil Classification	D 2488	Description and Identification of Soils (Visual-Manual Procedure)
Soil Grain Size	D 422	Particle Size Analysis of Soils
Atterberg Limits	D 4318	Liquid Limit, Plastic Limit, and Plasticity Index of Soils
Moisture Content	D 2216	Standard Test for Soil Moisture Content
Compaction	D 1557	Moisture Density Relations of Soils and Soil-Aggregate Mixtures (Modified Proctor Test)
Density Test	D 1556	Density of Soil in Place by Sand Cone Method
	Alternatively	
	D 2922	Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)

Table 1b. DIN Earthwork Quality and Construction Testing Requirements.

Item	**Number**	**Title**
Plate Load Test	18134	Earthworks: Plate Load Test

In the event that the provisions of this Specification exceed the minimum requirements of local code, this Specification shall take precedence.

The Sub-contractor may propose other methods and solutions than those Specified in this document. In the event that the Sub-contractor identifies a construction method which has advantages to those discussed in this Specification, he shall submit the alternative plan to the Contractor for consideration. Contractor shall then discuss with Owner if/as needed for approval.

Approval of alternative methods shall be at the discretion of the Contractor and Owner. Work according to alternative methods shall not be performed without approval.

2 SURVEY AND MEASUREMENT

This section discusses requirements for site survey and measurement.

2.1 General

Measurement shall be performed by survey throughout the construction process. Sub-Contractor shall retain a qualified, licensed surveyor for all site layout activities.

The Sub-Contractor and Surveyor shall execute plans setting-out such that the works presented in the tender documents can be completed as specified.

2.2 Equipment

Selection of field equipment for survey and earthworks quality assurance shall be at the discretion of the Sub-Contractor, provided that such equipment is capable of measurement to the tolerance required. All surveying equipment shall be properly maintained and calibrated in accordance with local norms and requirements. Sub-Contractor shall furnish certificates of calibration upon request by Contractor and in accordance with local norms.

2.3 Requirements for Survey

Prior to the commencement of earth works, the Sub-Contractor shall provide survey services to establish the site boundaries, topography, and presence/location of all existing structures or man-made objects. During construction, survey and quality assurance measurement shall be completed on a continuous basis by a qualified surveyor and qualified earthworks construction monitor.

The location of the reference lines (the O and the A lines) shall be surveyed and reference points shall be established.

2.4 Bench Marks

The Surveyor shall establish survey benchmarks as required to complete the work. Bench marks constructed inside the site shall be considered temporary, but shall be constructed and located in such a way that potential for damage is minimized.

At least two permanent benchmarks shall be constructed as permanent features. The Surveyor and Sub-Contractor shall construct the permanent benchmarks with due regard to the surrounding environment, such that durability of the benchmark is ensured.

2.5 Quantities Measurement for Earthworks

Principles of measurements are based on the "Bill of Quantities". All measurements shall be completed using suitable equipment, such that the quantities may be measured to the accuracy noted in the Bill of Quantities.

Volume of excavated and filled materials presented in the plans is theoretical, in-place volume. All volume in the Bill of Quantities shall be stated as cubic maters *in situ* (e.g. in place volume either (1) before excavation for excavated material, or (2) after placement and compaction for fill material). The Sub-Contractor’s price estimate shall be based on cubic meters in situ, rather than transport. Pricing based on weight is not accepted.

Commonly used bulking factors employed to determine the transport volume of various earth materials are presented in Table 2, below. These values are presented for reference only, actual

field value may vary. Sub-Contractor shall use his local experience with materials and methods to determine the bulking factor of materials in transport.

Table 2. Commonly-used bulking coefficients for earthwork volume estimation

Material	Excavation Bulk Factor	Fill Bulk Factor
Clay	1,68	0,54
Silt	1,59	0,64
Sand	1,30	0,66
Gravel	1,32	0,65
Crushed stone	-	0,65

1. *Multiply excavation quantity by Excavation Bulk Factor to obtain volume during transport.*
2. *Divide fill quantity by Fill Bulk Factor to obtain volume during transport.*

3 EXCAVATION

The excavation requirements for levelling and grading are shown on the plans. Excavation for the project shall be divided into three general types of work:

1. Clearing and stripping
2. Mass excavation
3. Excavation for structures and foundations

The following sections provide requirements for each type of work.

3.1 Clearing and Stripping

Prior to construction, all foreign objects, vegetation and topsoil within the construction area shall be removed. Foreign objects such as structures, waste material, or other man-made items shall be demolished and/or transported off site. Sub-Contractor shall obtain all necessary permits for disposal of such items, as required by local authorities. Proof of permits shall be furnished at the beginning of work.

All topsoil shall be stripped and stockpile for re-use. Topsoil removal depth shall be based on the geotechnical explorations, but verified in the field. The Sub-Contractor shall remove all topsoil, but shall minimize the volume of over-excavation to avoid mixing. The Sub-Contractor shall stockpile topsoil at a suitable area for re-use in planting vegetation areas unless instructed otherwise.

3.2 Archaeological Remains

If archaeological remains are discovered during any phase of excavation, Sub-Contractor shall stop all work immediately and the find shall be reported to the Contractor. Site inspector shall clearly mark off the area in which the remains were found, and personnel shall not enter the area. Excavation work shall not proceed on site until notice to proceed is received from Contractor.

3.3 General Excavation

General excavation is required to level the site and to establish site grades. The Sub-Contractor shall use his local experience to select equipment capable of performing the work to meet these specifications and the applicable project milestones and deadlines.

After completion of clearing and stripping, the Sub-Contractor shall excavate the site to the level of the general bench or benches shown on the Levelling and Earthworks Plan drawings. The excavation spoil generated shall be either stockpiled for re-use, or removed from the site.

Certain types of excavated soil have various potential for re-use. General guidelines for determining the re-use potential are presented in Table 3.

Table 3. Guidelines for determining re-use potential of excavated soil and rock

Material	**Potential for Re-use**	**Re-use Applications (Examples)**
Topsoil	Good	Planted and green areas
Sand and Gravel	Very good	Structure foundations, road base and sub-base, engineered fills (re-use depends on fines content)
Silt and Clay	Poor to fair	Yards, non-structural earth berms, sound barriers, if approved. Possible re-use in other applications if treated with cement.
Rock	Variable	Possible re-use as erosion protection in ditches and pipe discharges Additional re-use potential as fill, if a crusher is used on-site.

Note: these guidelines shall be considered general and shall be verified on a case-by-case basis by Contractor.

Re-use potential of cut soils shall be determined at the discretion of Contractor and the qualified construction monitor, and may require testing. If material may be re-used in an application, it shall be stockpiled on site at a location determined by Contractor. If material is not re-usable, it shall be removed from site to a proper facility.

Contaminated soil shall require special handling procedures. Refer to Section 3.7 for requirements.

3.4 Excavation for Buildings

Excavation shall be completed at the locations of buildings, to the level shown on the plans. At the locations of buildings, the typical excavation depth is deeper than in surrounding areas, to accommodate the placement of structural fill, and construction of foundations. Sub-Contractor shall follow the general requirements for General Excavation as noted above.

3.5 Excavation for Roads

Excavation for roads shall take place at the locations shown on the plans. In general, the road structure shall consist of three components: road sub-base, base course, and final paving course presented in the detail design.

The road areas shall be excavated to the elevations shown on the plans, to accommodate the placement and compaction of the road structure specified on the plans.

3.6 Excavation of Rock

In some locations, excavation of rock shall also be required to prepare the site for construction. In these areas, local practice shall be followed to determine the type of excavation method most appropriate for the work. Generally, three types of rock excavation methods are practiced:

- Rock removal by blasting (explosives): hard rock sites

- Rock removal by automatic hammer and special excavation equipment: soft to medium rock sites
- Rock removal by standard excavation methods: soft and/or weathered rock sites

In cases in which blasting shall be used for excavation, the Sub-Contractor shall prepare a blasting plan for use on the site. The plan shall adhere to all requirements of local law. The plan shall allow for excavation of the rock such that minimum over-excavation is achieved. Excavation volume significantly higher than the theoretical calculated volume of rock removal shall be at the expense of the Sub-Contractor.

3.7 Excavation of Hazardous Materials

Contaminated or otherwise hazardous materials shall be handled separately from non-contaminated materials, in accordance with local law.

If presence of hazardous materials is suspected, it is recommended that a specialty survey is completed in conjunction with general building surveys. This survey shall be completed by a qualified entity. Sub-Contractor shall obtain all necessary permits for removing, transporting, and disposing of such waste as required by local and national laws. All hazardous or contaminated materials shall be disposed at a suitable site licensed to receive such materials.

3.8 Retaining Structures

Sub-Contractor shall review the Earthworks Plans to determine if retaining structures are specified. A retaining structure shall be defined as an engineered wall, the purpose of which is to support or retain earth and rock materials. Two types of retaining structure are identified for earthwork projects:

- Temporary retaining structures: structures intended for use during the construction period only, and which do not provide long term support function.
- Permanent retaining structures: structures which are permanent features of the site, and which provide long term support function.

In the event that a retaining structure is specified, specialty drawings and Specifications shall be provided for use in Construction.

Temporary retaining structures may also be proposed by the Sub-Contractor, if the Sub-Contractor identifies a potential cost savings or requires a retaining structure for worker safety reasons. In these circumstances, Sub-Contractor may prepare a wall design according to his requirements and present it for review and approval.

For utility trenches, if work is required at the base of the excavation, the Sub-Contractor shall provide movable temporary shoring (trench boxes) to protect workers. These may be constructed in accordance with local practice and codes, and shall not require individual approval.

3.9 Excavation Safety

The Sub-Contractor shall be solely responsible for maintaining site safety and the safety of workers during construction.

3.9.1 Special Requirements

Sub-Contractor shall be aware of special requirements of local code. In the event that local code requires stricter operating procedure than these Specifications, the more strict requirements shall govern the operation.

Some localities require regular safety meetings of Sub-Contractors and their employees; all local regulations shall be followed and fulfilled.

3.9.2 Slopes and Excavations

The behavior of slopes and construction excavations shall be monitored on a continuous basis during construction. If slope movement is observed (slumping, development of tension cracks at top of excavation, etc.), further excavation shall stop immediately and Sub-Contractor shall contact the Contractor and Engineer. Depending on observed safety conditions, Sub-Contractor may build a temporary berm against the moving face to prevent further movement; however, work in front of a moving soil face is forbidden if worker safety cannot be ensured.

Along the perimeter of excavations deeper than 1,5m, the Sub-Contractor shall install visible markings (i.e. temporary safety fence). Where work around deep pits is required, the Sub-Contractor shall provide fall protection for the workers. For all excavations deeper than 1m, the Contractor shall provide exit points for employees in case of emergency.

Vehicle traffic shall not be allowed within 3m of the edge of an excavation when workers are present. Further, excavation spoil shall not be stockpiled within 2m of the edge of an excavation.

Excavation side slopes shall be constructed such that they meet the requirements of Appendix A. Long term slopes (embankment) shall be graded no steeper than 1:2 (V:H). In special cases, slopes may be graded to 1:1.5; however, in these cases the allowance will be shown on the plans. Slopes shall not be made steeper than 1:2 unless authorized by the engineer.

Short term slopes for the powerhouse mass replacement shall be as shown on the earthwork plans.

Note that site conditions such as heavy rain, etc. may require these slopes to be modified for stability. Modifications to general slope recommendations may be required based on soil type and observed conditions, type of excavation, and its depth. As such, the values provided in the Appendix shall serve as a generally-applicable guideline; final geometry of temporary slopes shall be established based on observed field conditions at the time of construction.

4 FILLING

Construction of compacted fill layers shall be completed throughout the site during preparation of general levelling fill and at the locations of the building foundation layers. The provisions of this section shall be followed for placement and compaction of fill soils.

4.1 General

Filling shall be carried out according to the “Excavation and Filling Drawings”. Different types of filling areas shall be filled with selected materials appropriate for the application.

The following table provides examples of application areas for various natural and imported soil types. Refer also to Table 3. Grain size distribution curves shall be noted, as presented in Appendix B.

Table 4. General guidelines for fill material and application areas

Description	**Approved Use**[1]
Topsoil	• Planting areas.
Well-graded sand/gravel	• Ground supported structures, mass replacement • General purpose sand filling • Road sub-base course

Crushed Rock or Gravel	• Top 300mm…500mm below ground-supported structures. • Road Base Course
Coarse Gravel (approximately 20…50)	• Surface of Gravel Yards • Laydown and Working Areas[2]
Silt and Clay	• Yard areas • Berms and sound barriers

1. *Approved use is a general guideline*
2. *Laydown and working areas are intended for temporary storage during construction, and for long term storage. Contractor may establish these in accordance with his needs and at approval of Customer.*

4.2 Preparation of Filling Area

Prior to filling, the Site Inspector shall observe and approve the area to be filled. General criteria for approval of the filling area shall be as follows:

- The area shall be free of all debris and foreign materials, and large rocks.
- The area shall be dry and free of standing water.
- Locally soft areas shall be over-excavated to remove poor materials.
- Separation geotextile shall be placed over the natural subgrade (if required by plans).
- The filling area shall be constructed in level benches (e.g. if the site area is naturally sloping; if required by plans)

Fill shall not be placed against foundations, walls, footings and other concrete structures until concrete forms have been removed, and damp proofing and water proofing have been completed and approved.

4.3 Filling Types

In general, two types of filling work are identified for Contractor projects:

1. Levelling fill for yards and site grades.
2. Structural fill for buildings, engineered embankments, and roads.

4.3.1 Levelling Fill

Levelling fill shall be defined as filling required to achieve the design grade of yards on the site. Levelling fill is generally required on sites with naturally sloping grade, or to raise the ground level to reduce flooding risk. Levelling fill shall be placed and compacted to the levels shown on the Excavation and Filling Plan.

Levelling fill shall be subject to quality control as specified in Section 4.4 of this Specification.

4.3.2 Structural Fill

Structural fill shall be defined as all fills placed and compacted beneath structures, engineered embankments, reinforced earth fills, and roads. Structural fill shall generally be composed of imported, select material such as well graded sand and gravel, crushed rock, or similar. In some cases excavated soil may be acceptable for structural fill, subject to the approval of the Site Inspector and Engineer.

Structural fill shall be subject to quality control as specified in Section 4.4 of this Specification.

4.4 Placement and Compaction of Fill Soil

Methods of fill placement and compaction shall be selected by the Sub-Contractor based on his experience. It is recommended that the Sub-Contractor have a 10-ton vibratory compactor for use at the site.

Fill soil shall be placed and compacted in horizontal layers. The maximum permissible layer thickness shall not exceed 300mm unless authorized. However, the Sub-Contractor shall reduce the layer thickness as required if suitable compaction cannot be achieved. In areas of very soft Subgrade conditions, the Sub-Contractor may make the first lift thicker to prevent disturbance.

If cement admixtures are required by the design, or desired for workability on site, the Sub-Contractor shall follow the requirements of Section 4.7.

4.4.1 Density Requirements

All fill placed for general leveling, roads, perimeter embankment, and building pads shall be compacted to the following requirements, based on the maximum density determined using the Modified (Improved) Proctor Test (ASTM D 1557).

- General Levelling Fill: 90 percent.
- Roads: The compaction of the road layers shall be as follows.
    - Natural Subgrade: 90 percent
    - Road Embankment (if applicable): 92 percent
    - Sub-base Course: 92 percent
    - Base Course: 95 percent
- Embankments, Sound Berms: 92 percent
- Ground Supported Foundation and Building Pad: 92 percent
- Yards, Green Spaces: 90 percent.

4.4.2 Tolerance

The dimensional tolerance for leveling and building pad fill shall be as specified in Table 5, below.

Table 5. Dimensional tolerance of fill soil levels beneath buildings.

Fill Type	**Tolerance (+) (mm)**	**Tolerance (-) (mm)**
General Leveling Fill	50	50
Building Pads	0	20
Road Sub-base course	50	50
Road base course	50	50

4.4.3 Field Monitoring

Placement and compaction of fill shall be monitored continuously during construction. The field monitor shall be qualified for monitoring earthworks and compaction activities.

The field monitor shall have at his disposal suitable equipment for measuring the density and moisture content of the compacted soil units. An example of suitable equipment is the TroxlerTM soil moisture-density gauge (“nuclear gauge”) or equivalent (ASTM D 2922, and the specific requirements of the manufacturer), sand cone (ASTM D 1556).

The field monitor shall prepare and submit a field report detailing each day's field activities. The report shall include areas of work, equipment and methods used, results of soil import testing, and the results of all soil density testing completed at the site. Additionally, all conclusions and recommendations of the monitor shall be included.

Quality assurance requirements for imported fill soil, and compaction quality control shall be completed at the following frequency, unless otherwise agreed.

Table 6. Frequency of Quality Assurance Testing for Imported Fill Soil.

Test	**Minimum Frequency**
Classification (USCS)	1 test per 2.000m^3 Import
Grain Size Distribution	1 test per 2.000m^3 Import
Moisture Content	1 test per 2.000m^3 Import
Modified Proctor Test	1 test per 5.000m^3 Import

Table 7. Frequency of Compaction Control.

Area	**Minimum Frequency**
General Leveling Fill	1 test for each 2.000m^2 per layer
Filling Below Floors	1 test for each 1.000m^2 per layer
Filling Below Foundations	1 test for each layer of compacted soil.
Roads	1 test for each 1.000m^2 per layer

Note: in small filling areas (i.e. floors of small size), one test shall be completed for each layer.

Sub-Contractor shall note that an ASTM-approved method of compaction control shall be required for density testing. Two examples of such methods are provided in Table 1a. Sub-Contractor shall note that only one (1) approved method is strictly required. Density testing via the Soil Moisture-Density Gauge (ASTM D2992) shall be preferred.

For structures with ground supported foundations, the foundation shall be tested using the plate load test. The requirements for the plate load test for foundations are:

Table 8. Plate Load Testing Requirements of Foundations and Roads

Area	**Minimum Frequency**	**Plate Load Test Requirements**	
Road Structures	1 per 1.000m^2	$E_1 \geq 40$ MPa	$E_2 / E_1 \leq 2{,}2$
Heavy Structures (1)	1 per 1.000m^2; Minimum 3 tests	$E_1 \geq 50$ MPa	$E_2 / E_1 \leq 2{,}2$
Light Structures(2)	1 per 1.000m^2; Minimum 3 tests	$E_1 \geq 40$ MPa	$E_2 / E_1 \leq 2{,}2$

1. *Heavy Structures: includes HFO and other heavy storage tanks.*
2. *Light Structures: includes ground-supported floor slabs, day tank foundations, fuel treatment house, water tank foundations, and unloading station foundations.*
3. *Execution of the plate load test shall be in accordance with DIN 18134.*

4.5 Road Structures

Road structures shall be prepared according to the site-specific road structural design, as shown on the plans. In general, road structures shall be constructed of the following components.

- Surface Course: asphalt concrete or Portland cement concrete
- Base Course: well-graded gravel or crushed rock
- Sub-base Course: well graded sand and gravel
- Subgrade filling: sand and gravel, or on site cut soil if allowed in the plans.

These materials are placed to the thickness on the plans, over prepared subgrade. The subgrade should be proof-rolled prior to road construction to ensure that no pumping or other instability exists. In some cases, separation geotextile shall be required; refer to the Plans.

4.6 Laydown and Working Areas – Yards

The contractor may establish laydown and working areas for temporary storage of construction materials, equipment, etc. as needed or as shown on the plans. The locations of these areas shall be established by the Sub-Contractor and Contractor.

All laydown and working areas shall be graded to ensure proper drainage out of the yard.

4.7 Cement Admixtures

Cement admixtures shall be defined as use of cement or similar material (e.g. fly ash, bottom ash, etc.) to achieve a desired result in earthworks practice.

4.7.1 Application and Limitations

Use of cement admixtures may be proposed by the Sub-Contractor, or may be required by the earthworks design. Use of cement admixtures for foundation construction is generally of two types:

1. To improve the workability of wet soil materials cement admixture may be used to dry the materials to optimum moisture quickly.
2. To improve the strength of poor materials, so as to allow their use in construction (wet silt and clay).

It shall be noted that not all soil types are compatible with cement additives, and as such the use of these materials shall be subject to the approval of the engineer.

4.7.2 Admixing procedure and compaction

The Sub-Contractor may select materials and equipment for mixing. Common mixing equipment includes agricultural plowing equipment, specialty soil mixing equipment, or batch mixing in a pit using an excavator.

The cement shall be mixed uniformly through the mass before it is spread and placed.

Compaction of the cement-admixed material may proceed as with all fill soils, specified in the following sections.

4.7.3 Cement addition rate

Sufficient cement shall be added such that the required density is achieved; the proper rate of admixture shall be determined in the field, but in general the common requirements are as follows:

- Roads: 3 percent by weight (75 kg/m^3), as needed for workability
- Entry Road Embankment: 3 percent by weight (75 kg/m^3), required if cut soil is used.
- Fills Over Slopes: minimum 2 percent by weight (50 kg/m^3), or as needed for workability
- Laydown and Working Areas: 3 percent by weight (75 kg/m^3), required for bearing capacity beneath storage containers

- Storage Tank Area: 5 percent by weight (100 kg/m3) required

When improving workability of the soil the Sub-Contractor may use a mixture of cement which is appropriate for the work. The normal range of cement addition is from 2…5 percent by dry weight (50…100 kg/m^3 of natural soil); however, exact addition rate may be determined by the Contractor.

5 SURFACE MATERIALS

Permanent surfacing requirements shall consist of surface materials for roads, yards, auxiliary areas, green spaces, and permanent erosion protection of drainage features and slopes.

A surface materials drawing shall be prepared for the site, and consulted by the Inspector and the Contractor. This section describes specific requirements for each type of surface material.

5.1 Erosion Protection of Exposed Excavations

During periods of high rainfall, Sub-Contractor shall protect exposed excavation surface from erosion runoff. This matter is particularly important with exposed areas of the native soil.

For large benches and yards, methods of protection include:
- protecting slopes with plastic sheeting
- sloping the ground away from the top of excavations (2 percent grade is generally sufficient)
- protecting cuts or bottom of excavations with slabs of lean mix concrete
- construction of an earthen berm around the pit

Precipitation water naturally collects in excavations. For large excavation areas, it is recommended that the Sub-Contractor select a suitable location in the excavation and construct a sump. The sump shall consist of a small pit designed to collect drainage water. The base of the excavation shall be graded such that water naturally flows to the sump. A submersible pump shall be placed in the sump, and water pumped out of the excavation. Standing water in excavations shall be avoided. If needed or desired, several sumps shall be constructed.

Sub-Contractor shall take due note of local requirements for runoff and discharge waters. All local laws and regulations shall be followed and fulfilled.

5.2 Gravel Surfacing – Yards

Gravel-surfaced yards which will not receive heavy construction traffic or serve as laydown/working areas shall be covered with Gravel in accordance with the plans.

Prior to placing gravel surfacing, the yard area shall be cleaned of all foreign debris and the surface of the ground compacted. The gradation of materials used in gravel road and yards shall be determined according to ASTM D 2487.

The thickness of the gravel layers shall be checked for every 2.000m^2. The allowable variation is ± 50 mm. The allowable variation for surface level is ± 20 mm.

5.3 Pavement

Paved areas shall consist of roads, unloading areas, and other locations which shall be permanently covered with asphalt or rigid concrete (cement concrete). Paved areas shall be constructed at the locations specified on the Surface Materials plans.

Prior to paving, the area shall be cleaned of all foreign debris and the surface of the ground compacted according to the Specification for Base Course. Paving of road areas shall not begin until the Construction Monitor has reviewed the testing data and has approved the beginning of pavement.

The designed thickness of the units shall be verified according to the plans (Structural Details, or Surface Materials drawings).

The allowed variation for surface level of final pavement is ±20mm.

5.4 Grass and Green Areas

On completion of site fills, Contractor shall place topsoil and plant grass in areas shown on the Plans. In general, the finishing requirements for grassed areas shall be as follows:

- Top Soil: 200mm thick layer. Can be re-used from stripping operation.
- Grass: Seed according to locally acceptable varieties.

Grass shall be seeded on a deep, loose, fertile, well-drained (internally as well as on the surface), has plenty of organic matter, and is free of weeds and disease. This soil layer may be of the excavated topsoil from the site.

The thickness of the soil layer shall be checked in every 1000 m^2. The allowable variation in layer thickness is ±30…50 mm (for layer thickness of 100…200 mm). For a length of 2 m the allowable variation in surface evenness is ± 50 mm

After seeding the grass, the surface shall be consolidated and levels shall be examined visually.

5.5 Erosion Protection of Exposed Slopes

Permanent exposed slopes shall be protected. Refer to the Structural Details drawing, if applicable, for project-specific requirements.

The earthworks Sub-Contractor shall install erosion protection to ensure that the slopes do not suffer from undue levels of erosion. The erosion protection shall consist of the following:

- Swale at top of slope
- Placement of jute matting or geocells to hold topsoil in place
- Seeding the area with grasses and other plants suitable to the environment

Below the jute mat, the Sub-Contractor shall place 200mm of organic top soil. This top soil may consist of topsoil stripped from the site at the beginning of construction.

5.6 Erosion Protection – Pipe Discharges and Ditch Corners

Areas of high water velocity shall require erosion protection distinct from that of the yard areas. Particular attention shall be paid to the requirements for pipe discharges (into ditches or onto slopes), and in corners of ditches.

Direct discharge of drainage water to unprotected slopes from pipes and open drains shall not be allowed.

5.6.1 Rip-rap for Erosion Protection

For the purposes of this Specification, rip-rap shall be taken to mean angular blocks of stone of size larger than 100mm, placed loosely in a layer on the area required. Placement of rock into concrete or other material shall not be considered rip-rap.

The riprap shall consist of loose rock of varying gradation. The minimum acceptable size for the rock is 100mm. The maximum size of the rock shall not be greater than 300mm. The rip-rap does not have to be placed in concrete unless required by local code.

The rip-rap shall be created from rocks which are not susceptible to degradation by water.

It shall be noted that in cases of very high predicted flow velocity in open channels, a design calculation should be performed to ensure that the rock size selected is acceptable for the work.

5.6.2 Ditch Corners and Curves

Ditch corners and curves require erosion protection with rip-rap. In these areas, erosion protection shall be placed as noted on the plans, and shall extend for a minimum distance of 1 times the depth of the ditch upstream and downstream of the ditch.

5.6.3 Pipe Discharges

At locations of pipe discharges onto open slopes, the rip rap should be placed on top of separation geotextile, to prevent piping of underlying soil over time. The erosion protection at the outlet of the pipe or open drain shall require that the area for a distance of 5m down slope, and minimum 2m wide be excavated to a depth of 300mm.

Separation geotextile shall be placed at the base of the excavation, and riprap shall be placed in a layer at least 300mm thick. The pipe or drain should be centered at the top of the water break.

APPENDIX A: TEMPORARY EXCAVATION GUIDELINES

Excavation shall proceed with due caution regarding safe working conditions. The values contained in the Tables below are presented for reference purposes only. Actual gradation of site excavations shall be based on observed conditions at site.

If Sub-Contractor or Contractor notes development of instability in excavation slopes (tension cracks, slumping, or movement), all excavation work shall be immediately halted and workers removed to a safe distance from the excavation. Work shall not proceed until authorized.

Table A.1 Suggested excavation depths and slope inclinations in coarse-grained materials.

Coarse-grained material	Depth (m)	Inclination
Loose to compact sand and gravel, silty sand and gravel	All	1:2…1:1
Dense sand and gravel, silty sand and gravel (including some till types)	0…1 >1	2:1 1:1
Very Dense Sand and Gravel, Including Most Till	0…1 >1	Vertical 1:1

Table A.2 Excavation depths and slope inclinations in fine-grained materials (clay).

Fine-grained material	Depth (m)	Inclination
Very soft clay (shear strength 7-10 kN/m2)	<1,0 m	1:1
	1…2m	1:2
	>2,0 m	1:3
Soft clay (shear strength 10-20 kN/m2)	1,5	5:1
	1,5…2,0	3:1
	2…2,5	2:1
	>2,5	1:1
Stiff clay (shear strength > 20 kN/m2)	0…2	3:1
	2…3	2:1
	3…4	1:1
	>4	1:2

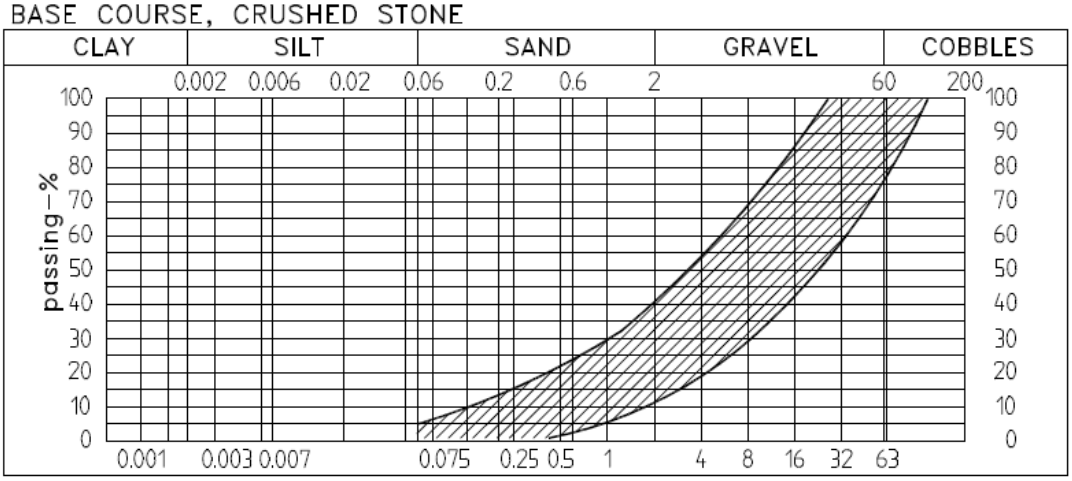
Notes:

1. *Sub-Contractor shall avoid stockpiling soil or other construction materials within 5m of all excavations.*
2. *When workers are present, Sub-Contractor shall maintain safe exit points for all personnel in an excavation.*
3. *Regardless of conditions on site, the earthwork drawings will show 1:1 excavation slopes. The actual slope configuration may be selected by the Sub-Contractor during construction, provided that safe working conditions are maintained.*
4. *Permanent slopes shall not be graded steeper than 1:2 unless specifically authorized by the Engineer. In some cases the permanent slope shall be 1:3. Refer to the plans.*

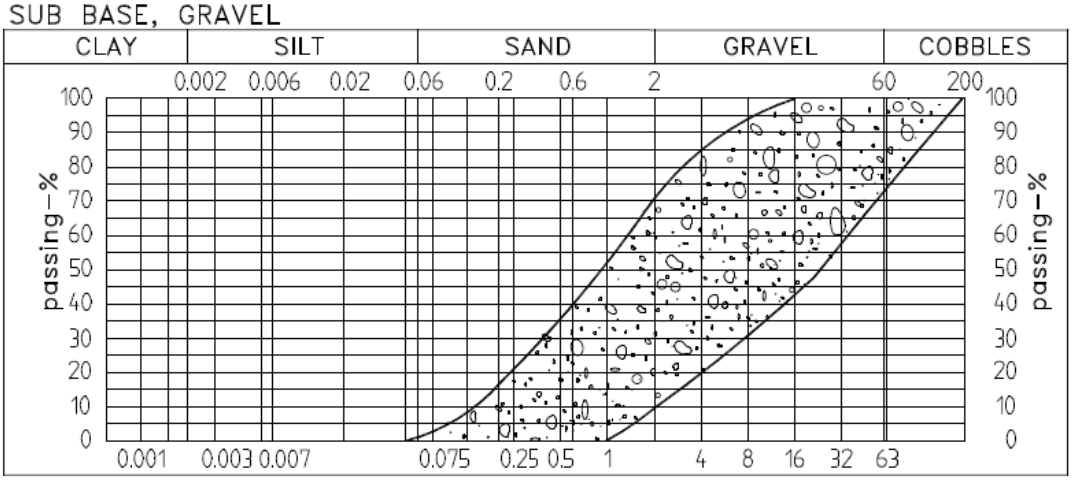
APPENDIX B: GRADATION REQUIREMENTS FOR IMPORTED FILL

GRADING REQUIREMENTS – IMPORTED FILL SOIL

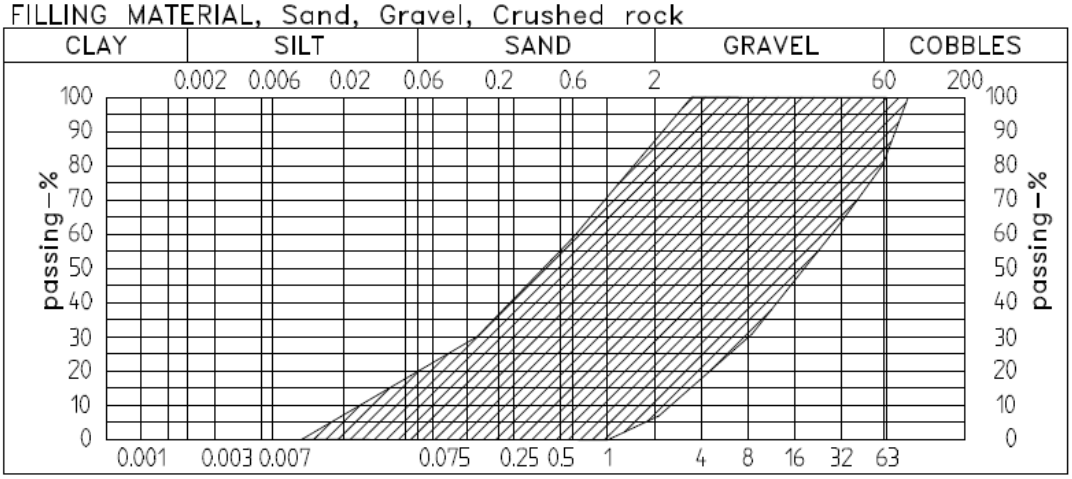
BASE COURSE, CRUSHED STONE



SUB BASE, GRAVEL



FILLING MATERIAL, Sand, Gravel, Crushed rock



Appendix 7C–

Thermal Plume Dispersion Analysis Memo

EDP LNG Import Terminal
Acajutla, El Salvador

Thermal Plume Dispersion Analysis

Submitted To:

Invenergy

One South Wacker Drive, Suite 1800
Chicago, IL 60606

Job Number	Submittal Date	Purpose of Issue	Revision Number	Prepared by	Reviewed by	Approved by
9338	2016-10-25	Draft	A	A. Venkattaramanan	G. Millar	R. Beasley
9338	2016-11-21	Final	0	A. Venkattaramanan	G. Millar	R. Beasley

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November 2016

Disclaimer:

This report was prepared by Moffatt & Nichol for the account Invenergy, LLC, for a specific purpose and specific project using the standard care prevailing at the time the work was done, and is provided for information only. The material in it reflects Moffatt & Nichol's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Moffatt & Nichol accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

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EXECUTIVE SUMMARY

Invenergy, LLC is planning to develop a new marine terminal for the unloading and supply of Liquefied Natural Gas (LNG) to a new power plant in Acajutla, El Salvador. The marine terminal will provide a permanent or semi-permanent mooring for a floating storage regasification unit (FSRU) as well as a port of call for gas deliveries on floating storage units (FSU) which are floating LNG (FLNG) carriers.

During the operation of the FSRU and FLNG, there will be releases of cooled or heated seawater into the surrounding waters. Invenergy, LLC retained Moffatt & Nichol (M&N) to conduct a thermal plume dispersion analysis in order to study the development of discharge plumes in relation to the metocean conditions at and around the project site. The purpose of the study is to estimate the extent of the plume dispersion area.

The following conclusions were made based on the results of the numerical modeling:

- The warm water plumes (from the boiler of the FSU and the FSRU engine cooling outfalls) primarily impacted the surface layers of the surrounding waters up to a 3 m depth.
- The cold water plume (from the FSRU vaporizer) primarily impacted the bottom layers of the surrounding waters up to 2 m from the bed.
- From the FSU, the warm water plume temperature was reduced to less than 0.5°C from ambient within 250 m from FSU Outfall 3.
- From the FSRU, the warm water plume temperature was reduced to less than 0.5°C from ambient within 70 m from FSRU Outfall 3.
- From the FSRU, the cold water plume temperature was increased to less than 0.5°C from ambient within 250 m from FSRU Outfall 6.
- The increase in water temperatures at the intakes, as a result of mixing from the outfalls, was not more than 0.25°C relative to the ambient temperature.
- The plume distance may be related to flowrate (based on the limited scenarios run). Dispersion to less than 0.5°C from ambient temperature occurs at a greater distance from the outfall with increasing flowrate.
- Increased flowrate does not greatly impact the depth or location of the temperature plume in the water column, for warm or cold discharges, based on the limited scenarios modeled.

1 INTRODUCTION

Invenergy, LLC is planning to develop a new marine terminal for the unloading and supply of Liquefied Natural Gas (LNG) to a new power plant in Acajutla, El Salvador. The marine terminal will consist of a Floating-Storage-Regasification Unit (FSRU) located within a cellular cofferdam protection structure. The cofferdam will serve as the semi-permanent berth for a Floating Storage Unit (FSU). Transient LNG carriers will berth against the FSU. The location of the project site is shown in Figure 1-1.

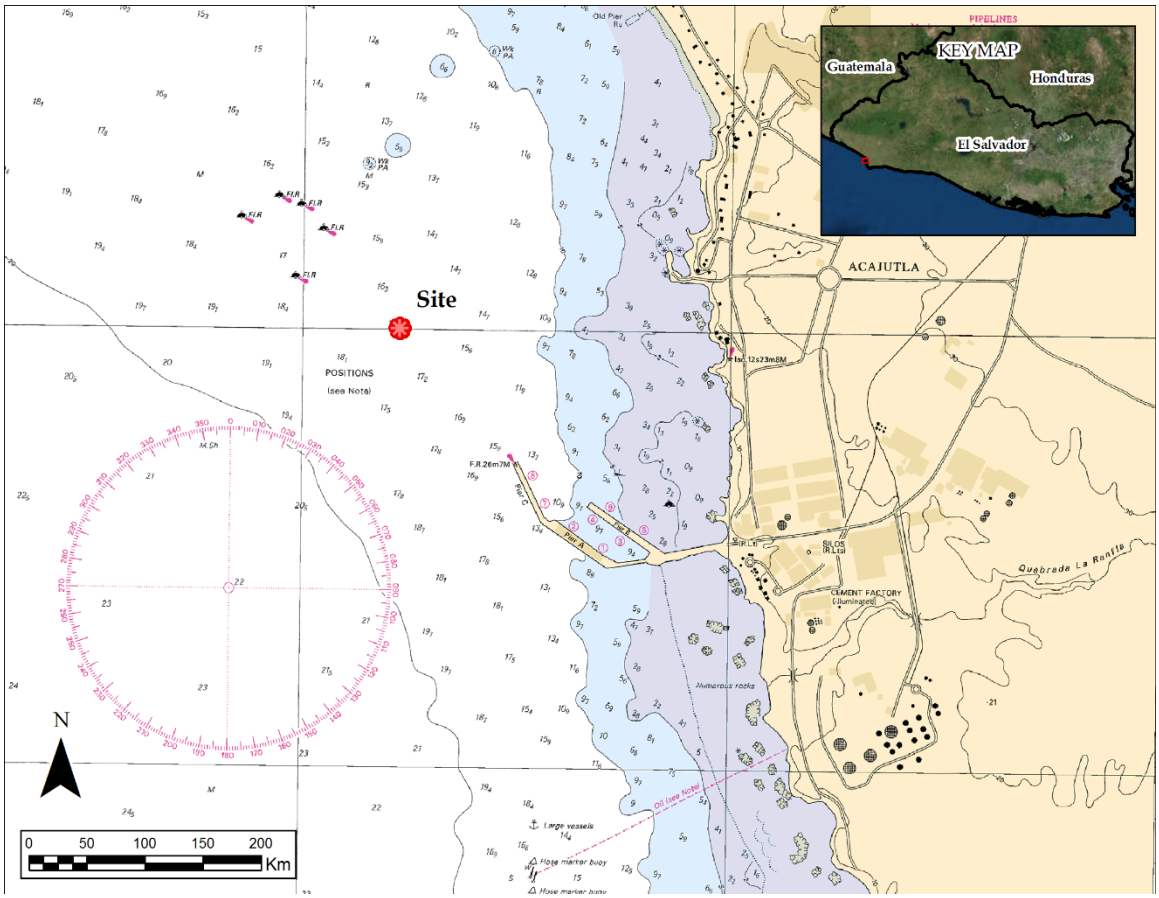

Figure 1-1: Location of Project Site

During the operation of the FSRU and FSU, there will be releases of cooled or heated seawater into the surrounding waters. Invenergy, LLC has retained Moffatt & Nichol (M&N) to conduct a thermal plume dispersion analysis in order to study the dispersion of these plumes in relation to the metocean conditions at and around the project site. The purpose of the study is to estimate the extent of the plume dispersion in terms of spatial distance and time. A case assuming operational capacity of 280 MMSCFD (million standard cubic feet per day) was evaluated as a worst case scenario.

2 MODEL DEVELOPMENT

A Mike Flexible Mesh 3D Hydrodynamic (HD) model was developed to evaluate the thermal plume dispersion. The model is a part of the Danish Hydraulics Institute (DHI) suite of numerical models. The HD model is a numerical model that can simulate oceanographic, coastal, and estuarine flows including density variations caused by salinity and temperature. The hydrodynamic model is based on the three-dimensional incompressible Reynolds averaged Navier-Stokes equations under the Boussinesq and hydrostatic pressure assumptions. The governing equations include temperature, salinity, and density terms along with a turbulent closure scheme. The vertical dimension parameters can be modeled utilizing a sigma or a combined sigma and z-coordinate transformation approach (DHI 2014).

2.1 Model Domain and Bathymetry

The model domain covered an area of approximately 3 square kilometers surrounding the project site. The model domain and bathymetry are shown in Figure 2-1. The depth at the marine terminal is approximately 16 meters.

The operational concept for the FSRU assumes that the regas unit draws water through intakes located on the barge inside the cofferdam structure. All discharges from the FSRU will be through outfall hoses or pipes into open water outside of the cofferdam. In order to optimize the minimum element size used in the model, as resolving the water exchange between inside and outside of the cofferdam, and between the cofferdam and FSRU would require considerably smaller elements, the cofferdam enclosing the FSRU was modeled as dry land. This implies that water exchange between the inside and outside of the cofferdam is not modeled. In reality, there are likely to be relatively small openings in the cofferdam closure gate, located between LAT and the bed, to allow water balance between the open ocean and basin. The potential impact of these openings will be discussed later in this report.

The model mesh was comprised of triangular elements of varying resolution across the domain. The area of elements varied from 500 m^2 near the offshore boundary to 3 m^2 at the project site. The mesh contained approximately 53,000 elements and is shown in Figure 2-2. The model projection was UTM-16N referenced to WGS84. Depths are reference to mean sea level (MSL).

Fifteen uniformly distributed vertical sigma-layers were used in the model. The sigma-layers adjust to the local bathymetry and water level variations during the model simulation.

The model domain had three open boundaries. Each boundary was forced with a combination of water levels and currents extracted from the results of a larger regional model (M&N, 2016 [2]).

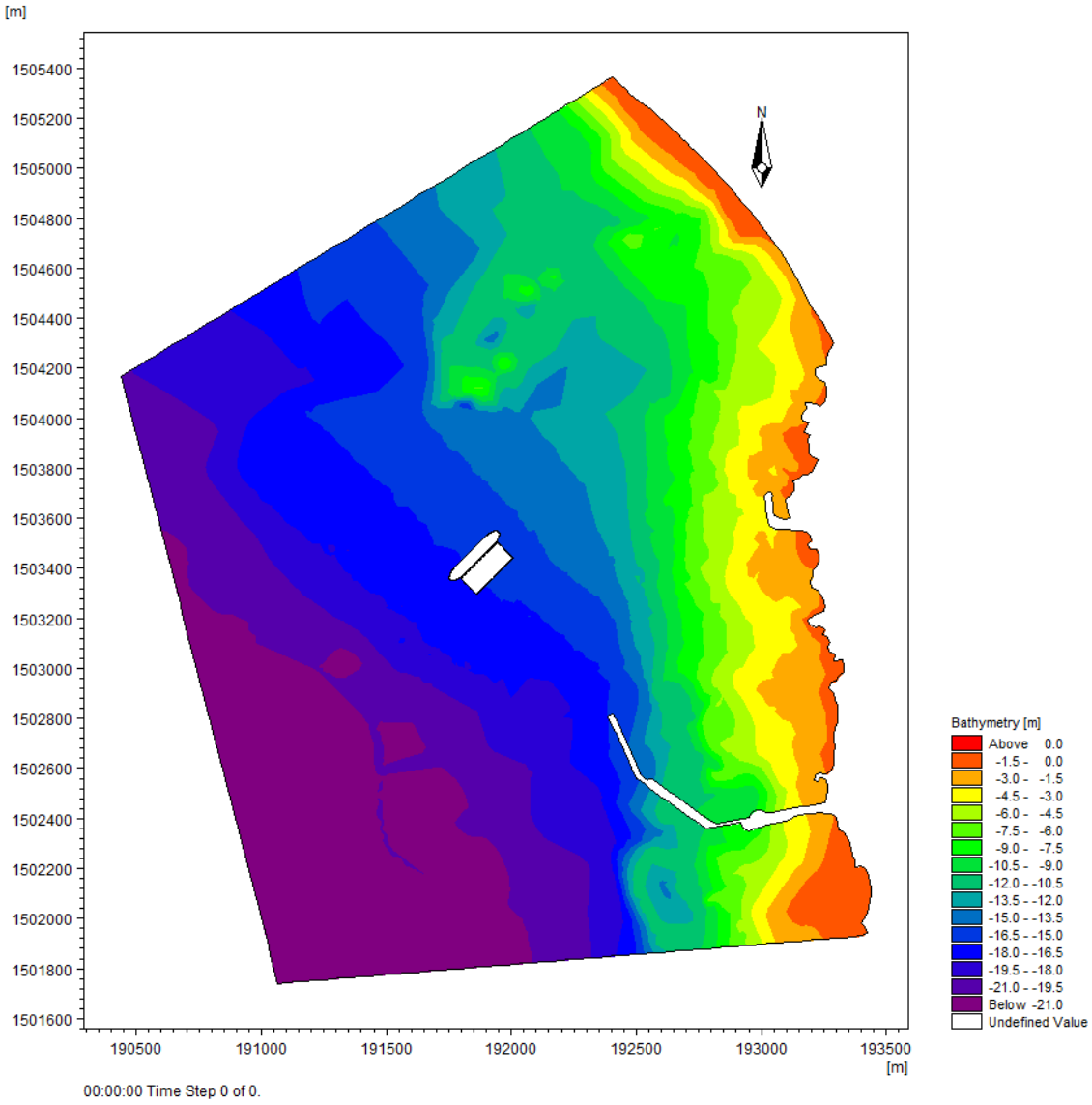

Figure 2-1: Model Domain and Bathymetry

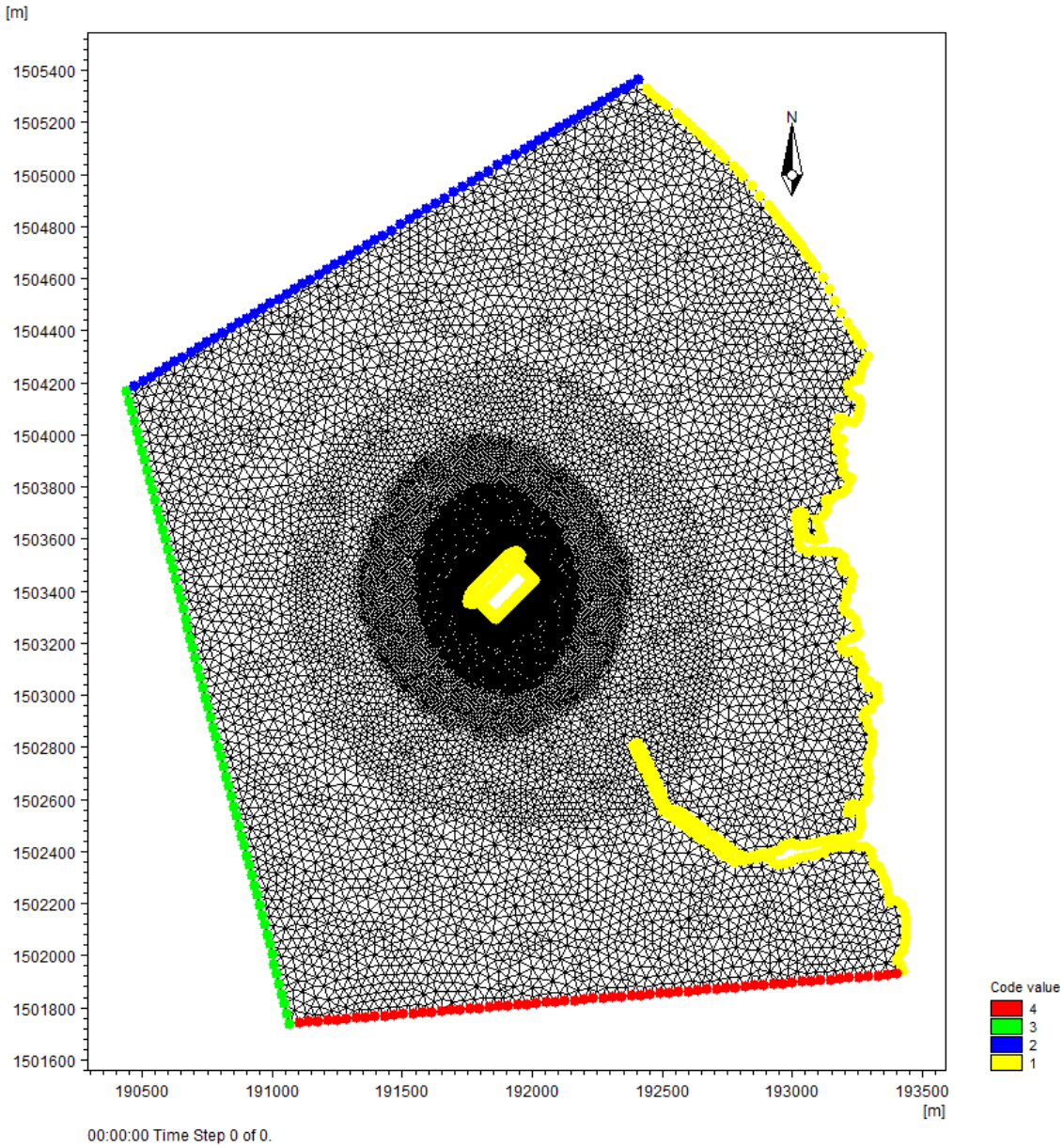

Figure 2-2: Model Mesh

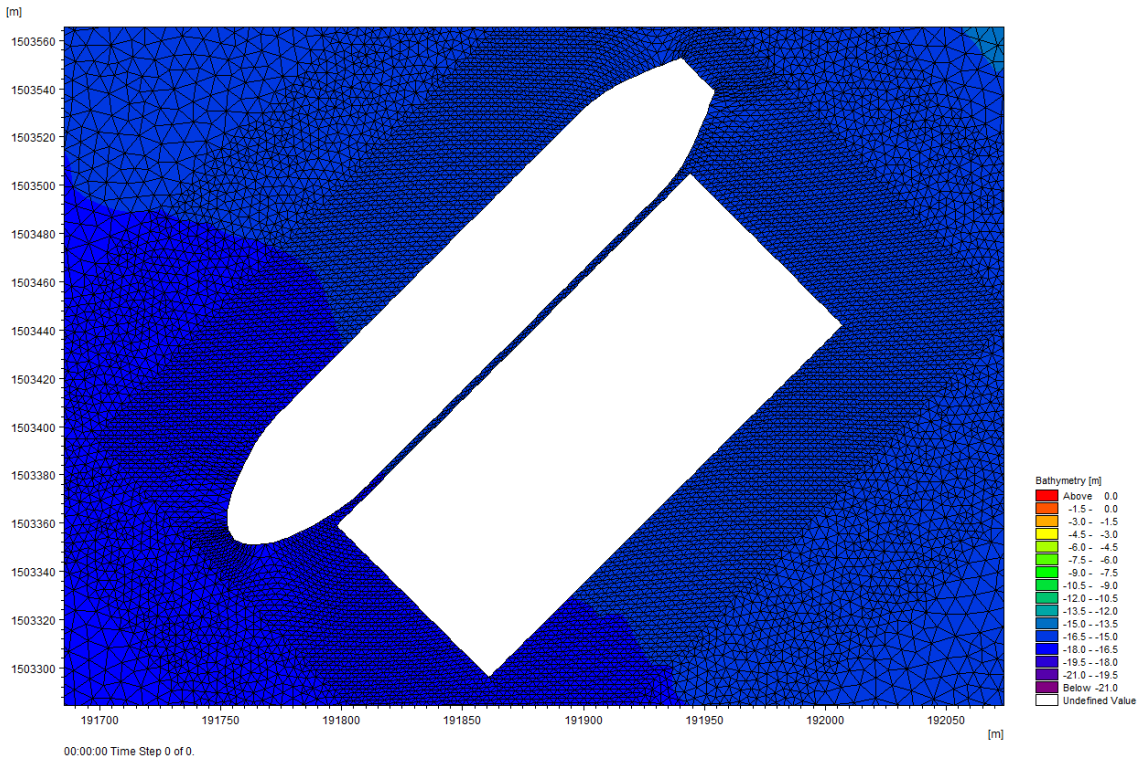

Figure 2-3: Model Mesh and Bathymetry at the Site

2.2 Model Configuration

2.2.1 Intake and Outfall Locations

The intakes and outfalls on FSU and FSRU are described in Table 2-1 and shown in Figure 2-4. The locations are approximate based on the information provided by EXMAR, at the time of this study. There is redundancy in the system, demonstrated in Figure 2-4 by the two FSU and four FSRU intakes. Seawater will only be drawn through one intake per process, i.e. engine cooling or vaporizer for FSRU, and boiler cooling for FSU.

Table 2-1: Intakes and Outfalls on FSU and FSRU

Vessel	Item	Name in Figure 2-4	X	Y	Z
FSU	Boiler IN	FSU Intake 1	191900.5	1503533	-4.25
		FSU Intake 2	191936	1503501	-4.25
	Boiler OUT	FSU Outfall 3	191917.4	1503545	-2.25
FSRU	Sea water vaporizer IN	FSRU Intake 4	191816.5	1503378.5	-4.25
		FSRU Intake 5	191878	1503312	-4.25
	Sea water vaporizer OUT	FSRU Outfall 6	191827.5	1503418	-2.25
	Sea water engine cooling IN	FSRU Intake 1	191937	1503499	-4.25
		FSRU Intake 2	191984	1503418	-4.25
	Sea water engine cooling OUT	FSRU Outfall 3	191997	1503431	-2.25

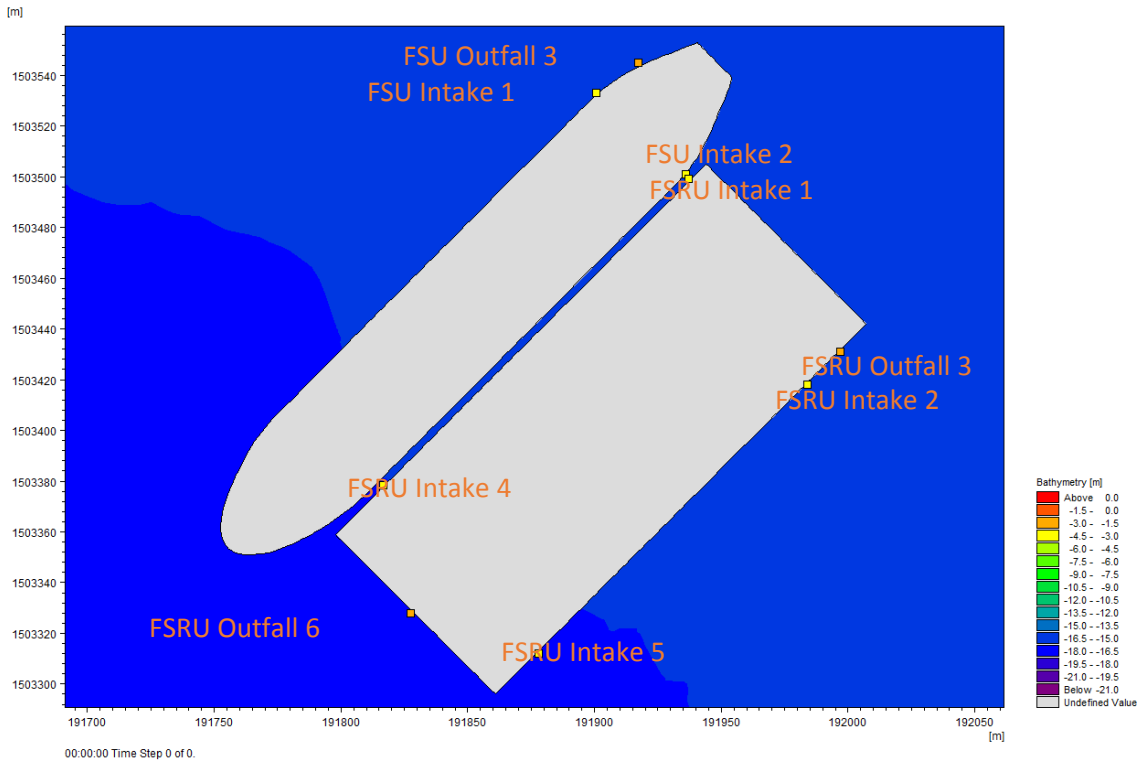

Figure 2-4: Sea water Intake and Outfall Locations

2.2.2 Temperature and Discharges

The model was run with a uniform ambient temperature of +28°C. The temperatures relative to ambient temperature and discharges at various intakes and outfalls used in the simulation are shown in Table 2-2. No velocities were specified for outfalls or intakes.

Table 2-2: Sink-Source Pairs Discharges and Temperatures

Sink	ΔT, °C	Source	Q, m^3/s	ΔT, °C
FSU Intake 1	0	FSU Outfall 3	2.78	+5
FSRU Intake 2	0	FSRU Outfall 3	0.33	+5
FSRU Intake 5	0	FSRU Outfall 6	2.78	-5

In order to be conservative, all flowrates will be modeled as steady-state with no ramp-up, ramp-down or shutdown periods.

2.3 Simulated Condition

The model simulation was performed for one full tidal cycle during a typical neap tide, as shown in Figure 2-5. The current conditions during the modeled time period is shown in Figure 2-6.

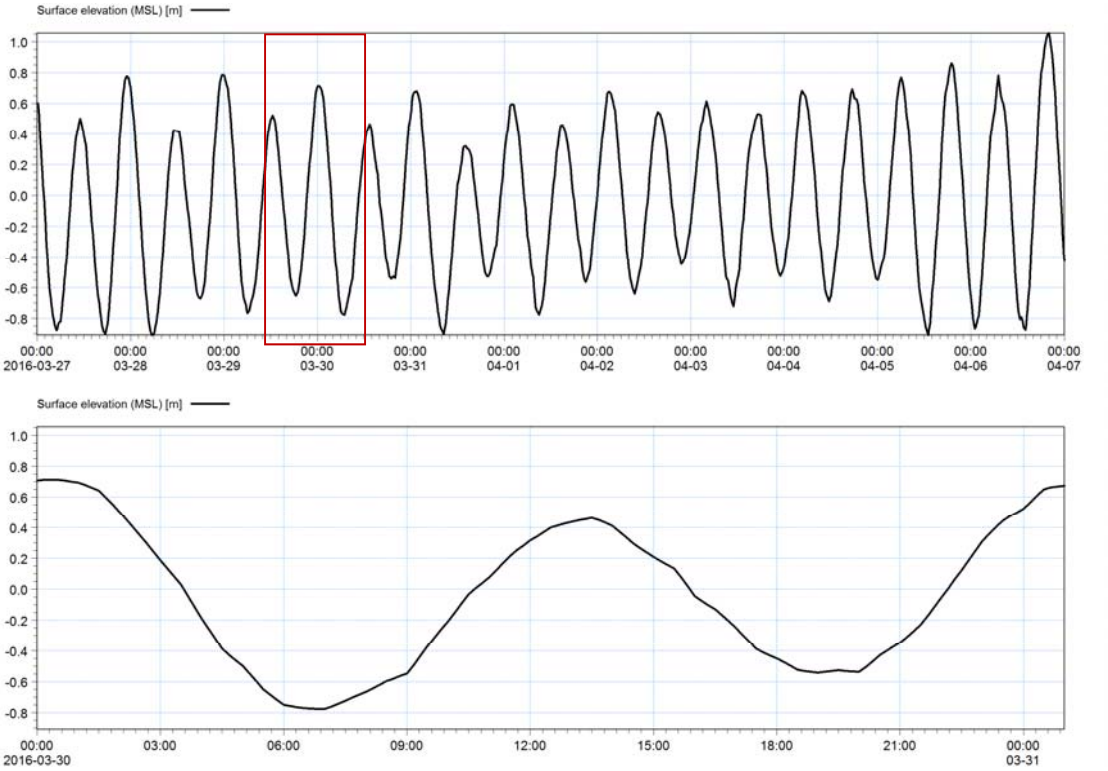

Figure 2-5: Typical (Top) and Modeled Tidal Water Levels (Bottom)

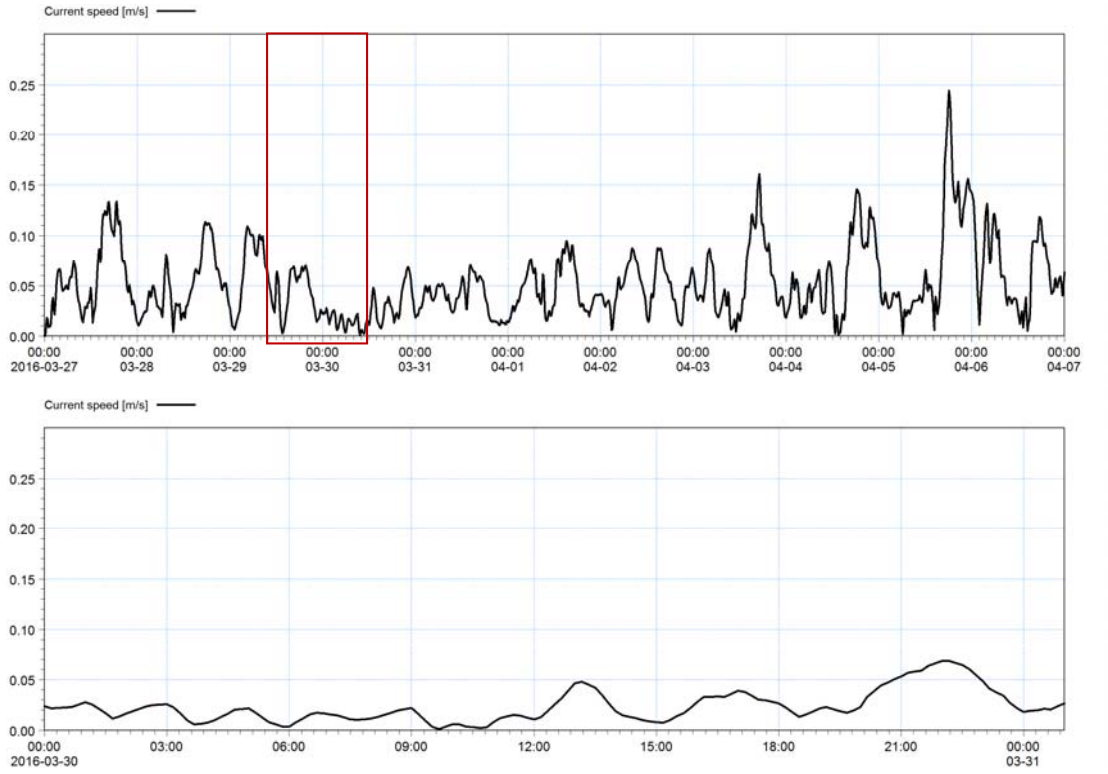

Figure 2-6: Typical (Top) and Modeled Current Speeds (Bottom)

A typical neap tide was selected because a neap tide will have lower current speeds. The model results for temperature dispersion are likely to be "conservative" during a neap tide as lower

current speeds would result in lower dispersion. The model run had a duration of 25 hours including one hour of model "spin up" (this is not intended to represent ramp-up of the FSU or FSRU operation – it is associated with the numerical model).

2.4 Calibration

No calibration was performed due to unavailability of suitable data. Default model parameters were used.

3 RESULTS

The results from the simulation are presented below.

3.1 Depth Averaged Currents

The depth averaged currents represent a general flow circulation generated by tides. The currents were plotted at time steps corresponding to ebb and flood tides and represent the conditions at that time step, but otherwise would vary throughout the simulation. The plots are shown in Figure 3-1 and Figure 3-2.

The currents during ebb tide are generally less than 0.15 m/s and during flood tide, current speeds up to 0.25 m/s can be observed. Typical eddies can be seen forming in the north side of the cofferdam and FSU.

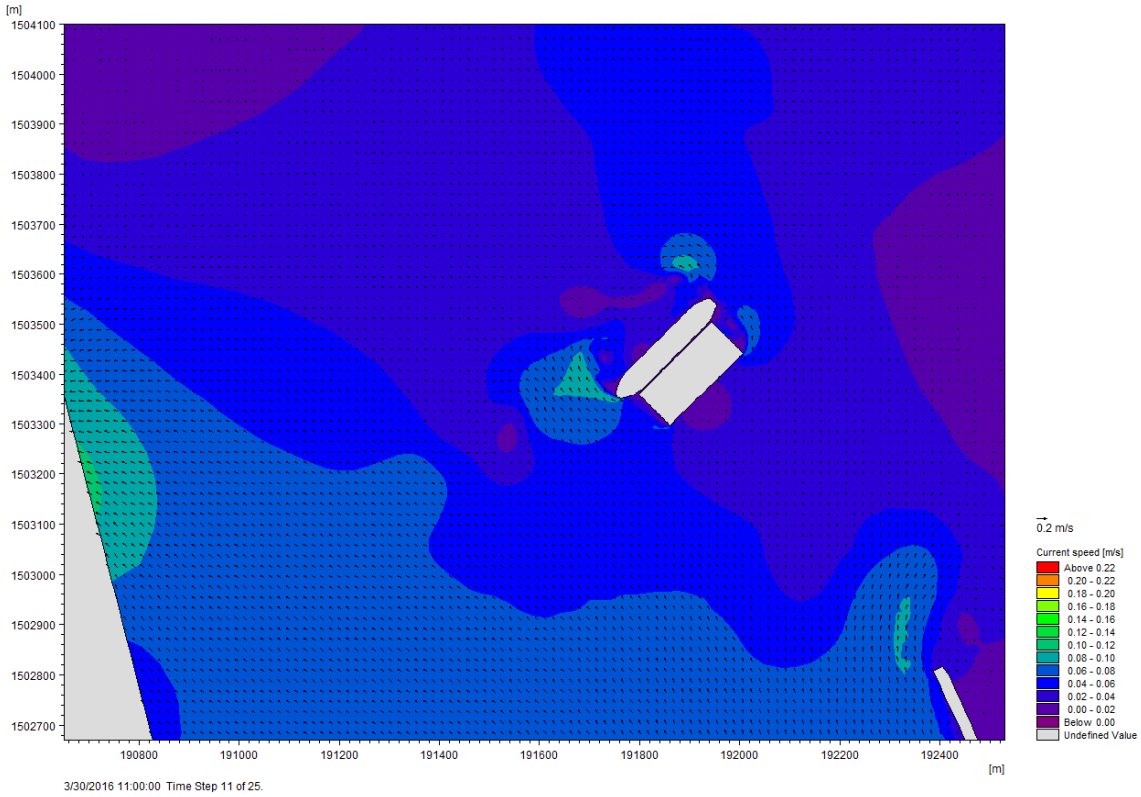

Figure 3-1: Depth Averaged Currents During Ebb Tide

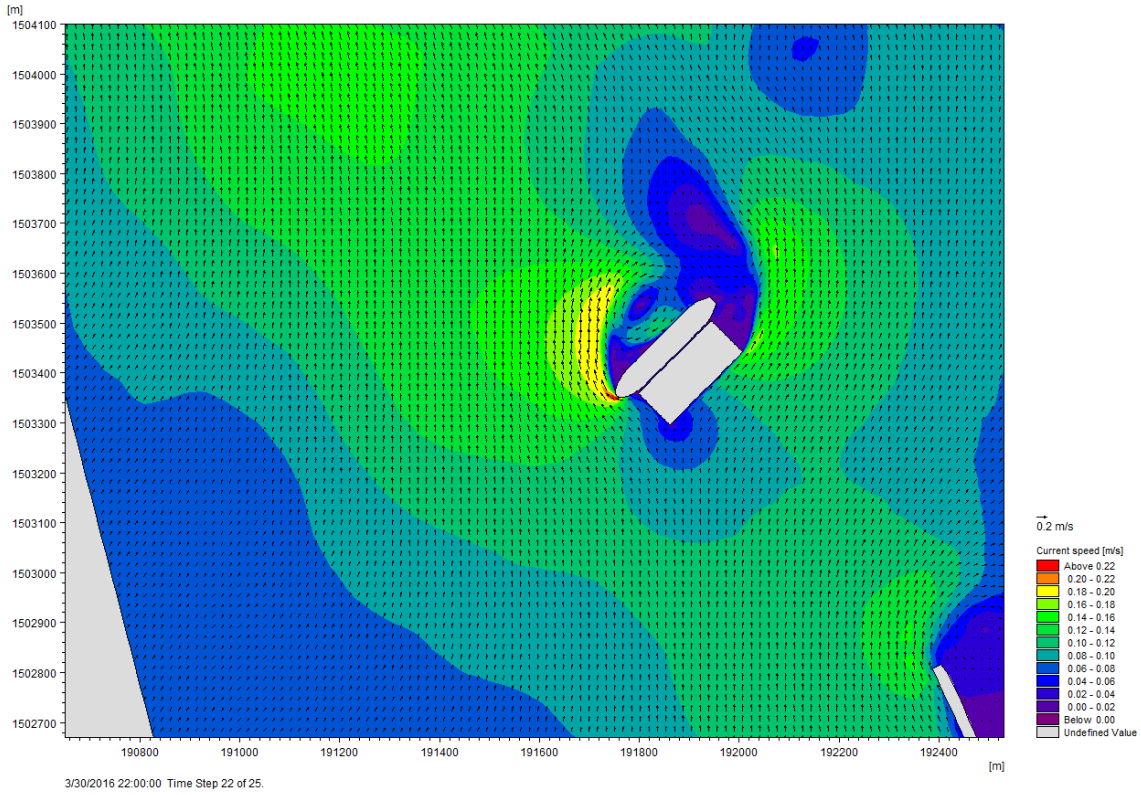

Figure 3-2: Depth Averaged Currents During Flood Tide

3.2 Surface Currents

The surface currents were extracted from the top sigma-layer of the 3D simulation. They mainly represent the flow generated by the thermal plume discharges. The currents were plotted at time steps corresponding to ebb and flood tides and represent the conditions at that time step, but otherwise would vary throughout the simulation. The plots are shown in Figure 3-3 and Figure 3-4.

Since no velocities were specified for the plumes, the currents generated by the plumes are more prominent during the ebb tide, as the ebb tide has lower current speeds in general. From the model results, it was observed that current speeds at outfall locations do not exceed 0.1 m/s.

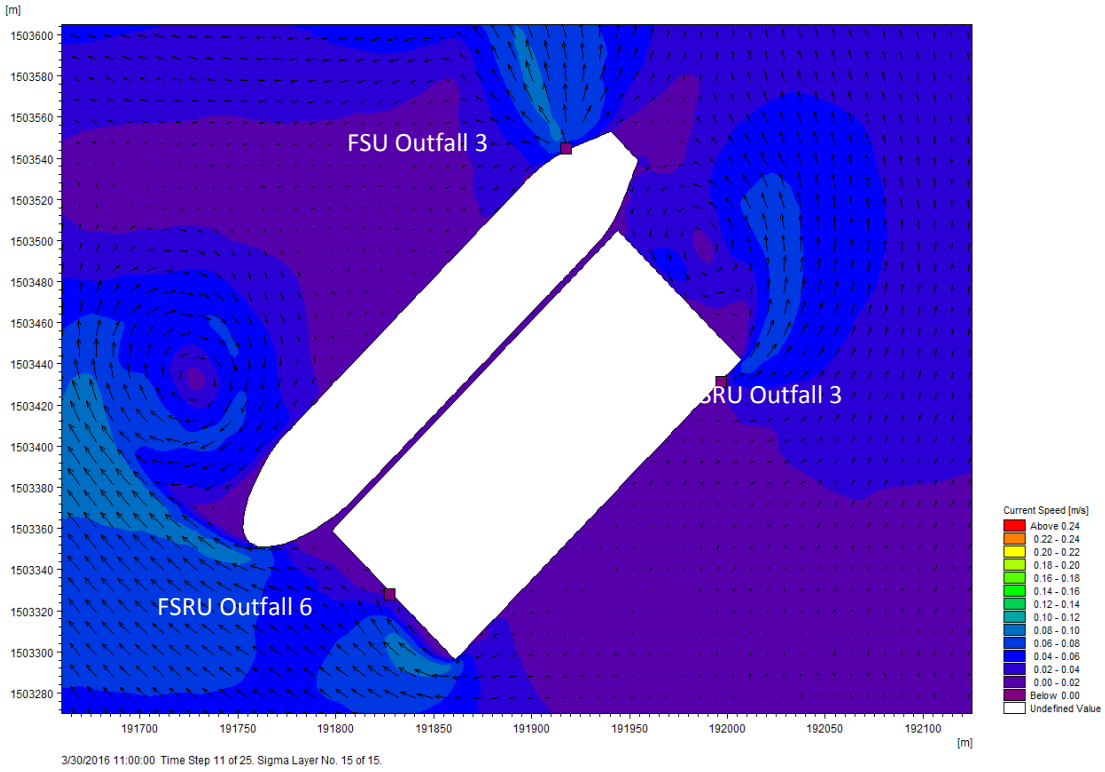

Figure 3-3: Surface Currents During Ebb Tide

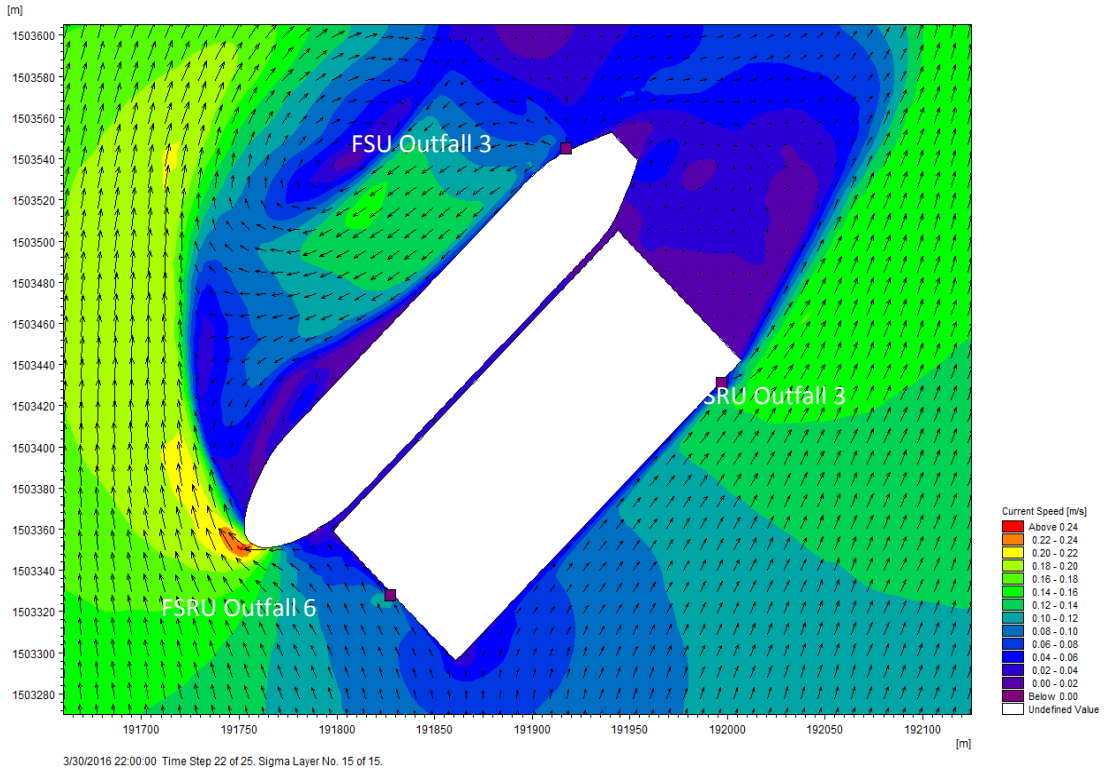

Figure 3-4: Surface Currents During Flood Tide

3.3 Surface and Sea Bed Temperature

The surface and sea bed temperatures were extracted from the top and bottom sigma-layers of the 3D simulation respectively. They represent the extent of the thermal plume away from the outfalls. The temperatures were plotted at the last time step of the simulation and represent the conditions at that time step, but otherwise would vary throughout the simulation. The plots are shown in Figure 3-5 and Figure 3-8.

The colors in Figure 3-5 indicate temperatures that are greater than 28.5°C, i.e., 0.5°C above the ambient temperature (+28°C). The warm water plume from the FSRU Outfall 3 (engine cooling water) can be seen to be influenced the most by eddies that are formed on the landward side of the cofferdam. It is noted that the temperature at the point source, i.e. the outfalls, is 33°C (delta +5°C from ambient).

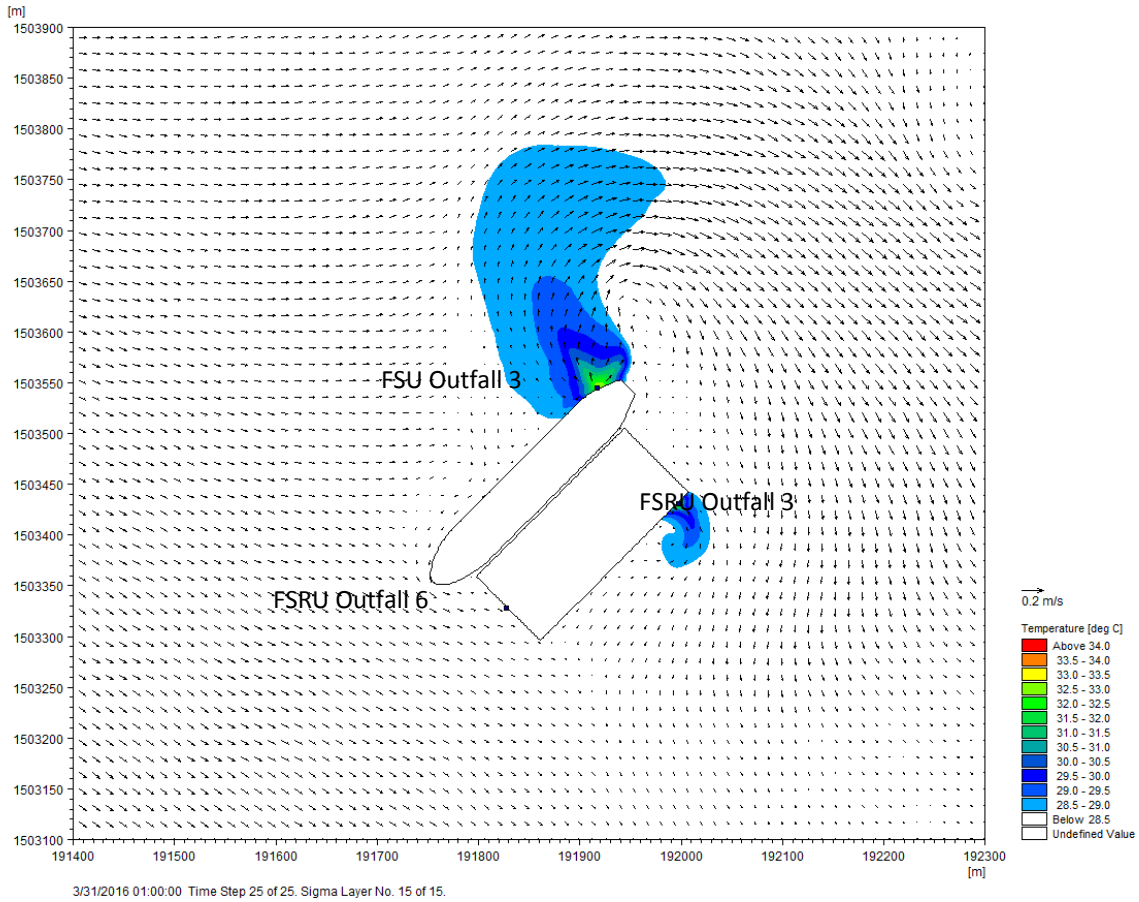

Figure 3-5: Surface Temperature at the Last Time Step of the Simulation

The colors in Figure 3-8 indicate temperatures less than 27.5°C, i.e., 0.5°C below the ambient temperature (+28°C).

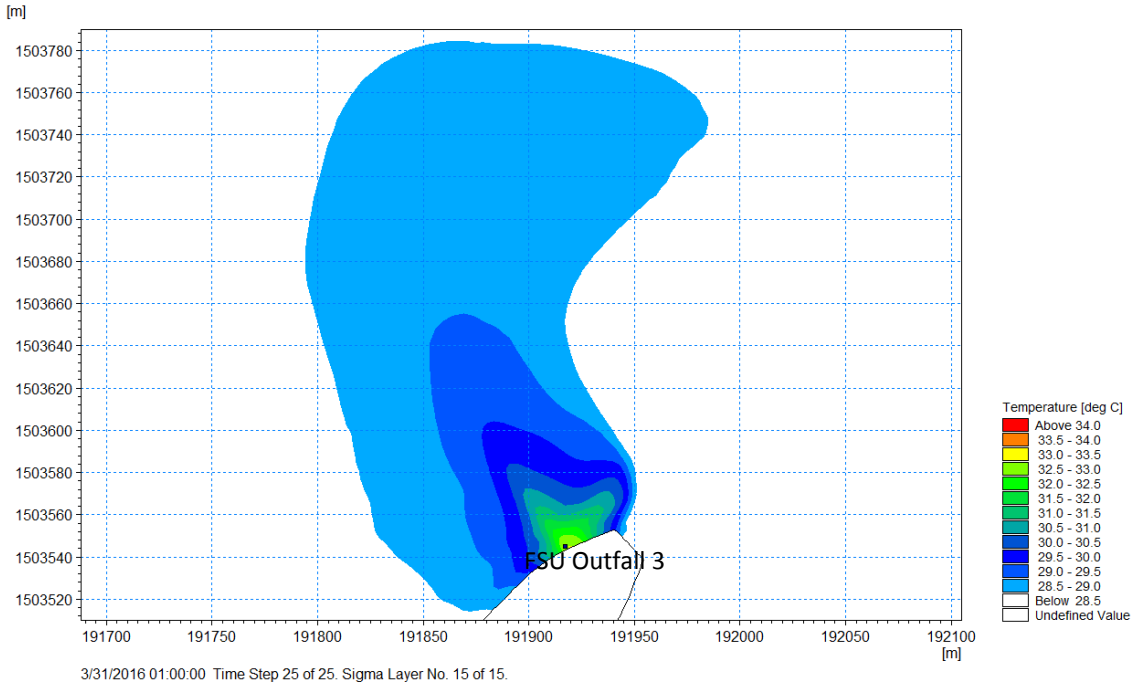

Figure 3-6: Surface Temperature Near FSU Outfall 3 at the Last Time Step of the Simulation

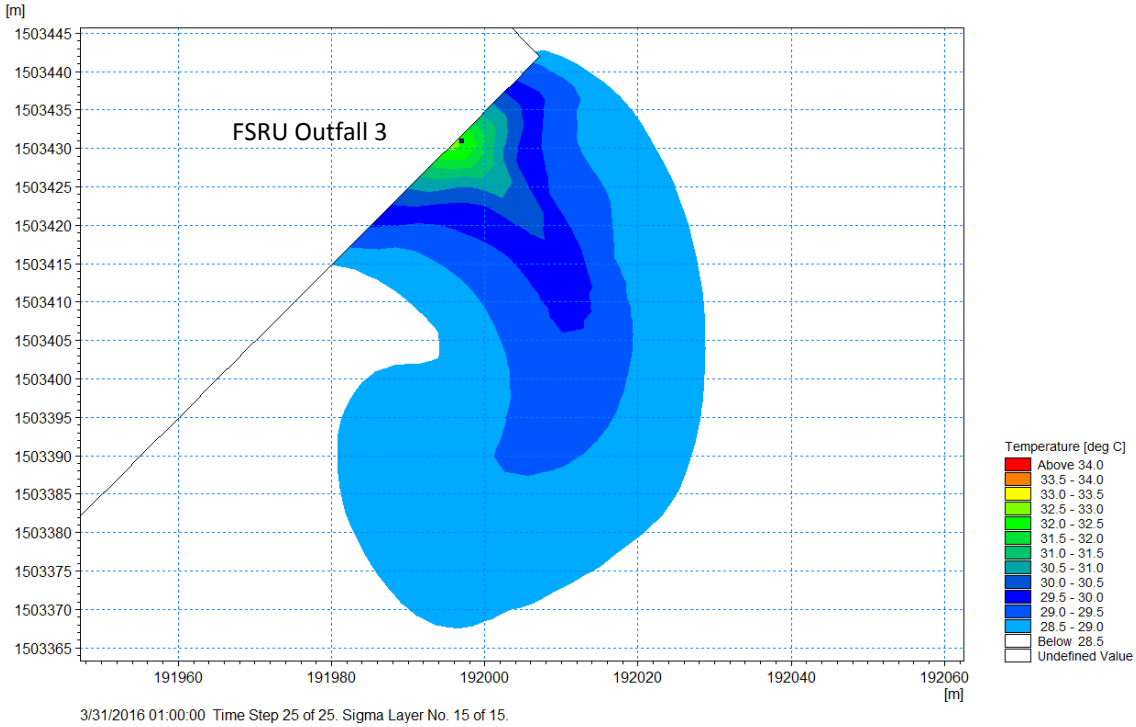

Figure 3-7: Surface Temperature Near FSRU Outfall 3 at The Last Time Step of the Simulation

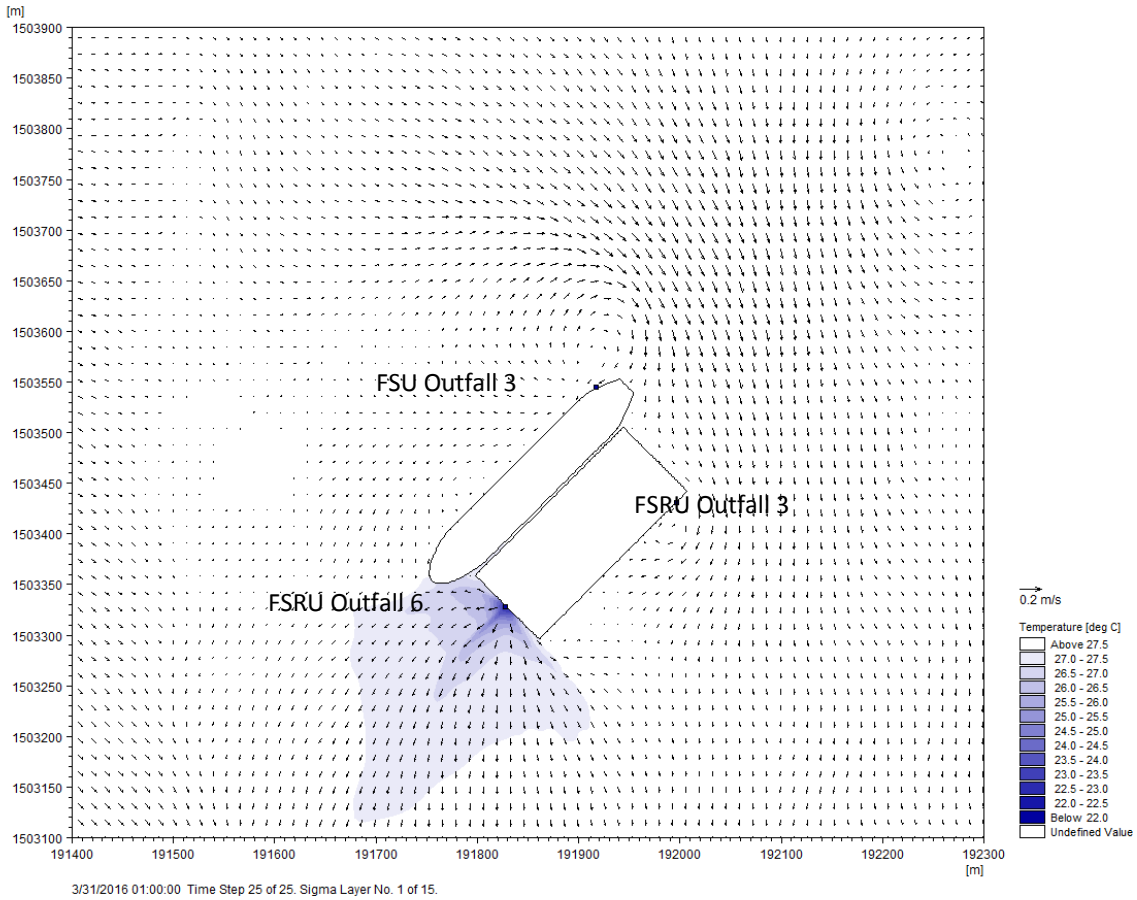

Figure 3-8: Sea Bed Temperature at the Last Time Step of the Simulation

It is to be noted that the temperature at the point source, i.e. the outfall, is 23°C (delta -5°C from ambient).

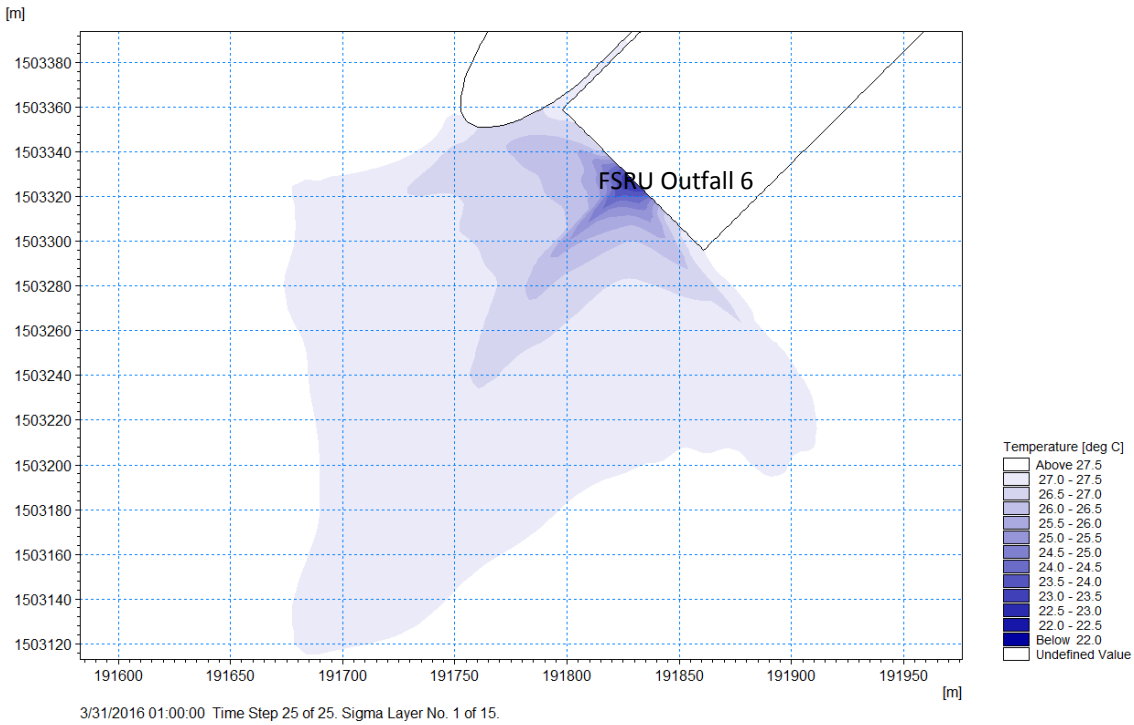

Figure 3-9: Sea Bed Temperature Near FSRU Outfall 6 at the Last Time Step of the Simulation

3.4 Vertical Profiles of Temperature

The vertical profiles of temperature were extracted at cross-sections at the three outfall locations (FSU Outfall 3, FSRU Outfall 3 and FSRU Outfall 6). The profiles were plotted at the last time step of each simulation and represent the conditions at that time step, but otherwise would vary throughout the simulation. The plots are shown in Figure 3-10 to Figure 3-12. The inset in each figure shows the corresponding cross-section.

The colors in Figure 3-10 and Figure 3-11 indicate temperatures that are greater than 28.5°C, i.e., 0.5°C above the ambient temperature (+28°C). The surface temperatures remain elevated near the outfalls, but dissipate quickly away from the vessels. The plume of warm water stays within approximately a 3-meter surface layer and dissipates within a few hundred meters from the outfalls.

The colors in Figure 3-12 indicate temperatures less than 27.5°C, i.e., 0.5°C below the ambient temperature (+28°C). The plume of cold water extends throughout the entire water column. Cold water, being denser, tends to sink. The plume stays within a 2-meter bottom layer and dissipates within 200 meters from the outfall. The difference between plume and ambient temperature reduced to 1°C within 80 meters from outfall.

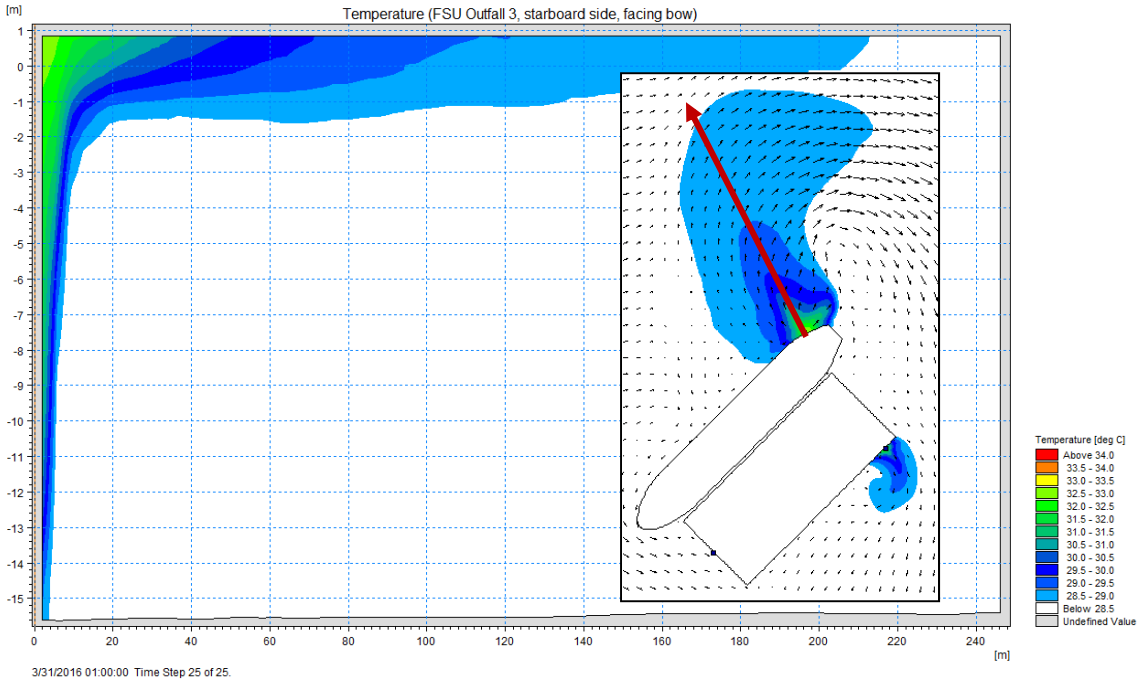

Figure 3-10: Vertical Profile of Temperature at FSU Outfall 3

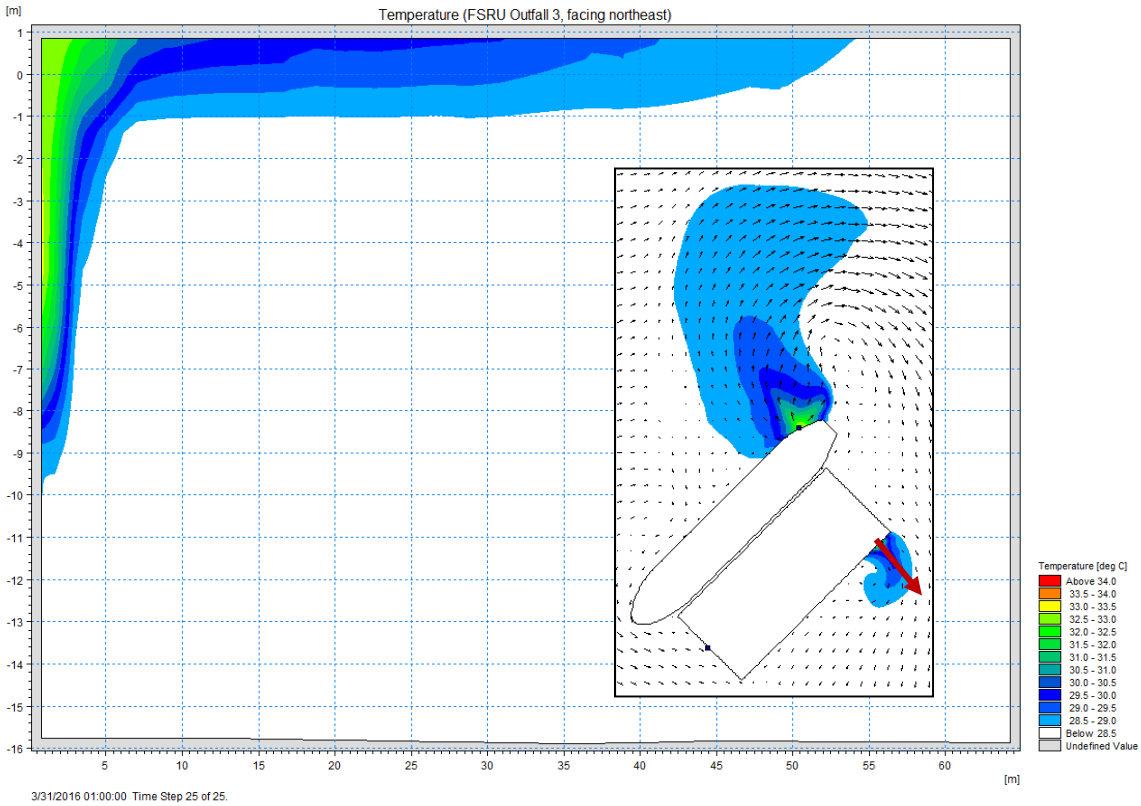

Figure 3-11: Vertical Profile of Temperature at FSRU Outfall 3

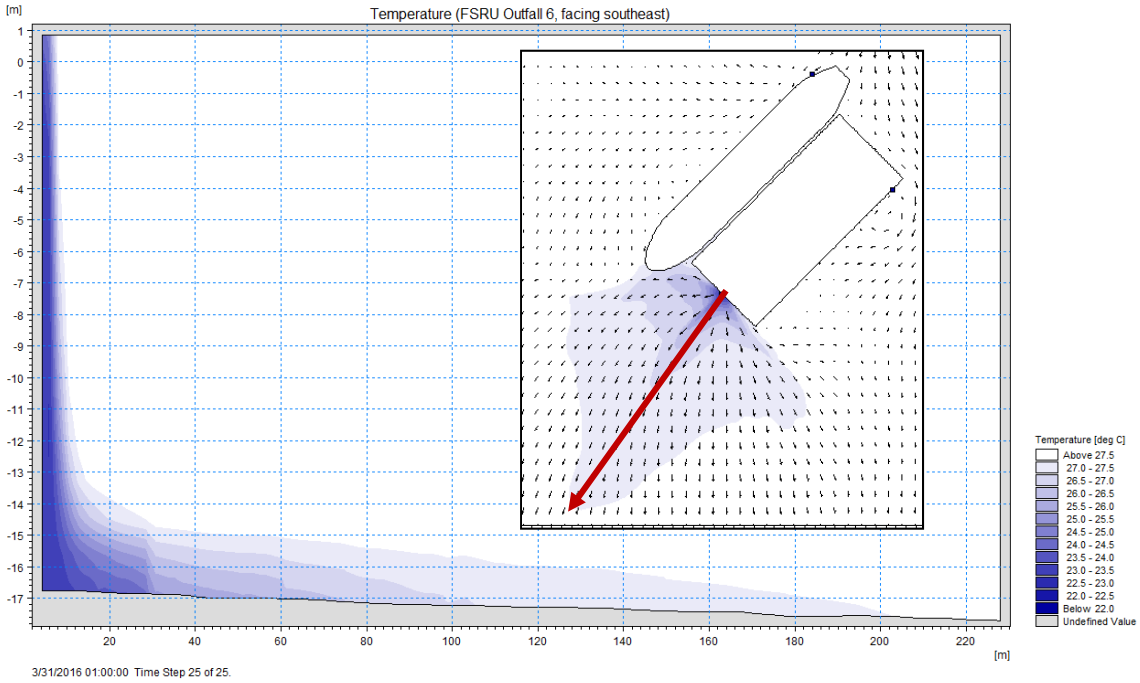

Figure 3-12: Vertical Profile of Temperature at FSRU Outfall 6

3.5 Temperature at Intakes

Since there is the potential for the ambient water temperature to fluctuate as a result of the discharged water, i.e. the heated water outfalls inferring with the intakes, the time series of water temperatures were extracted from the 3D model results at the three intake locations. The time series are shown in Figure 3-13. The water temperatures at intakes did not increase more than 0.25°C from the ambient temperature.

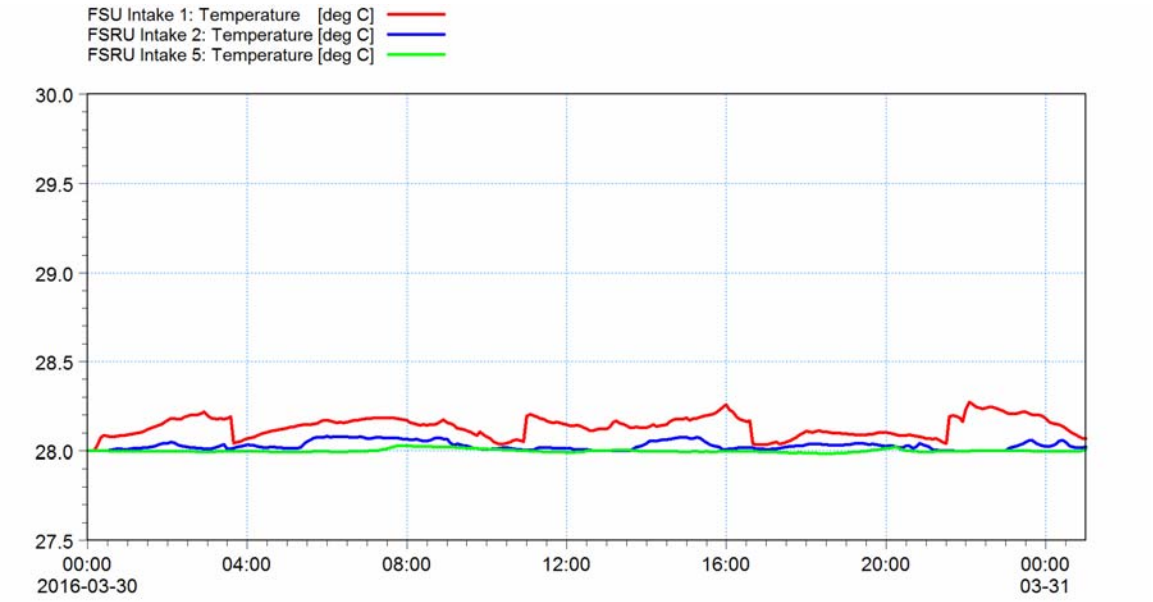

Figure 3-13: Temperature at Intakes

4 ADDITIONAL ANALYSIS

In addition to the 280 MMSCFD case, an operational capacity of 140 MMSCFD was also assessed. For the lower capacity scenario the intake and outfall flowrates for the FSRU were substantially lower. The vaporizer discharge was modelled at 4,000 m^3/hr (1.11 m^3/sec) as compared to 10,000 m^3/hr (2.78 m^3/sec). The engine cooling discharge was modelled at 700 m^3/hr (0.19 m^3/sec) as compared to 1,200 m^3/hr (0.33 m^3/sec). The FSU was modeled with the same flowrates, 10,000 m^3/hr. The delta temperature differences from ambient were assumed to be +7°C for the engine cooling and -7°C for the vaporizer.

The FSRU was modelled in reverse with the FSRU accommodations aligned with the bow of the FSU. Therefore the warm water and cold water discharges from the FSRU were at opposite ends of the cofferdam and significantly lower in volume. The current fields affecting the warm and cold water plumes were different, since the discharges were at opposite ends of the cofferdam, therefore direct comparison between the 280 MMSCFD and 140 MMSCFD cases is not possible.

Looking at the two run scenarios it is suggested that the vertical profile of the temperature plumes (warm and cold) are very similar in terms of location in the water column. However the horizontal distance that that plumes travel before dispersing is reduced with reduced flowrate. As an approximate comparison, the warm water plume from the FSRU travelled 45 m before the temperature dropped to less than 0.5°C from ambient for the 700 m^3/hr case. The cold water plume from the FSRU travelled 170 m before the temperature increased to less than 0.5°C from ambient for the 1,200 m^3/hr case. The discharge from the FSU was similar due to the same flowrate and outfall location; although the plume extended further in the same time frame given the increased temperature delta of 2°C.

5 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions can be made based on the results of the numerical modeling of the thermal plume dispersion of the water discharges from FSU and FSRU:

- The warm water plumes (from the boiler of the FSU and the FSRU engine cooling outfalls) primarily impacted the surface layers of the surrounding waters up to a 3 m depth.
- The cold water plume (from the FSRU vaporizer) primarily impacted the bottom layers of the surrounding waters up to 2 m from the bed.
- From the FSU, the warm water plume temperature was reduced to less than 0.5°C from ambient within 250 m from FSU Outfall 3.
- From the FSRU, the warm water plume temperature was reduced to less than 0.5°C from ambient within 70 m from FSRU Outfall 3.
- From the FSRU, the cold water plume temperature was increased to less than 0.5°C from ambient within 250 m from FSRU Outfall 6.
- The increase in water temperatures at the intakes, as a result of mixing from the outfalls, was not more than 0.25°C relative to the ambient temperature.
- The plume distance may be related to flowrate (based on the limited scenarios run). Dispersion to less than 0.5°C from ambient temperature occurs at a greater distance from the outfall with increasing flowrate.
- Increased flowrate does not greatly impact the depth or location of the temperature plume in the water column, for warm or cold discharges, based on the limited scenarios modeled.

6 REFERENCES

1. Danish Hydraulic Institute (DHI). (2014). “MIKE 21 and MIKE 3 Flow Model FM, Hydrodynamic and Transport Module, Scientific Documentation.”
2. Moffatt & Nichol (M&N). (2016). “Metocean and Numerical Modeling Report”, prepared for Invenergy.

Appendix 7D–
Sediment Plume Dispersion Analysis

EDP LNG Import Terminal
Acajutla, El Salvador

Sediment Plume Dispersion Analysis

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1 INTRODUCTION

Invenergy, LLC is planning to develop a new marine terminal for the unloading and supply of Liquefied Natural Gas (LNG) to a new power plant in Acajutla, El Salvador. The marine terminal will consist of a Floating-Storage-Regasification Unit (FSRU) located within a cofferdam protection structure. The cofferdam will serve as the semi-permanent berth for a Floating Storage Unit (FSU). Transient LNG carriers will berth against the FSU. The natural gas will be piped back to the mainland through a subsea pipeline.

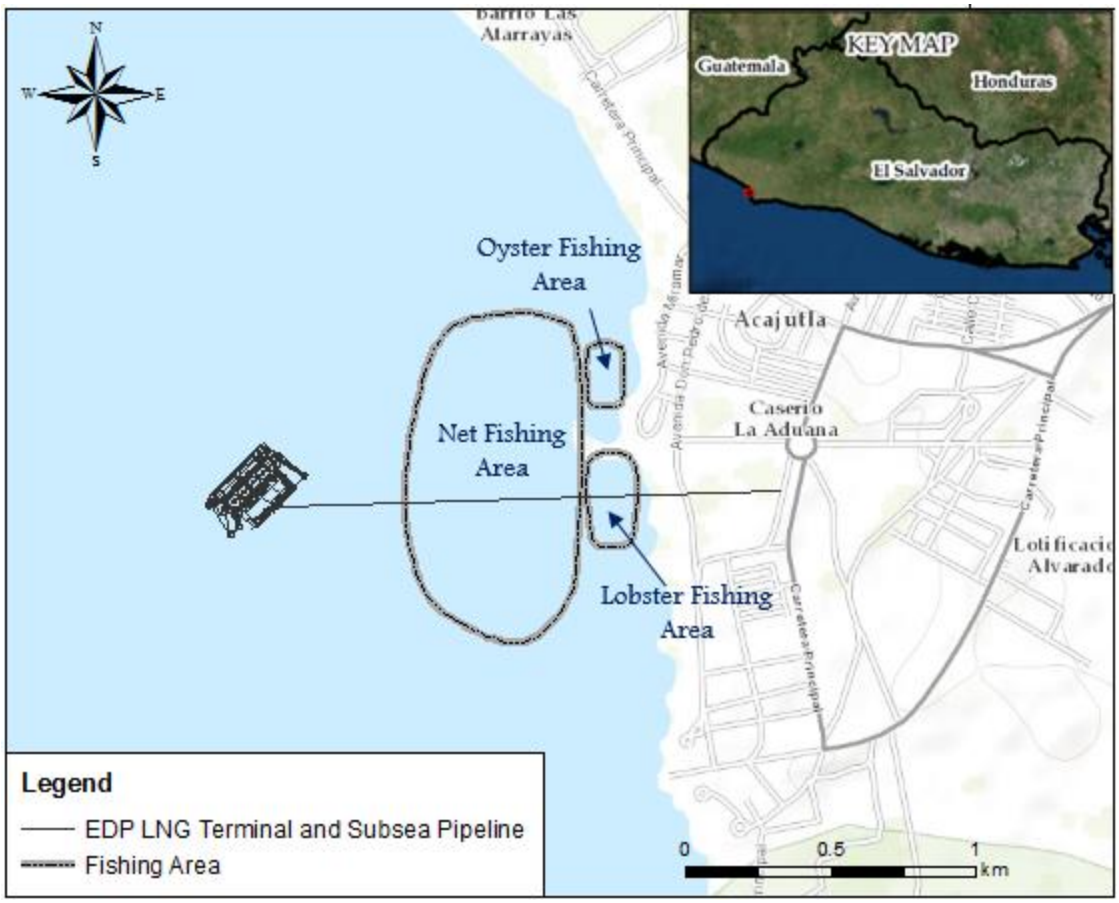

Figure 1-1 Location of Project Site

The proposed marine terminal is to be located approximately 1.25 km west of the Acajutla coast, at a water depth of approximate 15 m below mean low water spring (Fugro 2016). The subsea pipeline runs from the marine terminal to on-land LNG storage and power plant site. In the vicinity of the subsea pipeline route, there are fishing areas including oyster and lobster fields. The piers of Port of Acajutla are located southeast of the terminal. To the east of the site, there is a small fishing harbor protected by a breakwater. Figure 1-1 shows the terminal location and subsea pipeline route, along with the fishing areas.

During construction of the marine terminal there could be activities that result in the release of sediments into the surrounding waters, these include:

- Trenching of the subsea pipeline.
- Site preparation for the installation of the cofferdam (dredging), and

- Disposal of dredged material.

This report is intended to provide information on the potential for sediment plumes, their likely trajectory and concentrations for use in the Environmental Impact Analysis (EIA).

2 METHODOLOGY

The DHI MIKE 21 Particle Tracking (PT) model was used to determine the transport of re-suspended materials during dredging. The MIKE21-PT model is forced by water levels and current speeds generated from the hydrodynamic (HD) and spectral wave (SW) coupled model developed during FEED. The model simulates the release of dredging material by inputting a concentration of sediment as particles. The PT module calculates the path of each sediment particle and outputs instantaneous concentrations of individual classes. Suspension, settling and transport is interactively simulated for each specified sediment class. As an output, the extent of the suspended material transport and the predicted concentration are simulated.

The environmental flow conditions, characteristics of the dredged materials, volumes and release rates have all been determined through discussions and coordination with the technical and environmental teams. Further descriptions of the model, inputs and processes are provided in Section 5.

3 ENVIRONMENTAL FLOW CONDITIONS

The hydrodynamic model developed during FEED was used to provide critical flow conditions for the sediment plume study. The hydrodynamic model was validated using the measurements from an Acoustic Wave and Current (AWAC) sensor deployed near the proposed terminal (13° 34.881’ N 89° 50.841’ W). Spring tide conditions (largest tidal range) generate the highest current velocities and are therefore expected to move the sediment plume further from the simulated release point. In order to be conservative, the flow conditions during a spring tide were selected as the forcing flow conditions.

3.1 Dredging Sub-areas

In order to provide the maximum flexibility to the analysis and allow for sensitivity analysis, four sub-areas were identified in the numerical model, as shown in Figure 3-1. Soil parameters and dredge methods were identified specific to each sub-area. These were selected in consideration of bathymetry, sediment size and in consultation with geotechnical experts and experienced marine Contractors.

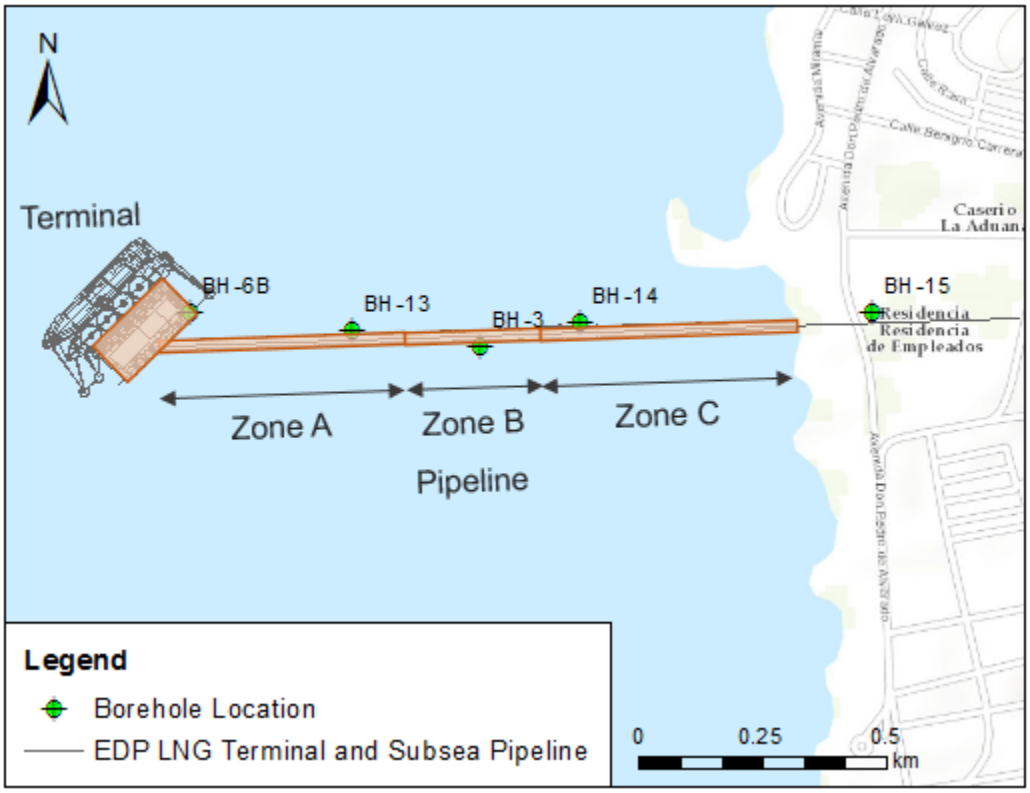

Figure 3-1 Modeled Sub-areas for Dredging Plumes

3.2 Estimated Dredging Volumes

El Salvador is a seismically active region, therefore there is the potential for liquefaction of the top weak layers of sea bed. This would be detrimental for the stability of the terminal structures proposed, including the integrity of the subsea pipeline. In consultation with the geotechnical subconsultant, potential liquefiable soil depths and likely dredge side slopes were determined. The volume of sediment to be removed was calculated using the liquefiable depths, and in consideration of pipeline alignment continuity. The calculated volumes plus a 20% contingency for conservatism are included in Table 3-1.

Table 3-1: Pipeline Excavation Volumes

Dredge Volumes at the Terminal and along Subsea Pipeline		
Zone	**Volume m^3**	**Volume** (incl. 20% contingency for overdredge, infill etc.) **m^3**
Terminal	106,000	128,000
Pipeline – Zone A	15,500	18,600
Pipeline – Zone B	10,850	13,000
Pipeline – Zone C	15,300	18,400

3.3 Dredging Method, Rates and Duration

Since the plume model requires information on the rate and location of release of sediment into the water, it is important to qualify and quantify construction methods and resuspension rates. Inputs were sought from the dredging industry on most likely methodologies and rates to ensure as representative a scenario as possible. The following dredging methods have been considered for dredging the terminal footprint and trenching the subsea pipeline (Examples are shown in Figure 3-2).

Images from B3D-design, Wasa Dredging and East Marine

Figure 3-2 Examples of Dredgers including Trailer Suction Hopper Dredger (Top), Backhoe Dredger with Side-barge Loading (Middle) and Clamshell Dredger (Bottom)

Given the dredging volumes and dredging rates (confirmed through literature review, past experience, and consultation with the dredging industry), the duration of the dredging and the corresponding working schedule were estimated. Table 3-2 below lists the dredging durations based on the dredging rate by sub-areas.

Table 3-2: Considered Dredging Duration and Working Schedule by Sub-areas

Dredging Location	Dredging Method	Rate	Duration	Dormant Time[1]	Number of Loads/Duration[2]
Terminal	Trailer Suction Hopper	2,500 m^3/hr	4 hours	5 hours	13 loads
Pipeline - Zone A	Trailer Suction Hopper	2,500 m^3/hr	4 hours	5 hours	2 loads
Pipeline – Zone B	Backhoe	100 m^3/hr	Continuous[3]	None	5.5 days
Pipeline – Zone C	Backhoe	100 m^3/hr	Continuous[3]	None	8 days

[1]Including 1 hour sailing time and 2 hours disposal time, plus 2 hours contingency time (allowance for bunking, mechanical or weather related delays)

[2]Based on 24 hour working schedule

[3]Assumes backhoe continues to work on a 24 hour schedule and the scrow or dumb barge is swapped out when full

3.4 Sediment Resuspension Rate

Dredging operations will almost always re-suspend sediments. The level of resuspension and associated impacts depend upon the characteristics of the sediment, the site conditions, type of dredging equipment and method of dredging employed. Together with the total dredging volume, the resuspension rate will determine the actual amount of sediment that is released into the water column. Rates of 5% to 15% are quoted in literature and confirmed through consultation with the dredging industry.

Figure 3-3 below shows the distribution of resuspension rates for hydraulic and mechanical dredging (Anchor, 2003). It is based on number of studies using empirical measurements of suspended sediment concentrations very close to dredging operations, thus it is suitable for the predictive dredging plume modeling. The following values are given for 100% of the sediment resuspension are about 8% for hydraulic dredging and 10% for mechanical dredging. Therefore, a “conservative case” using 10% resuspension rate was selected for this study.

Based on the feedback from industry and the figure below, a uniform resuspension rate of 10% was adopted.

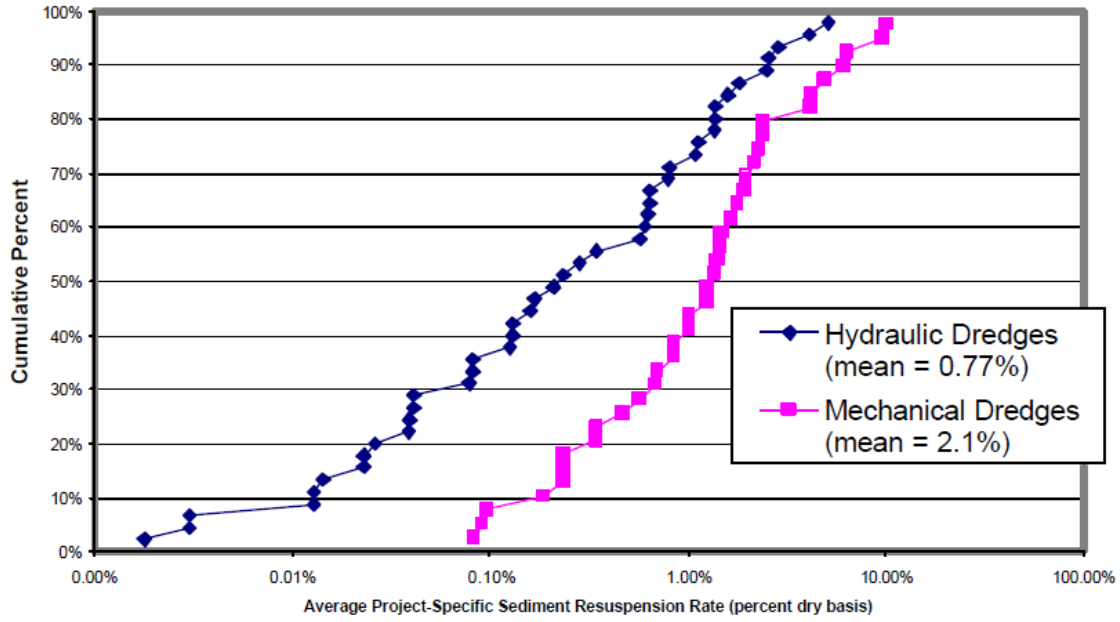

Figure 3-3: Probability Distribution of Dredging Resuspension Rates for Hydraulic & Mechanical Dredging

4 CHARACTERISTICS OF DREDGED MATERIALS

Geotechnical information from five completed boreholes (BH-3, BH-6B, BH-13, BH-14 and BH-15) were used to characterize the grain size of the likely dredge materials that could be released into the marine environment. Bore Hole 6B is located at the northeast corner of the proposed terminal, and Bore Hole 13, Bore Hole 3 and 14 are along the subsea pipeline route from offshore to nearshore, Bore Hole 15 is located on land. Figure 4-1 shows the location map of the five boreholes, together with the surveyed bathymetry. For the purpose of the sediment plume modeling, only the near surface soil was represented in the model since the required dredge depths were shallow.

4.1 Grain Size Classes

The sediment grain size and fractions were selected based on the soil information provided by the geotechnical subconsultant in the geotechnical interpretation report (Fugro, 2016). The selected soil characteristics at the four boreholes were used to represent each sub-area. Overall, the modeled grain sizes are classified by D-values in the trend of fine to coarse. Among the four sub-areas, the modeled particles at the terminal are the finest, as low as 0.027mm. Table 4-1 lists the soil characteristics used for each sub-area.

Table 4-1 Modeled Grain Sizes and their Fractions by Locations

Sub-area		Terminal	Pipeline – Zone A	Pipeline – Zone B	Pipeline – Zone C
Borehole No.		BH-6B	BH-13	BH-3	BH-14
Borehole Depth		surface	surface	1.5m	surface
Modeled Grain Size and Fraction[1]	Class 1	N/A	N/A	N/A	0.13mm; 15%
	Class 2	0.027mm; 30%	0.09mm; 30%	N/A	0.33mm; 15%
	Class 3	0.083mm; 20%	0.17mm; 20%	0.49mm; 50%	1.0mm; 20%
	Class 4	0.10mm; 10%	0.26mm; 10%	0.98mm; 10%	1.8mm, 10%
	Class 5	0.15mm; 25%	1.0mm; 25%	5.1mm; 25%	6.9mm; 25%
	Class 6	0.19mm; 15%	2.0mm; 15%	8.2mm; 15%	9.5mm; 15%

[1]Particle classes determined by D-values: Class 1- D15, Class 2 – D30, Class 3 – D50, Class 4 – D60, Class 5 – D85 and Class 6 – D90.

4.2 Particle Release Location

For this study, the source location at the terminal was assigned as a fixed point for the terminal and pipeline trail suction hopper dredging, and a point source on a moving track for the pipeline trench route. The moving speed was determined by the dredging rate and working schedule discussed in Section 3.3. The vertical level of the source was determined by the dredging method, as listed in Table 4-2.

Table 4-2: Particle Release Location

Location	Dredging Method	Particle Release Level
At the Terminal	Trailer suction hopper	Released at bottom and surface simultaneously to represent releases from the drag head & releases from the overflow shaft
Along the pipeline	Trailer suction hopper	Released at bottom and surface simultaneously to represent releases from the drag head & releases from the overflow shaft
	Backhoe	Released at the surface to conservatively simulate the release of particles while the bucket being raised to the surface (surface currents are stronger than bottom currents)

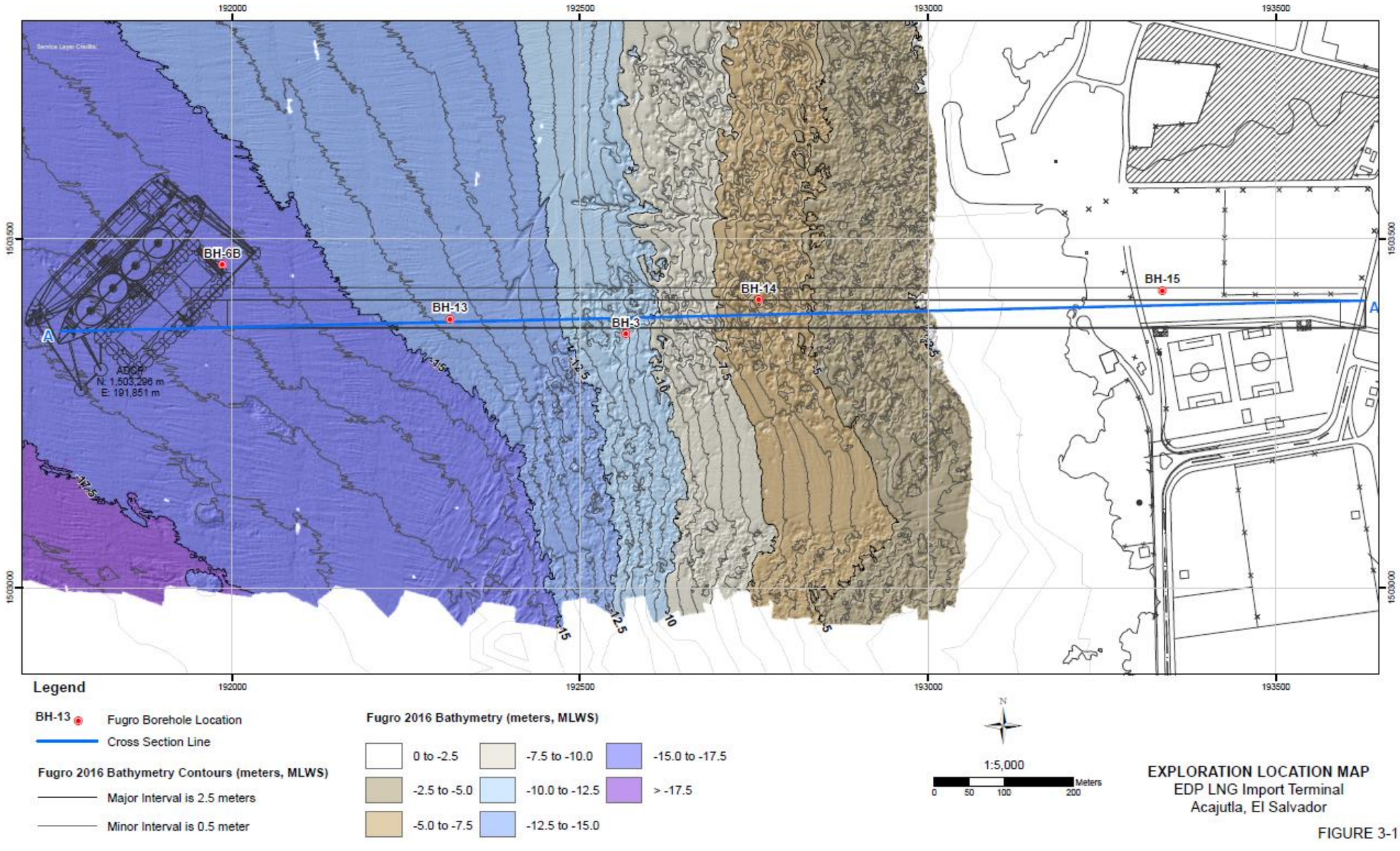

Figure 4-1 Borehole Locations and Bathymetry Contours (Fugro, 2016)

4.3 Unit Weight

The specific weight (also known as the unit weight) is the weight per unit volume of a material. Unit weight for the sediments was determined by the geotechnical consultant using ASTM Standard Test Method D 7263. A total of ten samples were tested. The sample unit weight calculated is approximately 18kN/m^3, equivalent to 1836kg/m^3.

5 DREDGE PLUME MODELING

The DHI Mike 21 FM model with Particle Tracking module was developed to evaluate the impact of dredging plumes (DHI, 2011). The PT module calculates the path of each sediment particle and outputs instantaneous concentrations of individual classes. It is capable of simulating the following processes: settling, erosion, decay, moving sources, wind forcing, and dispersion.

5.1 Model Domain

The model domain spans approximately 6 km from north to south, and extends about 3.5 km from shore to deep water, as shown in Figure 5-1. Flexible triangular elements with spacing of about 30 m are used over the whole domain. This mesh is the same size and resolution as the one used in the hydrodynamic model. The model depth at the offshore boundary is up to 25m below MLWS, and it gradually decreases while moving close to the coastline. The depth at the terminal is about -16m MLWS.

5.2 Model Inputs and Assumptions

The model inputs include soil characteristics (e.g. grain size), particle release locations, particle release rates and durations for the modeled sub-areas. The inputs are summarized in Table 5-1. A number of different scenarios using different particle size, location and release rates were modeled to gain an understanding of the transportation and settlement characteristics. As previous described, the flow conditions (water level and currents) from the two-dimensional hydrodynamic and wave coupled model were used to force the particle tracking model. By coupling the wave model to the hydrodynamic, the presence of the wave swell at Acajutla is included.

The representative settling rates for various sizes of particles are based on Stokes Law. It is assumed that no flocculation occurs during settling of the sediment particles. No background turbidity has been applied to the processing of the results. This is discussed further in Section 5.3.

In order to be conservative, dredging of the terminal and the pipeline is assumed to be simultaneous. The post-processing of the model results allows analysis of the two dredging operations separately.

The inflow from the Rio Sensunapan, Rio Barranca, and El Sunza are not included. Given the variance in the wet and dry season flow conditions, the influence of fluvial sediment concentrations would limit the isolation of impact associated with the EDP LNG terminal works.

Table 5-1: Summary of Model Inputs

Location	Volume (m^3)	Release Location	Min Particle Size Modeled	Work Pattern
Terminal	128,000	Near Bed + overflow	0.027mm	4 hour dredging + 5 hour dormant (repeat for 13 loads)

Pipeline – Zone A	18,600	Near Bed + overflow	0.09mm	4 hour dredging + 5 hour dormant (repeat for 2 loads)
Pipeline – Zone B	13,000	Surface	0.49mm	Continuous for 5.5 days
Pipeline – Zone C	18,400	Surface	0.13mm	Continuous for 8 days

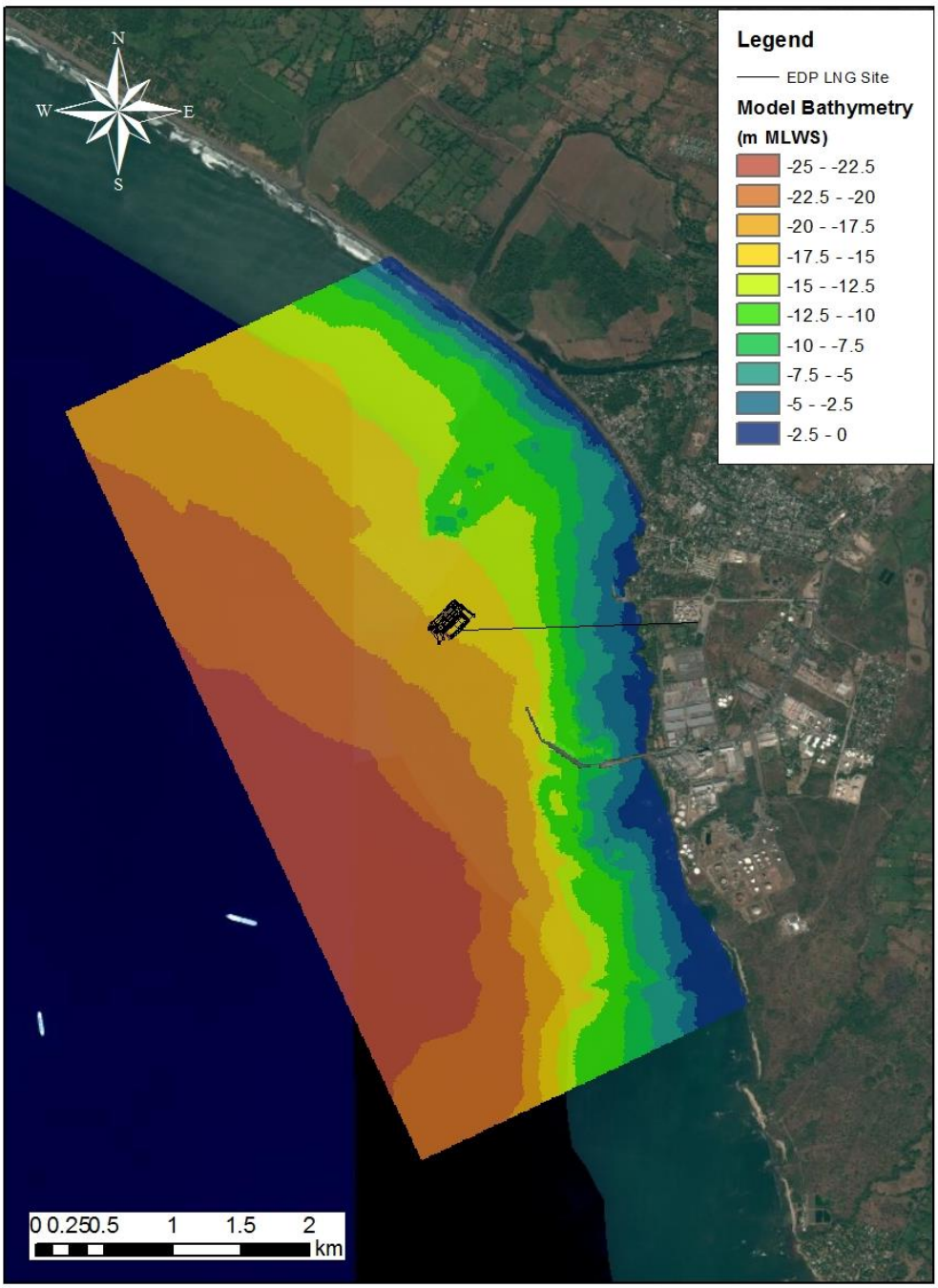

Figure 5-1 Model Bathymetry Overlaid with Satellite Image

5.3 Model Results and Discussion

The sediment plume created by the dredging activities relies heavily on the hydrodynamic flow conditions. In an open water environment, tidal flows are dominant. Different magnitudes of tidal flows, durations of flood and ebb conditions, and local variations in flow directions all contribute to the determination of the plume appearance. The coupling of the wave conditions, representative of swell, simulates a slightly higher current field.

From the sensitivity analysis it is apparent that fine sediments are inclined to remain in suspension in the water column for a long period of time compared to coarser grain sizes. The suspension time for fine sediments is long enough that the particles change travel direction with the flood-ebb tidal currents. Under a flooding or ebbing tide, the flow direction is constant and the sediment plume tends to keep streamline shape and dilute very quickly. Plume concentration buildups only happen when the tide is slack changing from flood to ebb, or vice versa. However these turbidity peaks are very short in duration and the sediment concentration disperses quickly as the tide starts to run again.

According to the results from the hydrodynamic model, there are stronger currents towards north than south near the terminal. Therefore, as seen in the figures, the overall sediment plume caused by the dredging activities travel north of the project site.

Given the nature of the dredging activities and the influence of the tidal fluctuation, average concentrations assist in the representation of the suspended sediment characteristics for this project. In addition, the depth of the sediment deposited is provided. As the suspended sediment is released from the water column it creates a blanket across the area of influence. This layer could be unmeasurable, a few millimetres or deeper. The depth of the deposited sediments can contribute to determining the impact.

Information on background turbidity is still being gathered. Therefore the modeling, post processing of the results and the interpretation does not including consideration of background turbidity.

The plume model results are presented and discussed in the following sections.

5.3.1 Average Suspended Sediment Concentration (SSC) of Total Suspended Solids (TSS)

Averaged SSC is a useful metric where there are significant fluctuations in concentration within very short time durations. Figure 5-2 presents the averaged SSC over 7 days and 30 days period, with a smaller scale view presented in Figure 5-3. The selection of the averaging periods are discussed in Section 6.

From Figure 5-3, it can be seen that the average SSC at net, lobster and oyster fishing areas is less than 15 mg/l for the 30 day average and less than 65mg/l for the 7 day average. There are two areas at the marine terminal location and immediately east of the terminal location where the averages are above 100 mg/l – these are point source indicators based on the model representation of the trailer suction hopper dredger. The modeled release rate for this dredging operation does not represent the motion of the vessel (a constantly moving 3-5 knot track). Instead it is shown as a single point source release. However, even with this method of representation, which is significantly more conservative than the actual motion of the dredger, the 7-day averaged SSC is below 2.5g/l within 250 m of the release location. Figure 5-4 shows the pattern of concentration against time for two extraction points, defined as Point X – at the marine terminal

and Point Y – at the boundary of the net fishing area. This figure illustrates the short duration of the SSC peaks and the very rapid reduction in peak concentration with short distance from the release point.

Referencing Figure 5-2 the maximum SSC along the northern boundary of the model is 0.6 mg/l for the 7 day average, 0.2 mg/l for the 30 day average.

5.3.2 Sediment Deposition Depth

As discussed above, deposition depth is another indicator of impact. Based on example projects in southern California and the biological effects of dredging operations by US Army Corp of Engineers (2005), a maximum depth of 3 to 6 inches (equivalent to 75 to 150 mm) deposition for intertidal habits and 4 inches (equivalent to 10cm) for submerged aquatic vegetation are suggested. Figure 5-5 shows the deposition map after completion of the dredging program. The deposition within the fishing areas is less than 75 mm (3 inch) in depth which is below the suggested threshold tolerance level. There is no significant deposition along the shoreline within the modeled area. The peak deposition anywhere within the modeled area is about 0.8 m. This occurs at the terminal and does not factor in the track motion of the dredger, nor the re-dredge that would occur as part of normal dredging operations.

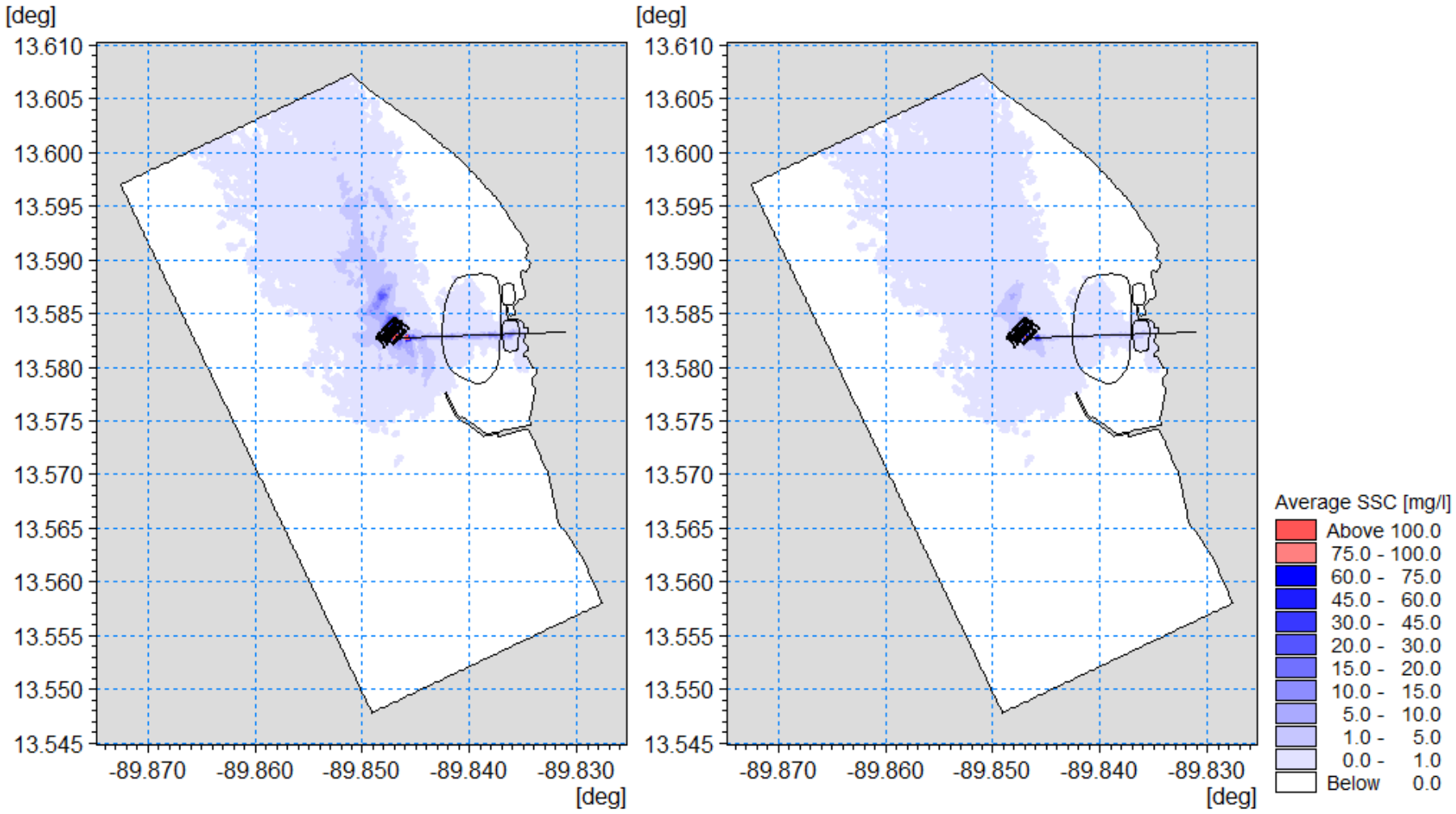

Figure 5-2 Total Suspended Solids Concentration Averaging over 7 Days (Left) and 30 Days (Right) over the Modeled Area

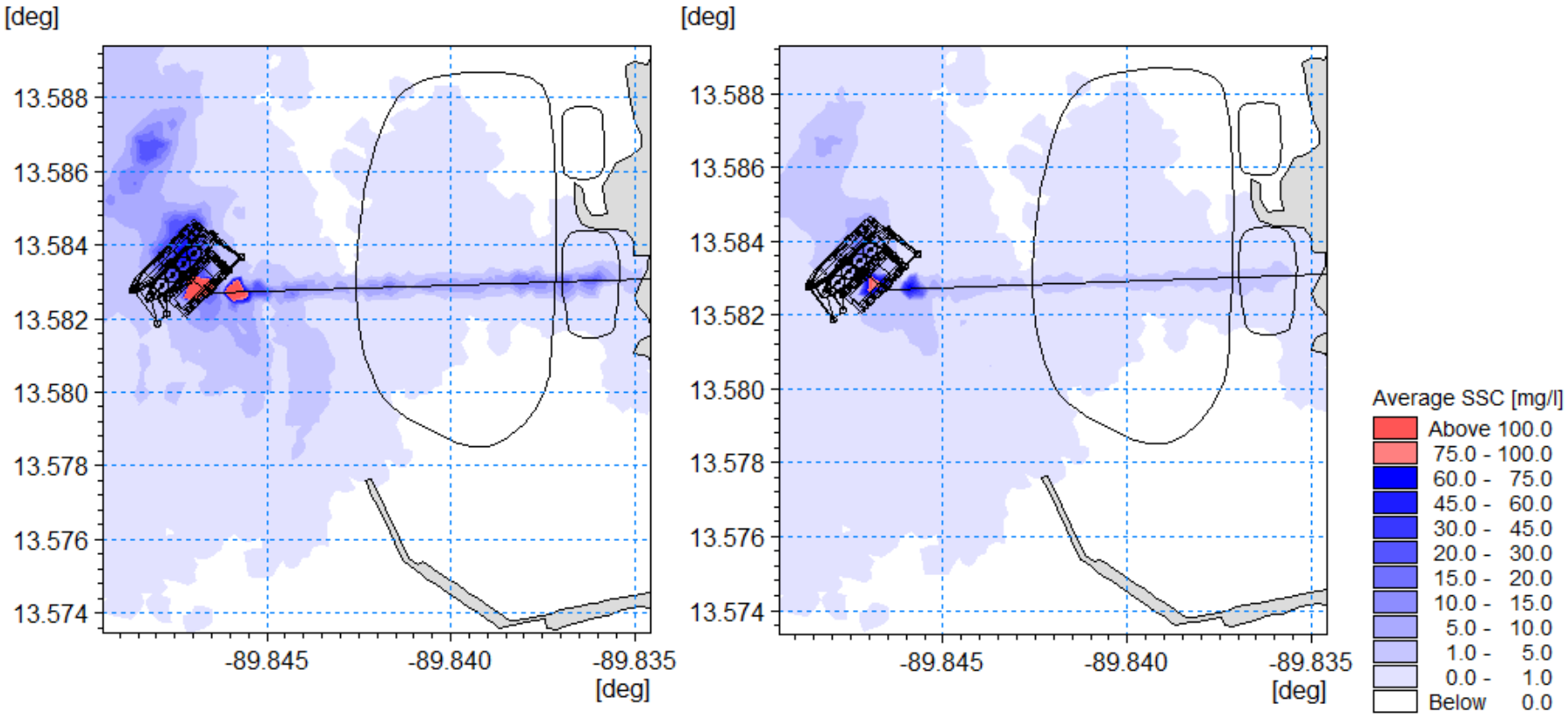

Figure 5-3 Total Suspended Solids Concentration Averaging over 7 Days (Left) and 30 Days (Right) at the Fishing Areas

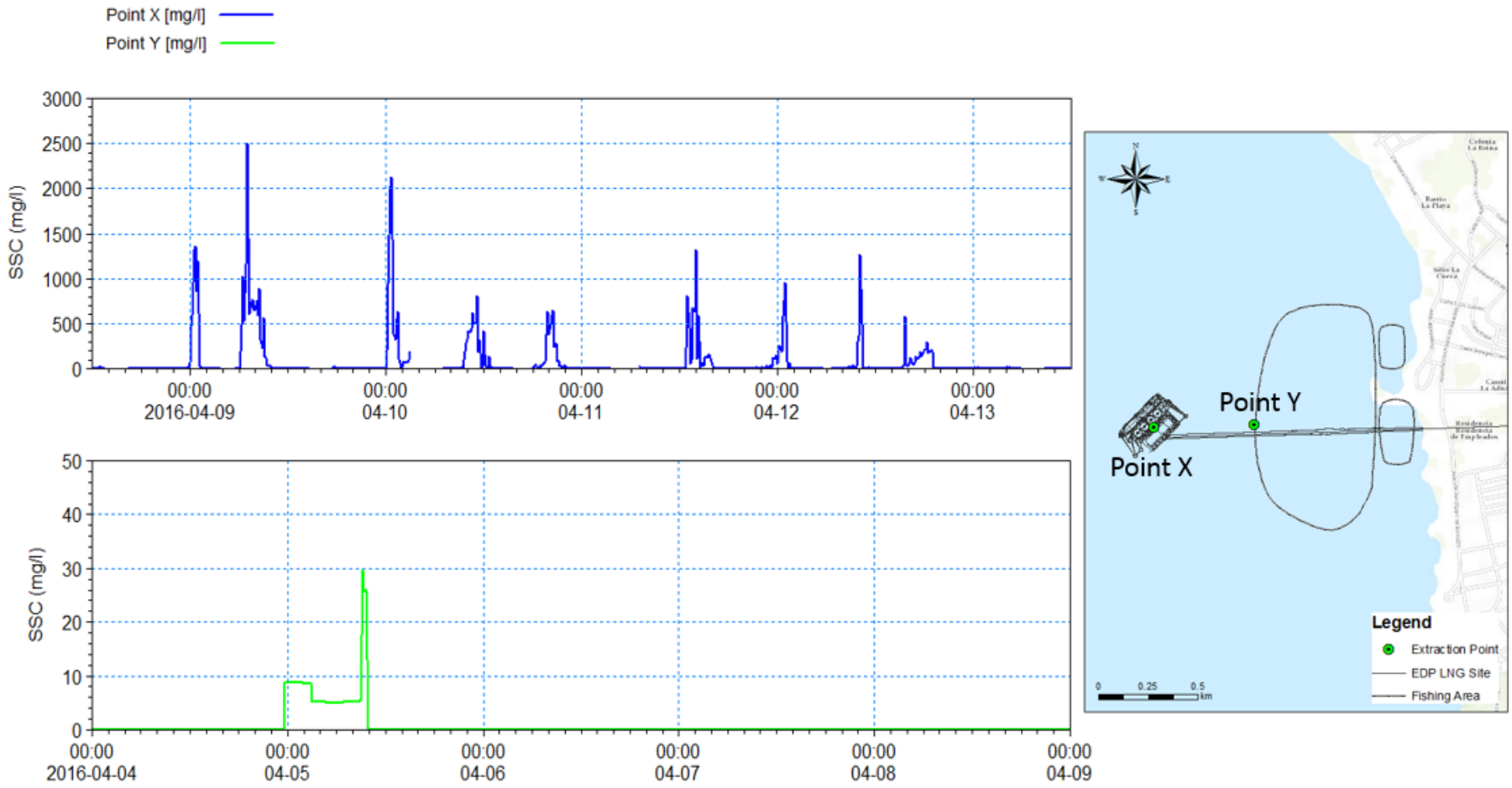

Figure 5-4 Total Suspended Solids Concentration Instant Time Series at Two Extraction Points

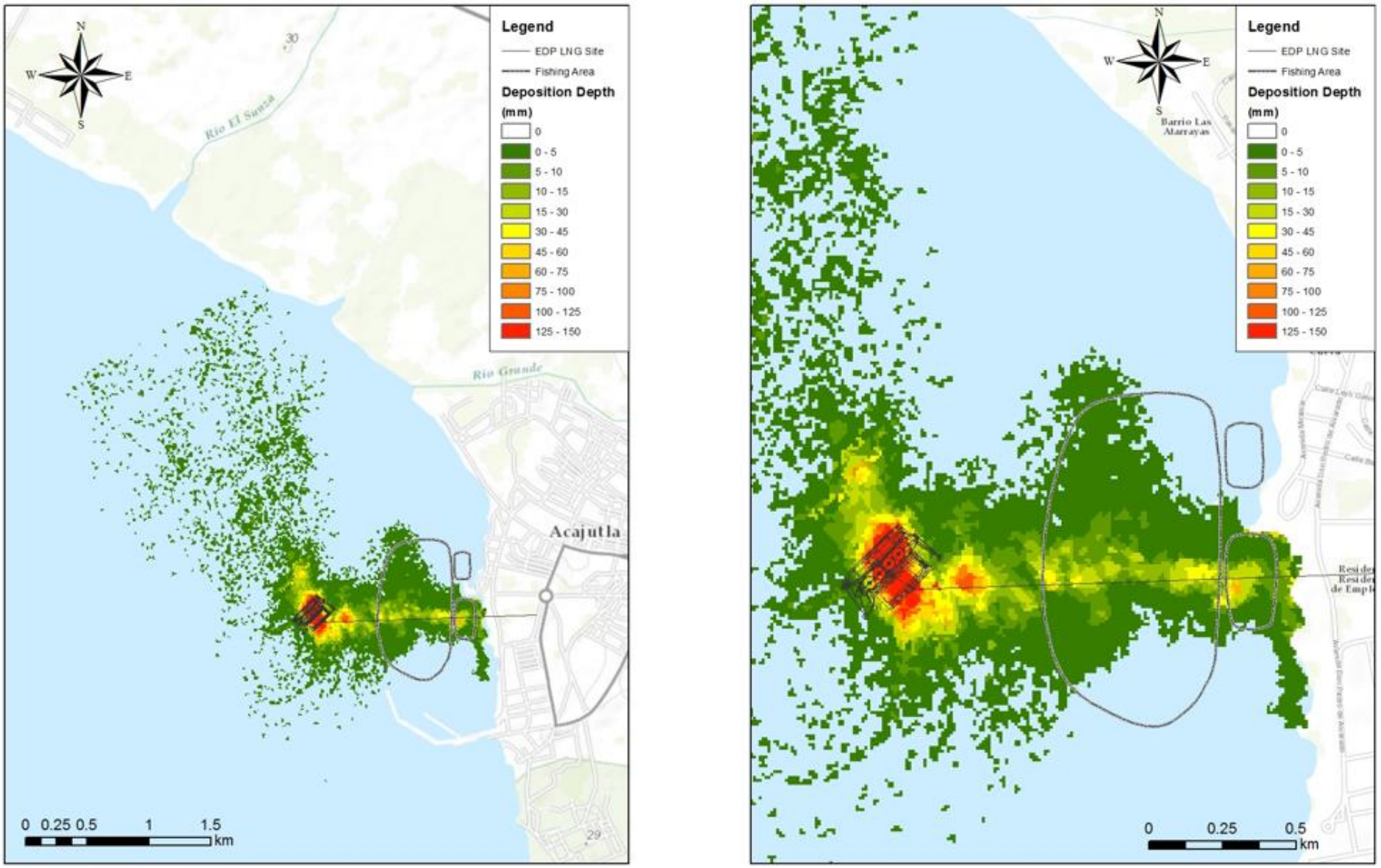

Figure 5-5 Total Deposition Depth over the Domain (Left) and Zoom-in at the Fishing Areas (Right)

5.3.3 Suspended Concentration along the Northern Boundary

Particular analysis of Figure 5-2 and Figure 5-5 show that the spatial trajectory of the suspended sediment reaches and would surpass the northern boundary of the numerical model. The results however also show that the SSC and the deposition depth are very low, particular in terms of the results extracted elsewhere in the model. Figure 5-6 demonstrates the suspended concentration along the northern boundary from deep water to the shoreline. The maximum SSC along the boundary at any time during the entire dredging period does not exceed 250 mg/l (shown as the blue line in Figure 5-6). Even then, the peak concentration is only experienced as an instant concentration lasting a very short period; less than 2 hours. The average SSC (shown as the orange line) significantly drops when averaged over 7 days. The highest average 7-day SSC along the northern boundary line is only approximately 0.6 mg/l.

The characteristics (shape, trajectory and concentration profile) of the plume are established by the time it reaches the northern boundary. With the orientation of the shoreline (running south-east to north-west) the plume will encounter the shore within 1.5 km from the model boundary. It is not unreasonable to expect the plume to continue its trajectory and continue to disperse in terms of SSC. Therefore, although the model domain does not include the entire plume trajectory for the dredging cases shown, extension of the model is not considered necessary to predict the impact, nor to verify the final fate of the plume.

Similarly, the scattered pattern of the sediment deposition, shown in Figure 5-5, indicates that the deposition is less than 5 mm (which is immeasurable) at dotted locations along the northern boundary. The frequency of measureable deposition depths very rapidly decreases 1 km from the terminal.

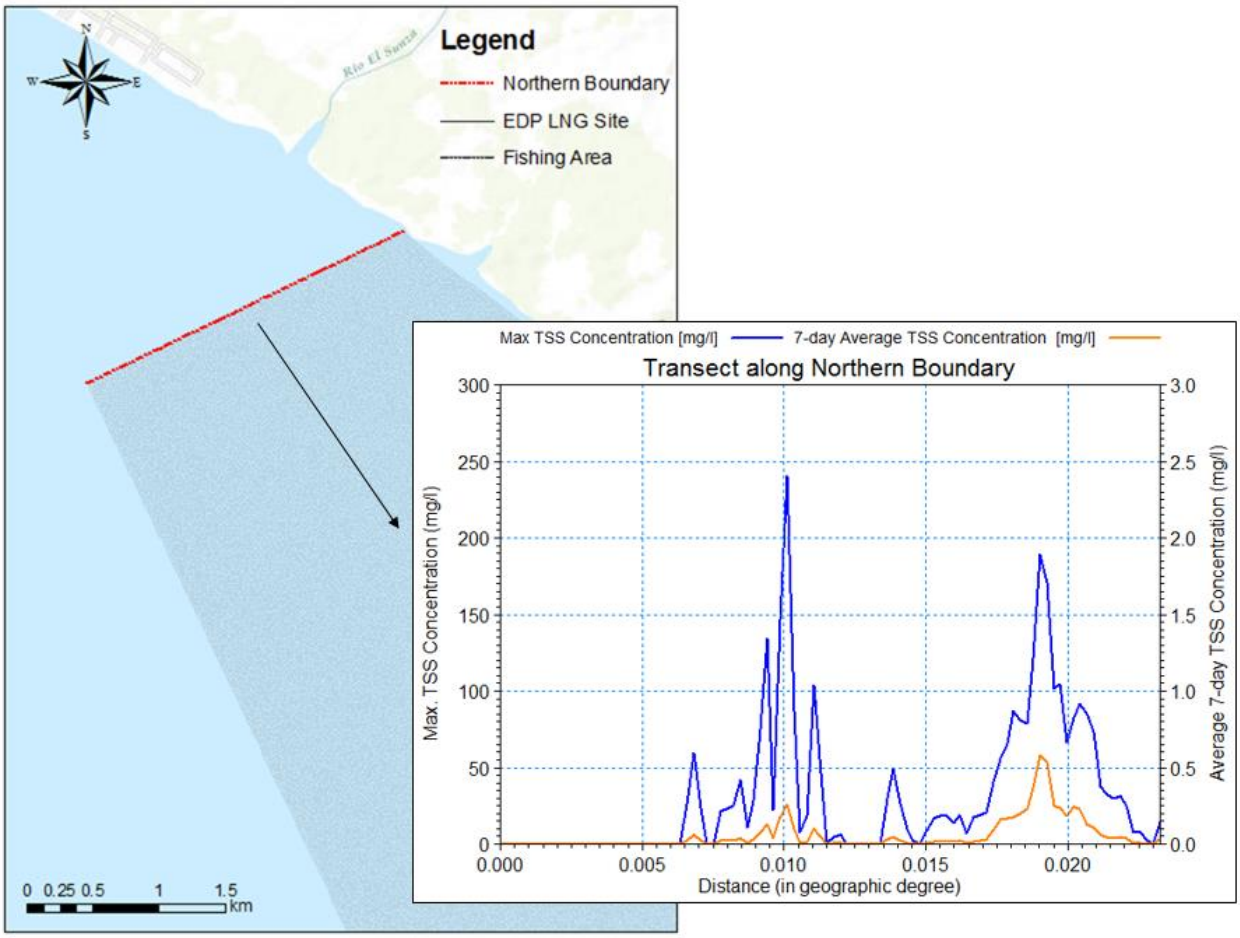

Figure 5-6 Peak Concentration (in Blue Line) and Average Concentration (in Orange Line) along the Northern Boundary

6 COMPLIANCE STANDARDS

Since the USA has Pacific Ocean coastline and has an established environmental compliance system, review of the Environmental Protection Agency (EPA) standards was used as a guideline to environmentally diligent sediment concentration standards. The EPA water quality standards for turbidity in California sets criteria for averaged turbidity based on 7-days and 30-days. For Ocean Waters the limiting concentrations are 75 JTU for the 30-day average, and 100 JTU for 7-day average. Given the short time duration of peak SSC occurrence, in combination with tidally driven dispersion, a compliance standard based on averaged turbidity at environmentally sensitive locations appears to be consistent with the California EPA water quality guidelines.

In relation to the modeled results, the SSC was averaged over the modeled period. The 30-day average concentration was calculated assuming the non-dredging period incurs zero increase in turbidity. The 7-

day average concentration was computed using moving average method over the modeling period and the highest 7-day average was presented.

6.1 Turbidity vs Suspended Sediment Concentration

The California EPA standards refer to JTU (Jackson Turbidity Units), which is an obsolete unit. For the purposes of this study JTU is assumed to equal NTU (Nephelometric Turbidity Unit). The relationship between NTU and Suspended Sediment Concentration is more complex. NTU is an optical measurement; for instance, 1 mg/l of sand (>63 um) will affect light penetration and therefore show less turbidity than 1 mg/l of mud (<63 um) because of the more numerous particles. The specific relationship is site specific based on the sediments and the conditions. On the basis of the sediment characteristics used in this study, it is not unreasonable to assume NTU is approximately equal to SSC.

This assumption will be clarified through field measurements.

7 CONCLUSIONS

From the studied cases and in consideration of the potential environmental compliance standards such as the suggested California EPA standard, the following conclusions are made regarding the determined sediment conditions and potential impacts as a result of the construction and operation of the EDP LNG terminal. The conclusions are focused on the identified areas of interest.

7.1 Fishing Areas

The plumes of suspended sediment from the dredging activities does not have a significant impact on any of the fishing areas identified in Figure 1-1, on the basis of the suggested standards. The average SSC over 7 days and 30 days are well below the suggested tolerance value of 75mg/l and 100 mg/l respectively. The deposition depth over the fishing areas is also within the suggested acceptable range.

7.2 Shoreline and Beaches

The assessment of the dredging activities indicates that the sediment plume was confined to open waters and did not impinge the shoreline immediately after release. The impact on the recreational beaches starting 4 km north of the terminal is minimal, and likely significantly less that the annual impact of suspended sediment from fluvial deposits following the rainy season. The receiving concentration of SSC averaging over 7-day period at the beach does not exceed 10mg/l, well below the California EPA standards.

7.3 Open water

The sediment plume generated during the dredging works is confined to open waters. The concentrations are heavily influenced by the flooding and ebbing tide, with minor buildup of concentration close to the release points only during slack tide. Peak concentrations only occur over very short periods, before returning rapidly back to/close to background levels.

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Appendix 7D´–
Sedimentation Transport and Scour Study Memo

EDP LNG Import Terminal
Acajutla, El Salvador

FEED Phase

Sedimentation Transport and Scour Study Memo

Submitted To:

Invenergy

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Chicago, IL 60606

Job Number	Submittal Date	Document Status	Revision Number	Prepared by	Reviewed by	Approved by
9338	2016-06-29	Draft	A	Q. Wang	G. Millar	B. Beasley
9338	2016-11-18	Final	0	Q. Wang	G. Millar	B. Beasley

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Disclaimer:

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TECHNICAL MEMORANDUM

To: **Invenergy**

From: **M&N**

Date: **November 18, 2016**

Subject: **Desktop Sediment Transport**

M&N Job No.: **9338**

1 Introduction

1.1 Project Background

Moffatt & Nichol (M&N) has been contracted by Invenergy to provide Front End Engineering Design (FEED) services for the Energia del Pacifico (EDP) liquefied natural gas (LNG) import terminal to be located near the Port of Acajutla in El Salvador. The marine terminal will serve as a port of call for gas deliveries on LNG Carriers (LNGCs), and a semi-permanent mooring for a Floating Storage Unit (FSU) vessel. As part of the FEED studies, M&N conducted a desktop evaluation into sediment transport in the vicinity of the proposed terminal and along the subsea pipeline route. This memo is prepared to present an overview of the preliminarily determined sediment conditions based on a review of available meteorological and oceanographic (metocean) data, and to discuss potential impacts on sediment transport as a result of the installation and operation of the EDP LNG terminal.

1.2 Methodology

Characterization of sediment transport can be achieved through a number of means. Numerical modeling can provide a prediction method based on the driving coastal processes such as tidal currents and bathymetry, combined with consideration of sediments present, either on the sea bed or introduced through fluvial sources or runoff. Accurate prediction of sediment transport through numerical modeling is highly dependent on source data and verification/calibration using measured data. In lieu of numerical modeling, a desktop study uses the same information, predictions of current direction and velocity, depth qualified measured data, sediment grain size and particle distribution. Combining this with physical data such as present and historical bathymetric information, dredging records, aerial photography, observations such as sediment build-up around offshore or shoreline structures, examination of morphological features such as spits, presence of fluvial sources, and anecdotal information, a prediction of likely sediment transport can be made.

M&N will gather information available from Invenergy, the Port of Acajutla, the Ministry of Environment and Natural Resources (MARN) of El Salvador, Fugro commissioned surveys, previously gathered Pre-FEED data, public domain aerial photography, and any other data sources available.

1.3 Project Site

The proposed marine terminal is to be located approximately 1.25 km west of the Acajutla coast, at a water depth of approximate 16 m above mean low water spring (Fugro 2016). The site sits between the Port of Acajutla pier and El Paso mooring area (an offshore multi-point mooring facility). To the east of the site, there is a small fishing harbor protected by a breakwater.

The marine terminal will consist of a Floating Storage Regasification Unit (FSRU) housed within a cellular cofferdam protection structure that will serve as the berth for the FSU and LNGC. The FSU and LNGC will be moored at a single berth sea island jetty. The supply of gas provided by the FSRU is transported through a subsea pipeline to the connection point on the landside.

Figure 1 presents the site location and its vicinity. The terminal layout and subsea pipeline route are also shown in the figure.

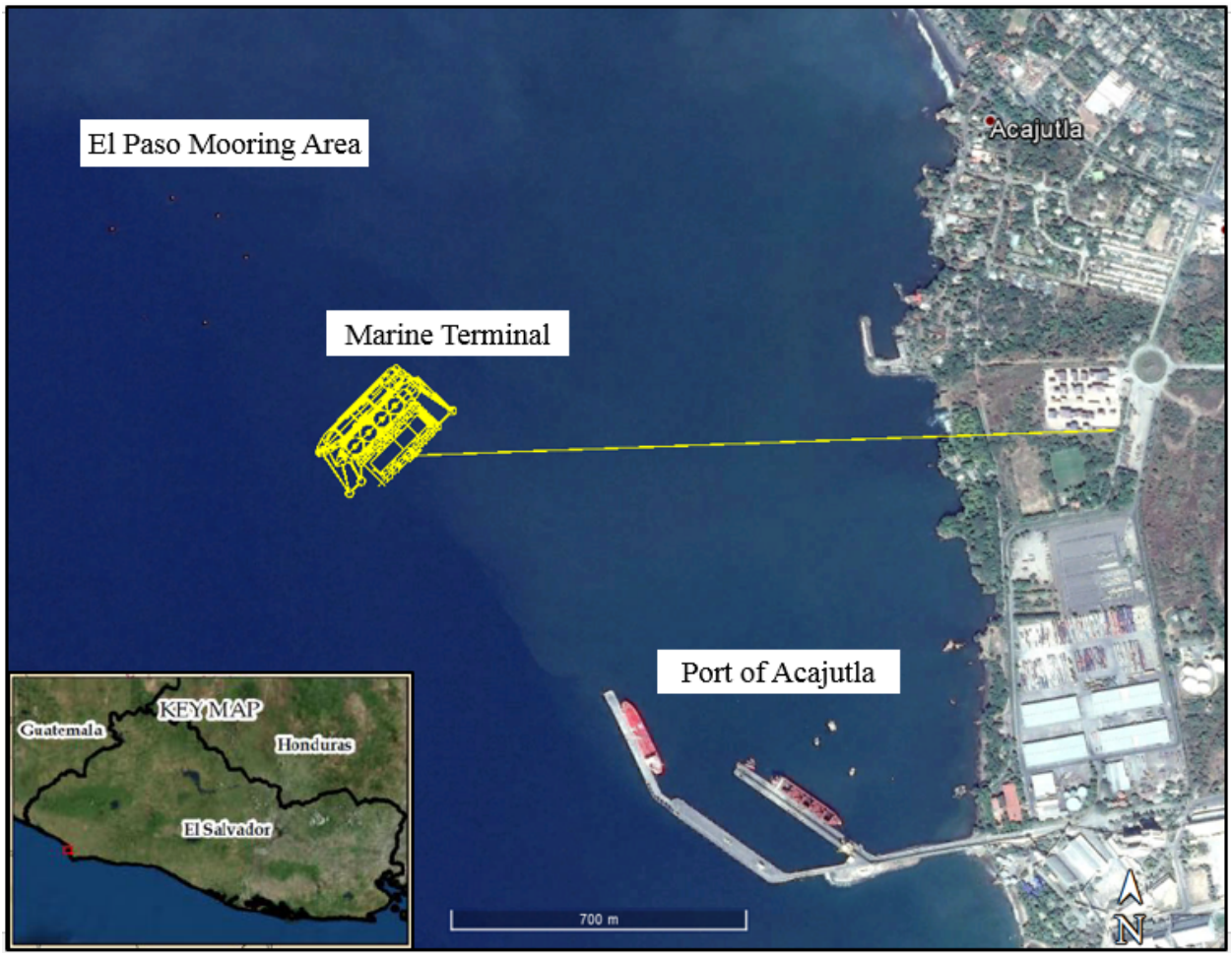


Figure 1: EDP LNG Site Location and its Vicinity

2 Site Conditions

2.1 Bathymetry

A recent bathymetric survey was conducted by Fugro in April, 2016 (Fugro 2016). The survey covers an area of approximately 2 km by 1 km, from the multiple mooring site extending to the nearshore (Figure 2). According to Fugro (2016), the survey data was reduced to mean sea level (MSL) from its native datum. The correlation was provided to Fugro by EDP and determined from the tide gage located at the Port of Acajutla. Finally, Fugro adjusted the survey data from MSL to MLWS by adding +0.98 m. This correlation was provided to Fugro by M&N and determined from the tidal datums computed from the Port of Acajutla tide gage.

No historical bathymetric surveys are available other than the nautical chart for Quetzal and Acajutla (British Admiralty Nautical Chart #1946). Based on the chart note, the chart bathymetry is compiled from several surveys conducted in 2005 and 2011. The nautical chart also notes depth

are in meters and referenced to chart datum, which is approximately the level of mean low water spring (MLWS). The bathymetry contour lines from the recent Fugro multi-beam survey were overlaid with the nautical chart, as shown in Figure 3. The comparison is limited because the resolution of the survey is much higher than that of the nautical chart.

The bathymetry along the orientation of the terminal berth from SW to NE was extracted from both sources and is shown in Figure 4. As can be seen in both figures, the more recent Fugro multi-beam survey indicates an increase in sea bed elevation of approximately 1 m. This could suggest significant sedimentation. However, this degree of accretion would likely be visible elsewhere in the vicinity of Acajutla Port. As discussed later in this memo, the Port does not perform regular maintenance dredging, which is indicative of low sedimentation rates. Moreover, morphological features along the shoreline, from aerial photography, also discussed later, do not appear to indicate significant changes to the shoreline. The discrepancy between the nautical chart and 2016 survey is very consistent along the terminal alignment. If it is assumed the 2016 survey is referenced to MSL, the shifted elevation to MLWS actually matches the nautical chart well. At this stage no definitive conclusions can be made. Further investigation of the survey data is on-going with Fugro.

Assuming the original chart survey was referenced incorrectly, the bathymetric change is very minor over the past 11 years (2005 to 2016). There has been no significant erosion or accretion within the last 10 years in the vicinity of the proposed project. Historical surveys prior to 2005 for the area would be helpful to provide a better understanding of the long-term bathymetric change in the project area.

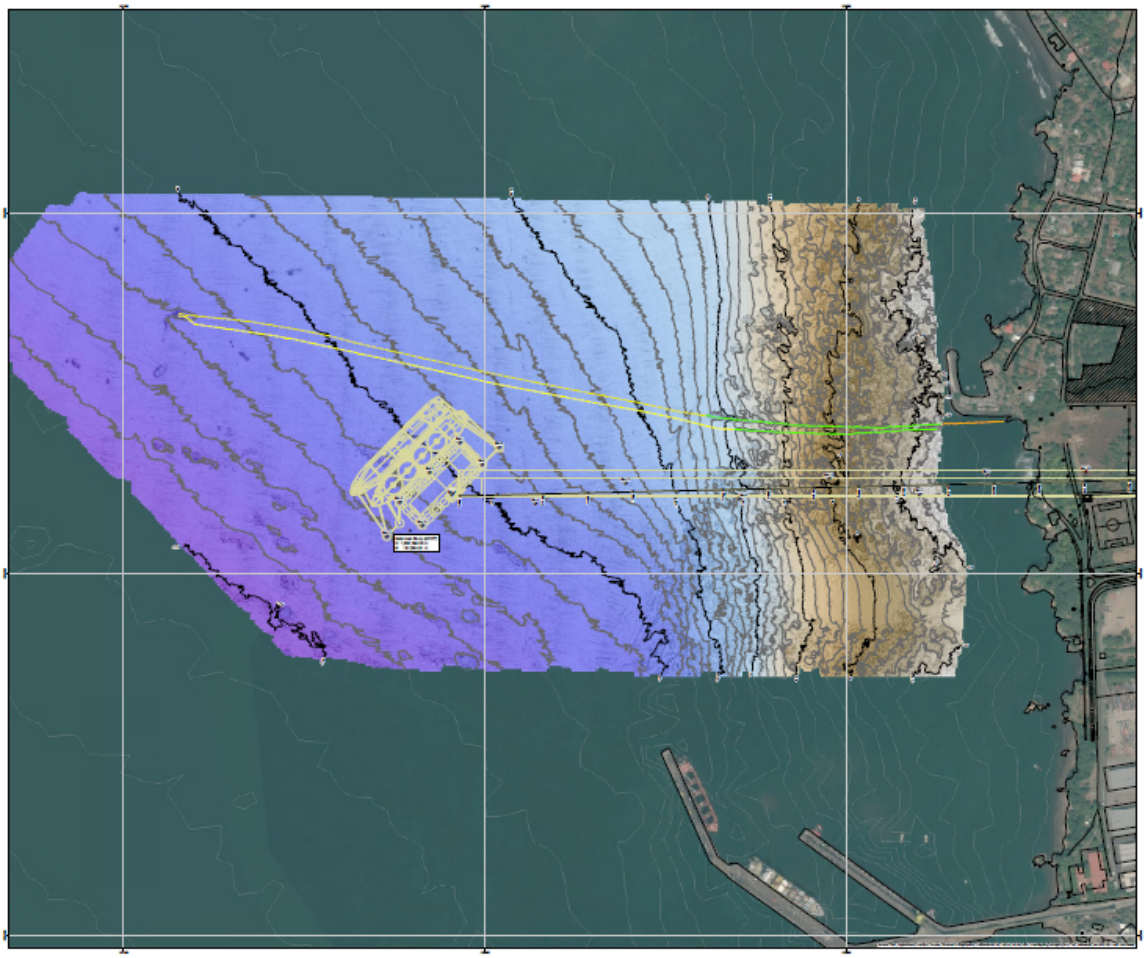


Figure 2: Bathymetry Chart of Proposed Acajutla LNG Terminal (Fugro 2016)

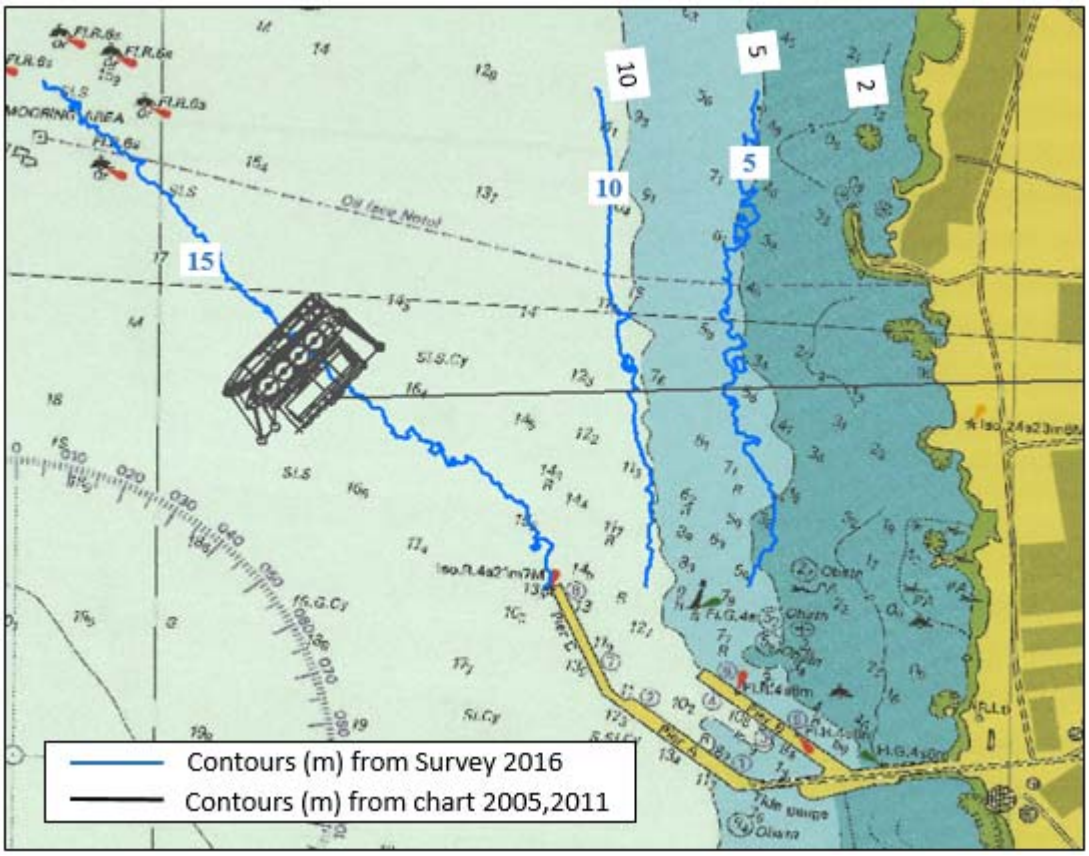


Figure 3: Bathymetry Comparison for the Project Area (5 m, 10 m and 15 m contour lines)
(preliminary data)

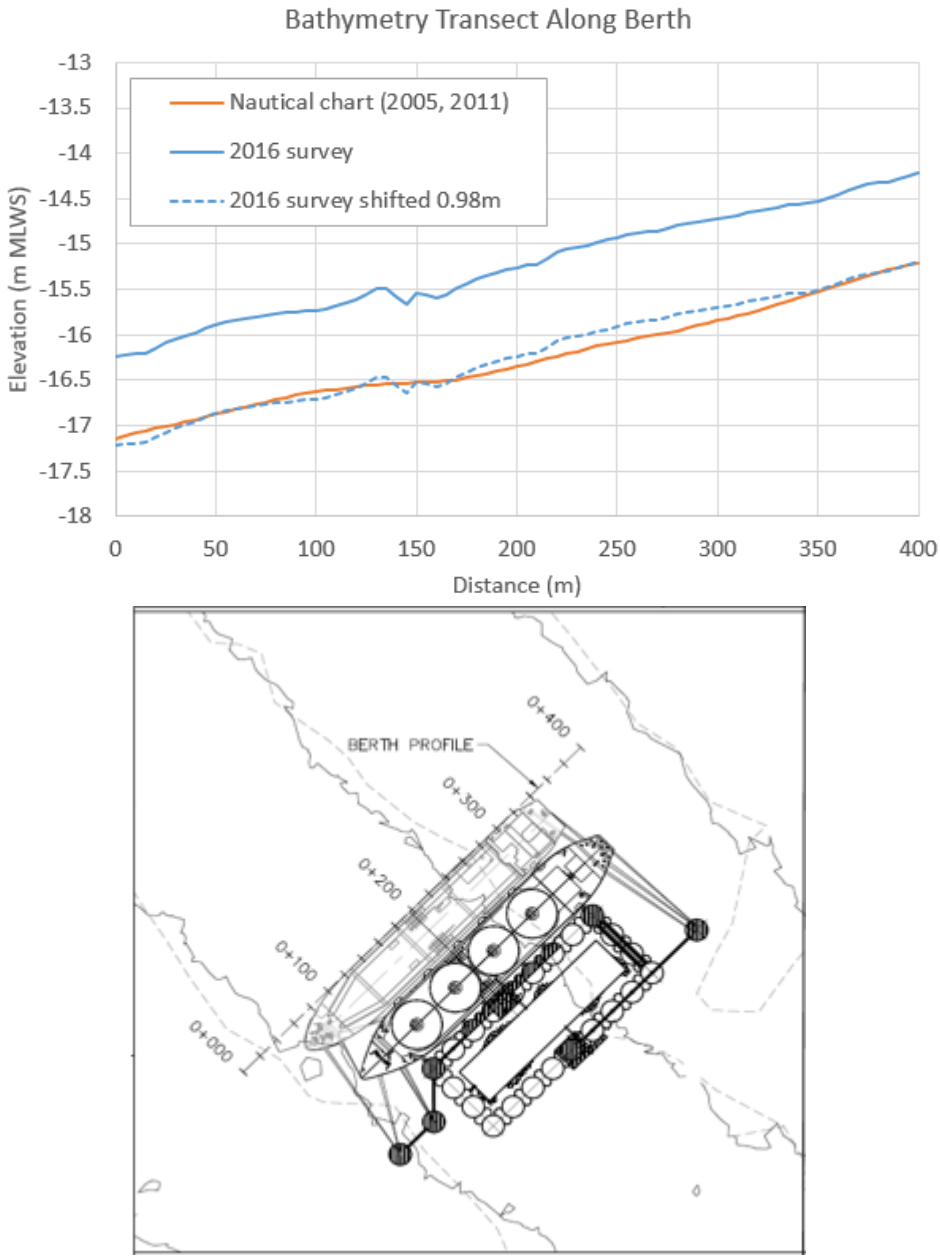


Figure 4: Transect of Bathymetry along Terminal Berth for both Bathymetry Data

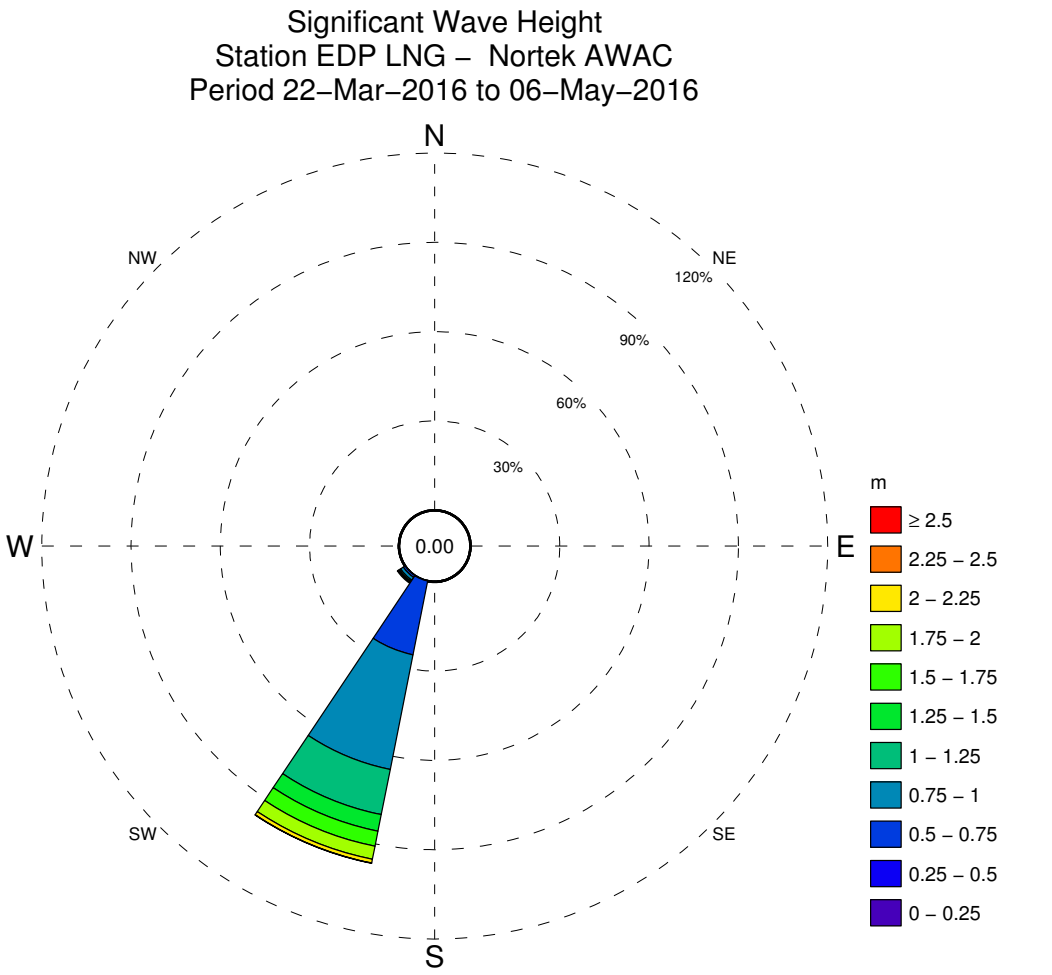
2.2 Wave and Current Conditions

Waves and currents can be the driving forces for coastal and adjacent shelf sediment transport. In the nearshore surfzone, waves can agitate the sediments and put them in suspension. They can also be responsible for driving sediment along the shoreline and/or in the cross shore directions. However, at the terminal berth with a depth of 16 m, waves are unlikely to move the sediment. Discussing the waves and current conditions will help to understand their role in inducing shoreline changes and sedimentation process at the Acajutla coast.

2.2.1 Measured Metocean Data

2.2.1.1 AWAC Measured Data at the LNG Terminal

Fugro has been contracted to collect metocean data near the EDP LNG terminal site. An Acoustic Wave And Current Profiler (AWAC) was deployed at location 13°34.881'N, 89°50.841'W on the seabed. Approximately 6 weeks of data, from 3/22/2016 to 5/6/2016, has been collected and downloaded so far. The AWAC will remain in the water until 8/7/2016. Figure 5 and Figure 6 show the measured wave height, period and direction at the AWAC location. During the measured period, the wave period mostly stays between 14 to 16 seconds and is constant from the SSW direction. The significant wave height is below 1 m 67% of the time. The measured highest significant wave heights are between 2.25 m and 2 m, occurring 1.3% of the whole measured period.



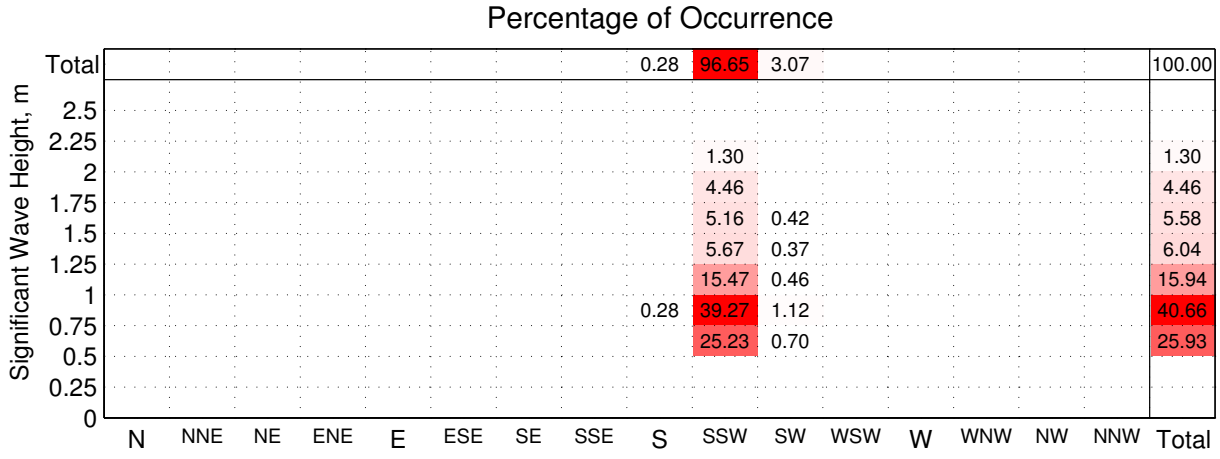


Figure 5: Wave Height Rose at the AWAC Location(13°34.881'N, 89°50.841'W)

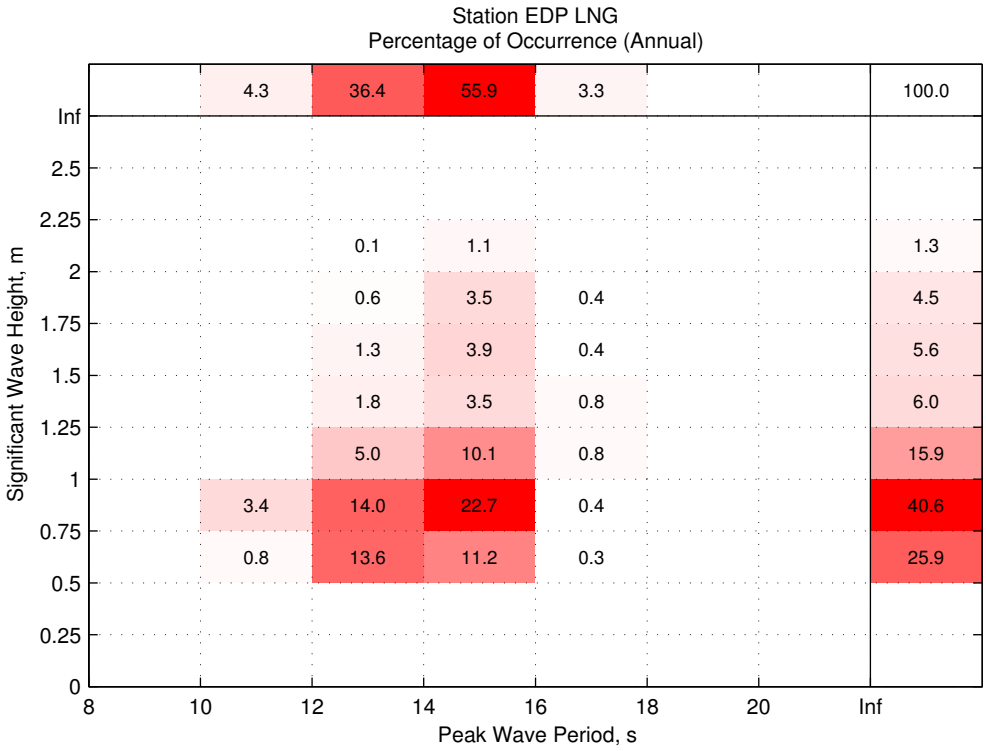


Figure 6: Joint Probability Table of Wave Height vs. Wave Period at the AWAC Location (13°34.881'N, 89°50.841'W)

Figure 7 presents the current conditions collected by the AWAC at the site. The currents along the entire water column were recorded. The current velocity at the bottom is more critical to sediment movement. During the measured period, as shown in Figure 8, the 12 hour-averaged bottom velocity is on the magnitude of 0.1 m/s, with slightly higher values of 0.2 m/s toward the end of the period. The maximum current velocity occurs near the surface, and its magnitude is up to 1 m/s. The direction of the current switches between north and south, indicating the currents moving alongshore.

The water depth at the terminal is as deep as 16 m above MLWS. The high currents at the surface will be hardly cause any suspension of the fine sediments. The low currents at the bed indicates minimal sediment suspension and movement at site.

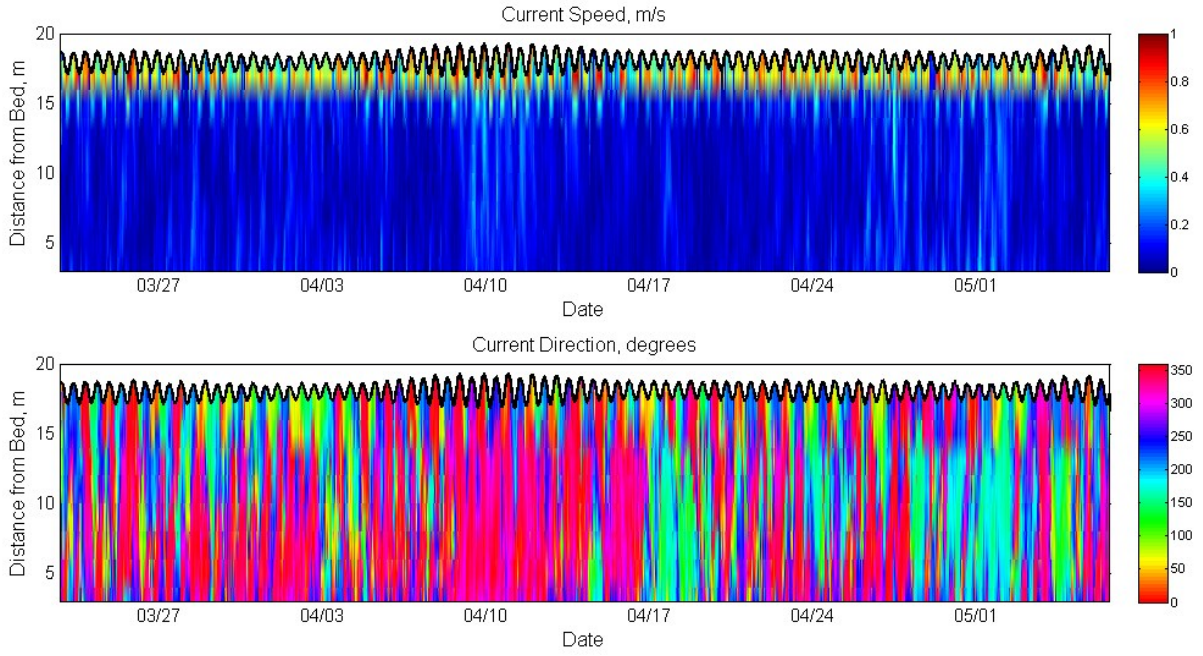


Figure 7: Time Series of Current Conditions along the entire water column at the ADCO Buoy (13°34.881'N, 89°50.841'W)

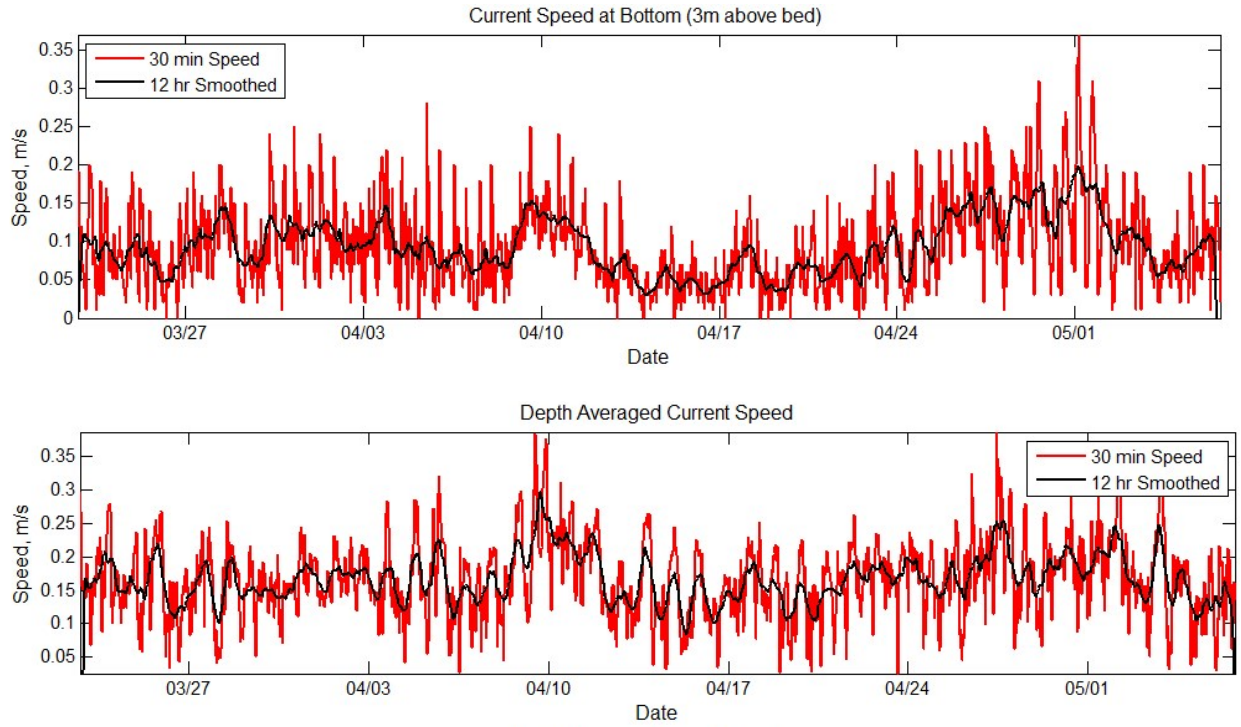


Figure 8: Time Series of Current Velocity at the ACDP Buoy (Upper: Currents at Bottom; Lower: Depth Averaged Currents)

2.2.1.2 MARN Measured Data at Acajutla Offshore

During Pre-FEED, measured currents from MARN buoy located at offshore (13.584430 °N, 89.8623 °W) were presented. The data spans from 9/7/2012 to 10/18/2013 with a three-month gap in early 2013. General observations from the analysis of currents are:

- Depth-averaged current speeds typically have magnitudes between 0.1 and 0.2 m/s. Depth-averaged currents exceeding 0.25 m/s occur 2.7% of the time.
- The highest currents are observed to travel to the southeast. The maximum recorded current speed is 0.4 m/s traveling to the southeast.
- Generally, the currents measured at the MARN buoy are low and the current speeds under normal condition agree well with the AWAC observation at the terminal.

2.2.2 M&N Hydrodynamic and Wave Modeling

M&N conducted hydrodynamic and wave modeling for the EDP LNG terminal during the pre-FEED study (M&N 2015a). The model is currently being verified and calibrated using the measured data. Model results of wave data at the EDP LNG terminal are depicted as seasonal and annual wave roses provided in Figure 9 and Figure 10. The prevailing directions for the waves approaching the terminal site are southwest (SW) and south-southwest (SSW). For normal condition, the significant wave heights are between 0.25 m and 1 m for both sea waves and swell. The hydrodynamic and wave model is being verified, calibrated and updated using the measured data. Preliminarily, the modelled data agrees reasonably well with the measured data at the AWAC location.

As the data shows, almost all the waves come from the S-W quadrant. The berth is located at 16 m below MLSW. It is outside of the surfzone and it is deep enough that the waves will not stir up and agitate sediments in the vicinity of the berth. Given the small overall footprint of the terminal and the distance offshore, it is speculated that there will be no notable changes to the waves reaching the shoreline. It appears that the terminal does not provide any sheltering for the Port approach channel or turning basin.

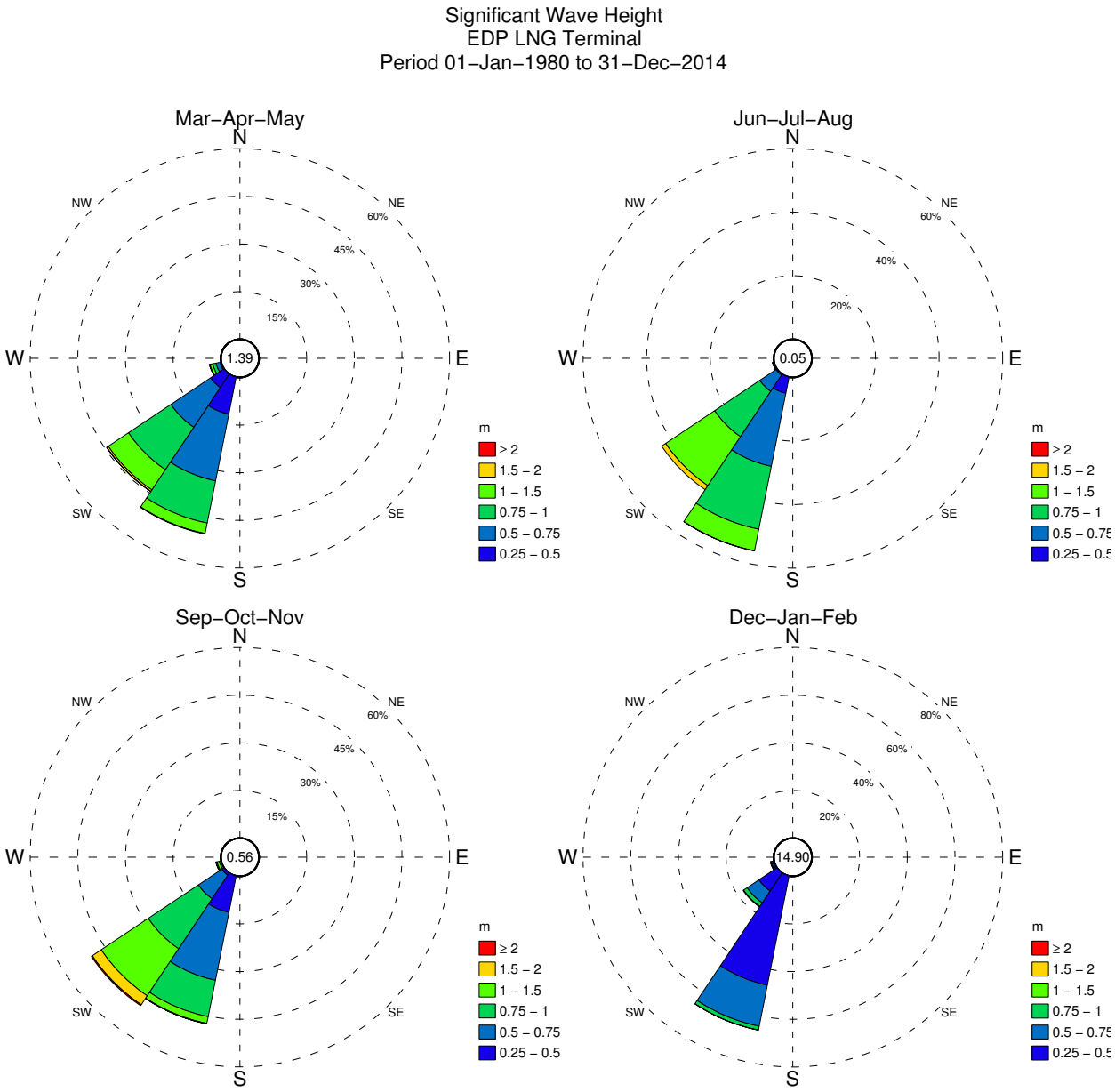
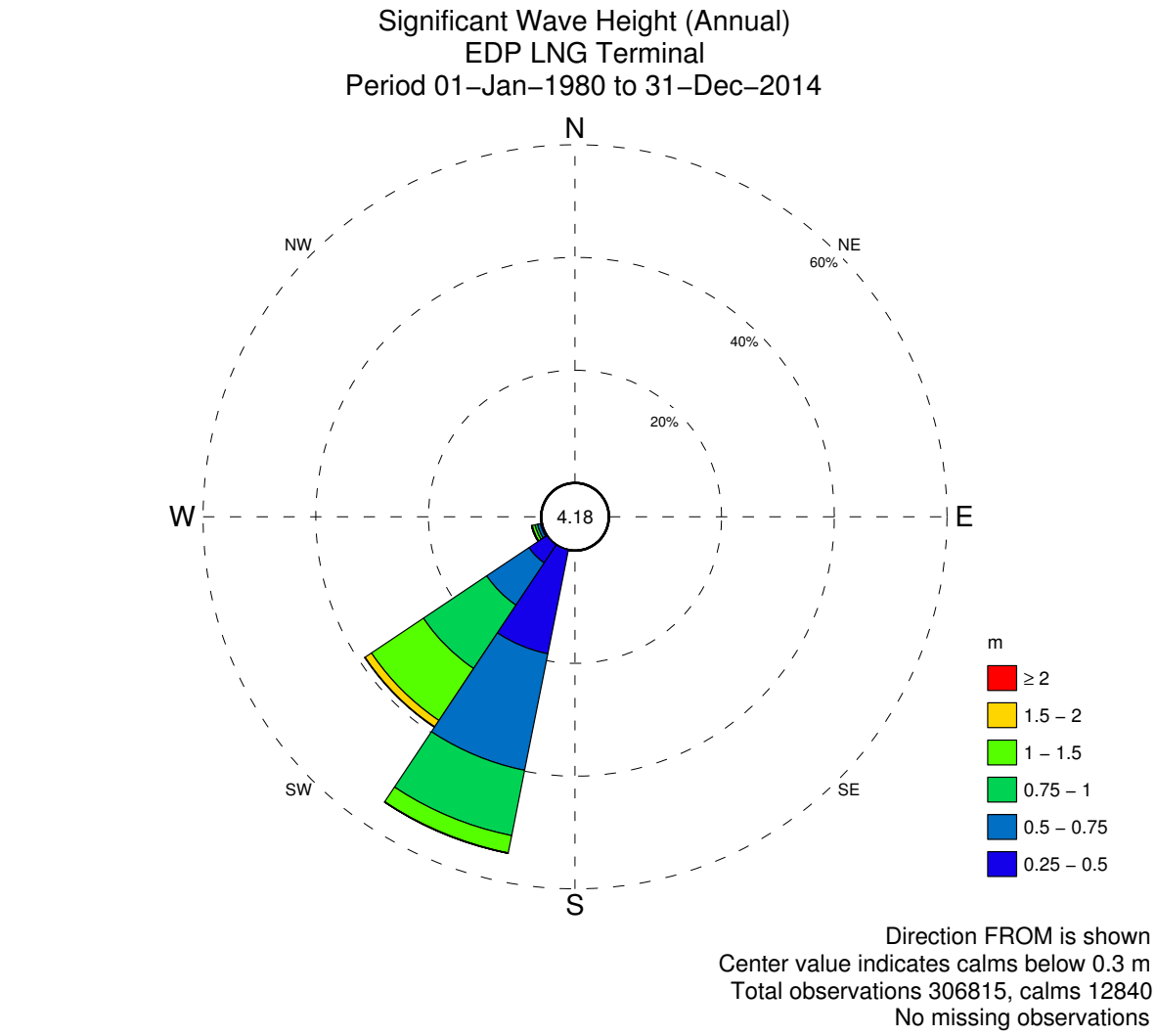


Figure 9: Significant Wave Height Roses for EDP LNG Terminal by Season



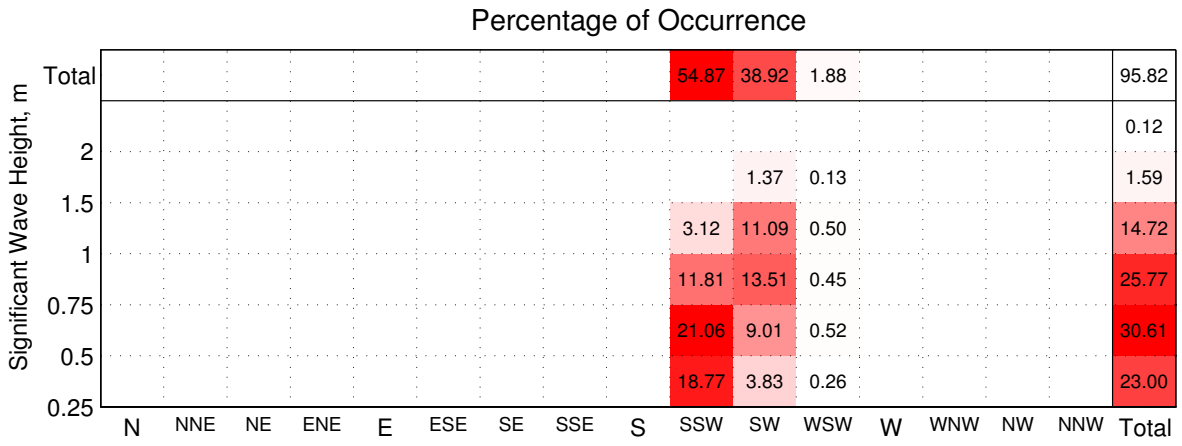


Figure 10: Annual Significant Wave Height Rose for EDP LNG Terminal

Based on the results of the non-calibrated hydrodynamic modeling, depth-averaged current speeds at the site are low, exceeding 0.1 knots about 13% of the time. However, as previously presented, the AWAC measurements indicate that depth-averaged currents at the site can reach up to 0.35 m/s (0.7 knots). The AWAC data will be prioritized until the hydrodynamic model is calibrated. The fully calibrated hydrodynamic model with AWAC data will be able to identify the highest current locations during typical tidal cycle and to see the current circulation as a whole.

Based on the measured and modeled results, the seabed current at the terminal is weak. The impact of the LNG terminal on the flow field is minor and can be disregarded. With sediment characteristic information, the sediment transport is further discussed in Section 2.4.6.

2.3 Visual Observations

Visual observations either in real time or using aerial photographs are a snap shot in time and should be used with caution. However, information such as sediment build-up on one side of a shoreline obstruction or protrusion can indicate the amount of longshore sediment movement and directionality. Particular attention should be taken to the state of the tide during visual observations. Beaches could appear either eroded or accreted, depending on whether the tide is ebbing or flooding.

2.3.1 Findings from Historical Aerial Photos

Aerial photos from Google Earth provide information on the coast along Acajutla. Starting from the north, San Pedro River and Sensunapán River are the two major rivers in Sonsonate, El Salvador. The two river mouths run into the Pacific Ocean. They are very close and both carry large flows, especially in the winter season (USACE 1998). From the historical satellite photos shown below (Figure 11), the morphological dynamic of the tidal flats at the mouth is apparent. These photos show sediments from the river bank are washed by the river flow and carried downstream to the ocean. The images indicate that the amount of sediments at the mouth is gradually increasing. The established vegetation along the coast helps to maintain the coastline and minimize beach erosion.

Figure 11: Satellite Photos of Tidal Flats near San Pedro River and Sensunapán River Mouths in 2006, 2010, 2013 and 2016 (Google Earth)

There is a sandy beach just south of the river mouth. Shoreline change at this beach is discussed in the next section. Further south, rocky points and bluffs up to 10 m are present on the shore. No significant shoreline change at the bluffs is observed. Sandy beaches with crushed shells and coral fragments are located between rocky headlands. South of Port of Acajutla, several wide sandy beaches near resorts are seen from the satellite image. Whether these beaches are naturally developed behind the coral reefs or nourished periodically is unknown. Figure 12 consists of three pictures along the Acajutla coast from north to south: a) sandy beach; b) bluff; and c) sandy beach with rocks and coral.

Caja de Crédito
Acajutla, Pacifico, El Salvador by Leandro Caamaño Vitureira

Figure 12: Pictures along the Coast of Acajutla (Picture locations are shown on the map at the right) (Top: sandy beach; middle: bluff; bottom: sandy beach with rocks and coral)

As mentioned earlier, the morphological mobility of the tidal flats at the river mouth are most probably caused by the fluvial deposits from the rivers due to bank erosion. Meyer-Abich (1952) mentioned in his study that the sedimentation conditions are pretty stable since 1903. A sudden change in the shore profile happened in June 1934 due to sudden rising water levels in the rivers, which ended up with overflowing the bank. The beach top has eroded and a lot of sedimentation happened along the offshore. The “old pier” near the port had to be extended 50 m offshore due to the sedimentation.

The picture of sandy beach in Figure 12 shows a very flat slope of the beach. This is an indication of fine sediment, since fine sediment requires flatter slope to be stabilized than coarse materials. These grey to black color fine sediments most probably come from the river. In the Pacheco-Alas (2011) study, field sediment samples collected along San Pedro River show similar composition of fine sediment.

Based on the observations mentioned above, the future development of the tidal flats and the morphology of the beach near the river mouths will largely depend on the river discharge and the amount of the sediments the flow carries. Any major flooding of the rivers can bring large amounts of sediments from upstream; it has been a major sediment supply for the coast of Acajutla.

Moving towards the Port at the south, bluffs along the coast are present, as shown in Figure 12. Scattered pocket beaches exist between the bluffs. Although cliff erosion can be another sediment supply source for the coast, the observation from historical aerial images show minimal change of the coastline along the bluffs.

Meyer-Abich (1952) concluded the morphologic pattern for the Acajutla coast area to be: The rivers (San Pedro and Sensunapán) to the north of the Port of Acajutla are the primary sources of sediments for the area (Figure 13). Towards south where the Port is located, as well as the proposed LNG terminal, is a zone considered to be neutral in terms of sedimentation. The area to the north is a zone of sedimentation due to fluvial sediment inputs and the area to the south is a zone of erosion. This conclusion agrees with what was shown in aerial photos.

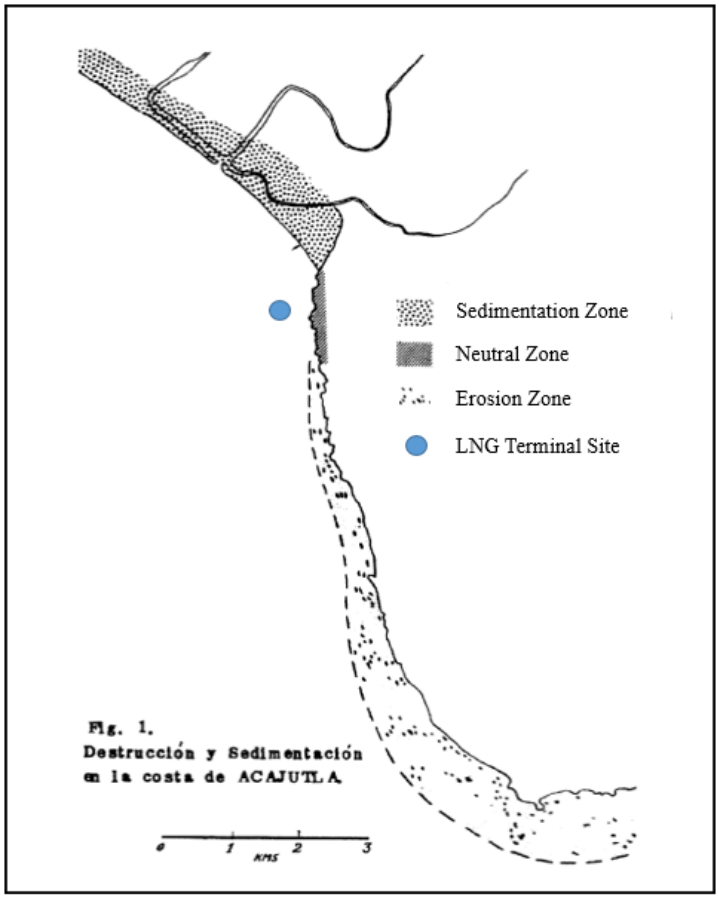


Figure 13: Sedimentation on the coast of Acajutla (Meyer-Abich, 1952)

2.3.2 Shoreline Change from Historical Aerial Photos

Historical satellite photographs, available from Google Earth, provide a good source to study shoreline change. An assessment of coastal sedimentation for the Bocana El Limón was done by University of El Salvador (Pacheco-Alas, et. al. 2011). Bonaca El Limón is the name of the stretch

of coastline where the river mouths are located. In the study, the historical satellite photos were examined for the shoreline change at the beach, about 1.5 km northeast of the terminal site.

In the analysis of aerial photographs from the years 1949 and 1996, by superimposition on the same scale, regressive erosion was detected in this period, the calculation was 0.41 m / semester representing the rate of erosion rainy season, from May to September (Figure 14).

The difference of horizontal displacement of the coastline was established at points P1, P2, P3 and P4 on the shoreline (Figure 15) between two periods of time: 1) February 25, 2005 to January 9, 2006; and 2) January 9, 2006 to February 21, 2010. The erosion rate is about 0.71 m/month between 2005 and 2006, and 0.20 m/month between 2006 and 2010. The beach is under regressive erosion between 2005 and 2006. After that, the erosion rate slowed down. Figure 15 (a) is a satellite image of the beach; coastal properties, such as residential houses sit on the beach front without any vegetation or dunes. This could also be a reason for local erosion. Removal of vegetation, which is a natural binding agent for sand and soils, often leads to losses both from surface water runoff and wave runup/overtopping.

On the other hand, the river mouth just north of the beach is a significant sand source for the area. A previous study by Dr. Meyer-Abich (1952) concludes that this area is considered to experience high sedimentation caused by the discharge of the San Pedro and Sensunapán Rivers. Thus, the erosion at the beach did not happen very quickly, given the sand input from the river retreats the beach.

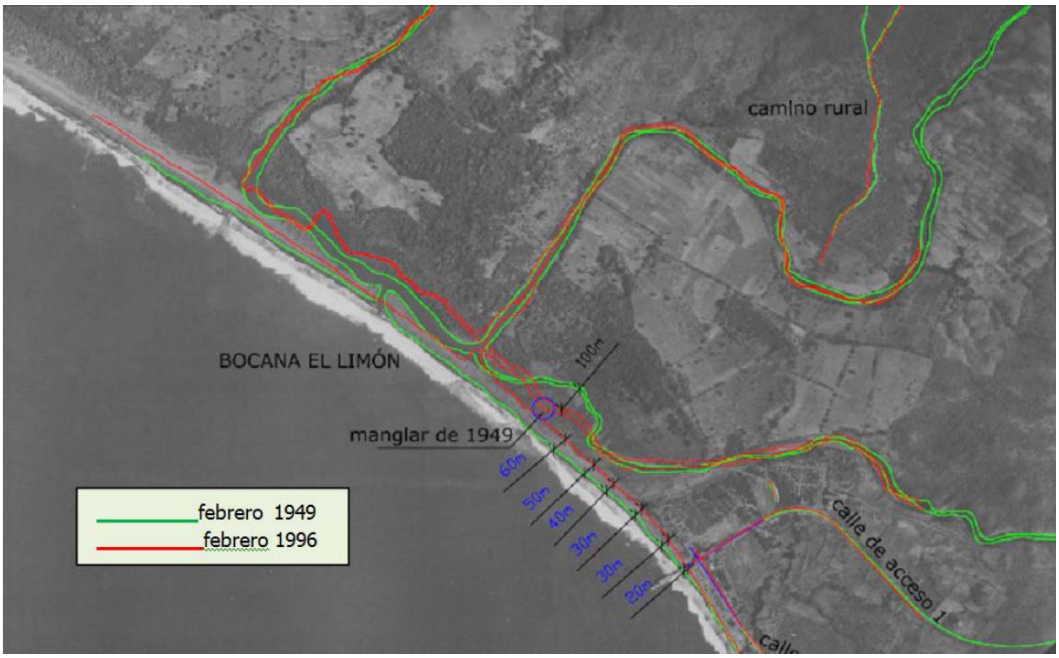


Figure 14: Overlaid shorelines and rivers for 1949 and 1996 on the aerial photo of 1949
(Pacheco-Alas, et. al. 2011)

Figure 15: Beach Satellite Images: a) Residential Houses Sit on the Beach without any kind of Buffers; b) Area Map Showing the Location of the Beach; c) Location of Shoreline Displacement (P1 through P4)

(Pacheco-Alas, et. al. 2011)

2.3.3 Inspection of Shoreline Obstructions

Important to the longshore movement of sediments are waves breaking obliquely to the coast and the longshore currents they generate. With the existing piers at the Port of Acajutla, the longshore transport is interrupted. This normally results in a buildup of sediment on one side and erosion on the other side. However, no dredging activity at the port for the past 40 years indicates that the longshore transport rate is not significant. Bottom currents measured by the AWAC and predicted by the hydrodynamic model are less than 0.2 m/s, supporting the minor longshore transport under normal condition.

Extreme conditions, such as overflowing from the estuary, hurricanes and tsunamis, can change the situation significantly. The 1934 flood, as discussed in Section 2.3.1, has showed significant change of the coast profile, supporting the finding on severe impacts by extreme conditions.

2.4 Sediment Characteristics

Sediment characteristics, such as the composition of the sediment and particle sizes, are crucial information related to sediment transport, dredging and potential environmental impact.

Typically, sediment samples are collected separately for sea bottom sediment and suspended sediment.

One of the most important parameters controlling the transport and deposition of sediments is grain size. Whether sediment particles are able to be picked by water flows, transported and deposited again when the speed of flow diminishes, is determined by sediment particle size (i.e. the weight of the particle). Sediment size distribution is also important since this indicates the spread of particle sizes within a sample. Sediment size must be compared to the forcing mechanisms (waves or currents) to determine likelihood of suspension, likely transit distance and settling characteristics, i.e. whether the sediments will fall out evenly or be deposited heaviest grains first, etc.

If particles are able to be suspended and transported, they can be carried by currents away from the source site. This can have a multitude of impacts including scour at the source, turbidity and light blocking in the surrounding waters. As sediments settle out, blanketing organisms or deposition/sedimentation of sinks (such as berth pockets or channels) can occur. Fine sediments such as silts and clays produce greater and longer-lasting turbidity because of their small particle size, which will impact larger areas of seafloors than coarser, sand-sized material.

Historical records were obtained from different sources including the Port Authority of El Salvador (CEPA), MARN and the client. They provide information for sediment characteristics in the vicinity of the site. Figure 16 presents the locations of the available sediment sample information at the following sites:

- Site A: Proposed dredging material disposal site, bottom surface samples (CEPA 2012)
- Site B: Pier C, boreholes (CEPA 1973)
- Site C: Beach at the mouth of San Pedro River, bottom samples with varied depths (Pacheco-Alas, et. al. 2011)
- Site D: Acajutla Beach, bottom surface samples (MARN 2011)
- Site E: Locations in the vicinity of the LNG terminal and subsea pipeline, bottom surface samples (Dillon 2014)

The data sites are all located in the vicinity of the proposed terminal site, with the closest one being Site E. Grain size information is available at Site C, D and E. Site E has the finest D_{50} (the medium value of the particle size distribution) size, with 0.09 mm at the terminal. The average grain size increases to around 0.2 mm at the beach.

During June and July 2016, marine borings have been progressed. Soil samples have been taken to the lab for geotechnical analysis. The site-specific soil characteristics from these boreholes are discussed in Section 2.4.6.

Figure 16: Locations of Available Sediment Sample Information

2.4.1 Site A

The samples taken from Site A were described as “dark brown, compacted, plastic and soft texture, no organic matter, no foul odor” (CEPA 2012). The texture is of fine sand and the diameter of particles varies between 0.2 and 2 mm, which requires further confirmation (Figure 17).

Figure 17: Picture of Sediment Sample taken from Sea Bed at Site A (top 0.2-0.3 m)

2.4.2 Site B

Historical borehole information dating back to 1973 at Pier C, Port of Acajutla, is presented in Figure 18. When Pier B was constructed, dredged material from the footprint was disposed at Pier C. Therefore, the top layer in the borings, varying from 2 to 8 m, contains dredged materials from Pier B and it is composed of sand, gravel, silt, clay and occasional boulders. Since Pier C is next to Pier B, these dredging fill materials may or may not necessarily appear at the terminal site. The sub-layers consist of sand and volcanic agglomerate rock. The thickness of sand varies, but is no more than 2 m. The volcanic agglomerate layer ranges in thickness from 6 to 10 m. No grain size is available from these boreholes.

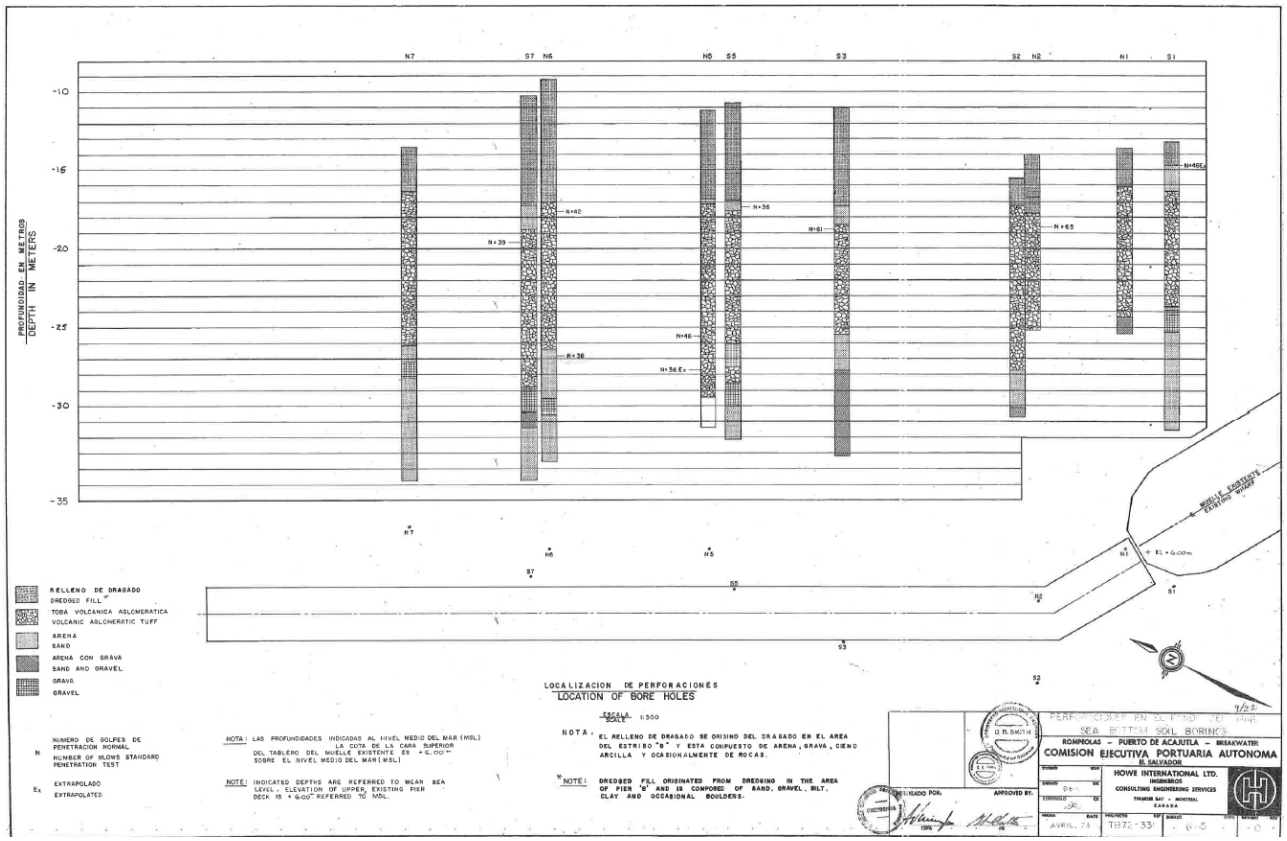


Figure 18: Borehole Information at Site B
(CEPA 1973)

2.4.3 Site C

The sedimentation study conducted by Pacheco-Alas, et. al. (2011) provides some grain size information at Site C, the mouth of the San Pedro River. The sieve analysis results are listed for the samples at the beach of San Pedro River mouth, located about 2 km north of the terminal site. The samples from three different depths were sieved separately. Figure 19 shows the gradation curves for these samples. The D_{50} grain size is in the range of 0.22 mm to 0.32 mm. Fine sand (0.25 mm to 0.075 mm) percentage is 62%, 39% and 35% of the samples from 0 to 0.2 m, 0.2 to 0.4m and 0.4 to 0.6m, respectively. This was sampled on the beach at the river mouth. Fine particles upstream in the river are more easily washed from upstream banks and discharged to the ocean. Depending on the discharge amount of the San Pedro River and currents along the coast, the area impacted by these river sediments may or may not include the terminal site.

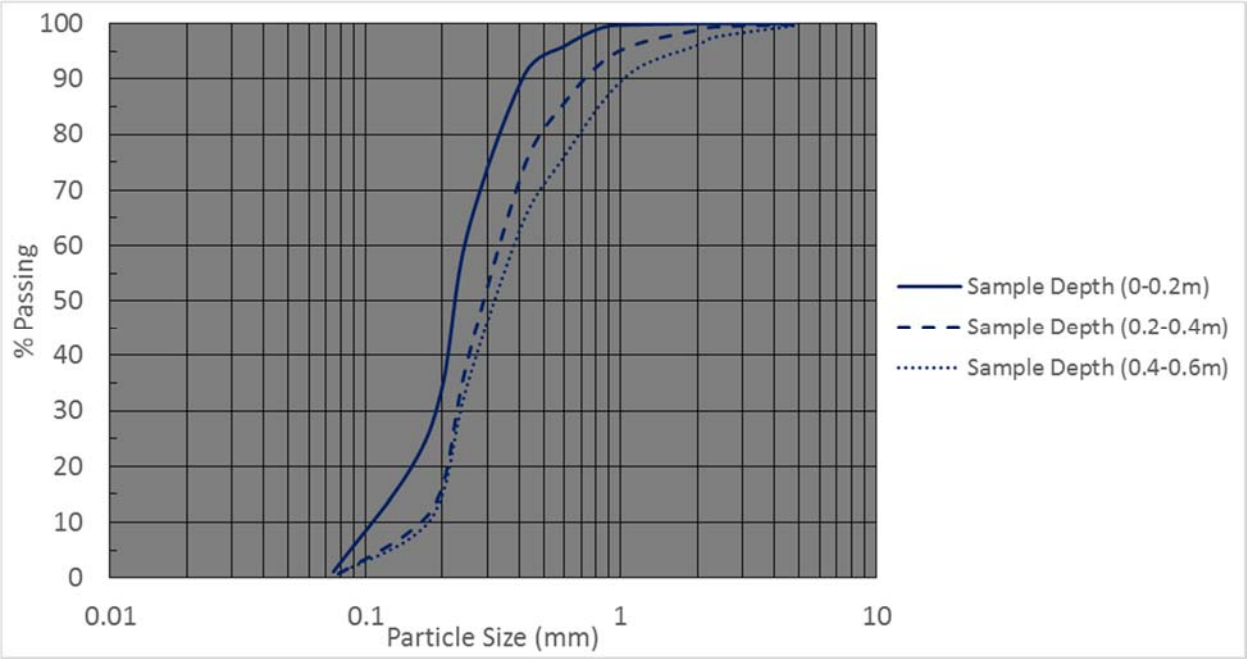


Figure 19: Sieve Curves for Sediment Samples at Site C (Approx. 2 km north of the terminal site)

2.4.4 Site D

The MARN (2011) study of sand characteristics at Acajutla beach (13°35'40.28"N 89°50'11.12"W) provides sediment information on the beach. The Acajutla Beach sampling point is located 1.46 km from the mouth of the Sensunapán River, about 1 km North of the Port of Acajutla. The visual observation stated as "fine grained sand with dark grey to black color, presence of rock fragments and organic matter". The dark minerals in the entire sample make up 40%. Carbonates are 1 to 2%. Eroded remains from shells are 3%, 60% of which are angular fragments and 40% are sub-rounded to rounded.

Grain size curve from sieve analysis is provided in the MARN (2011) study. The average grain size (D_{50}) is about 0.18 mm. Almost 100% grain size is below 0.5 mm.

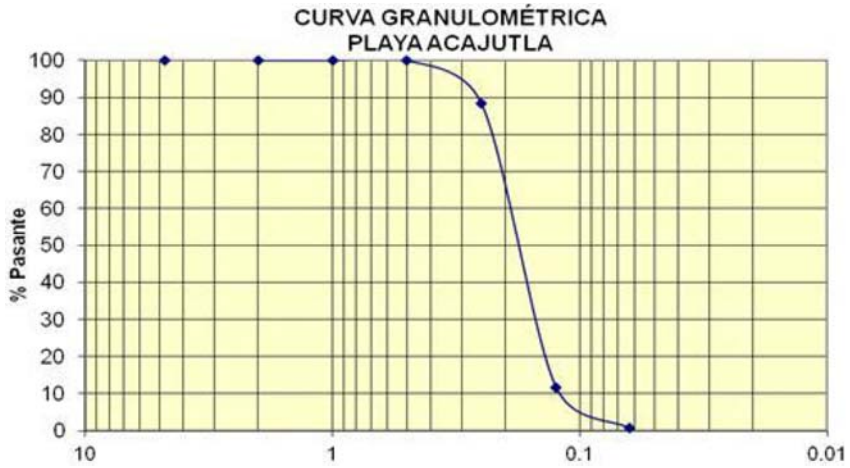


Figure 20: Sieve Curves for Sediment Sample at Site D

2.4.5 Site E

A total of 12 sediment samples were collected and analyzed during previous planning studies performed by Dillon Consulting (2014). The sample locations ES1 through ES12 (numbered from offshore to land) are shown in Figure 21. These locations look very similar to the current proposed pipeline route and terminal site.

Varied composition of fines (clays and silts, silty-clayey sands) with fine and coarse sands are observed, making up more than 50% in all the sample locations. At ES1 and ES2 (10 to 12 m depth), which are at the terminal, 45 to 50% of the grain size is considered silty-clay, part of the remainder is 12 to 13% very fine sand. At ES3 to ES6 (depths between 7 and 9 m), the silty-clayey sediment varied between 32% and 44%. At ES7 and ES8 (depths from 5 to 6 m), the percentage of silt and clay was much lower, 4 to 6%. For ES9 to ES12 (depths from 2 to 4 m), the grain size distribution was similar to that at ES3 to ES6, silty-clay sediment varied from 24% to 41%. It is suspected that ES7 to ES12 are influenced by the sediment supply from the drain that discharges directly in the intertidal zone close to ES12.

The grain size curves were also provided for the 12 samples. ES1 is presented below as it is the closest location to the current proposed terminal (see Figure 22). The D_{50} of Sample ES1 is about 0.09 mm. The detailed sieve analysis results for all 12 samples are included in Attachment A.

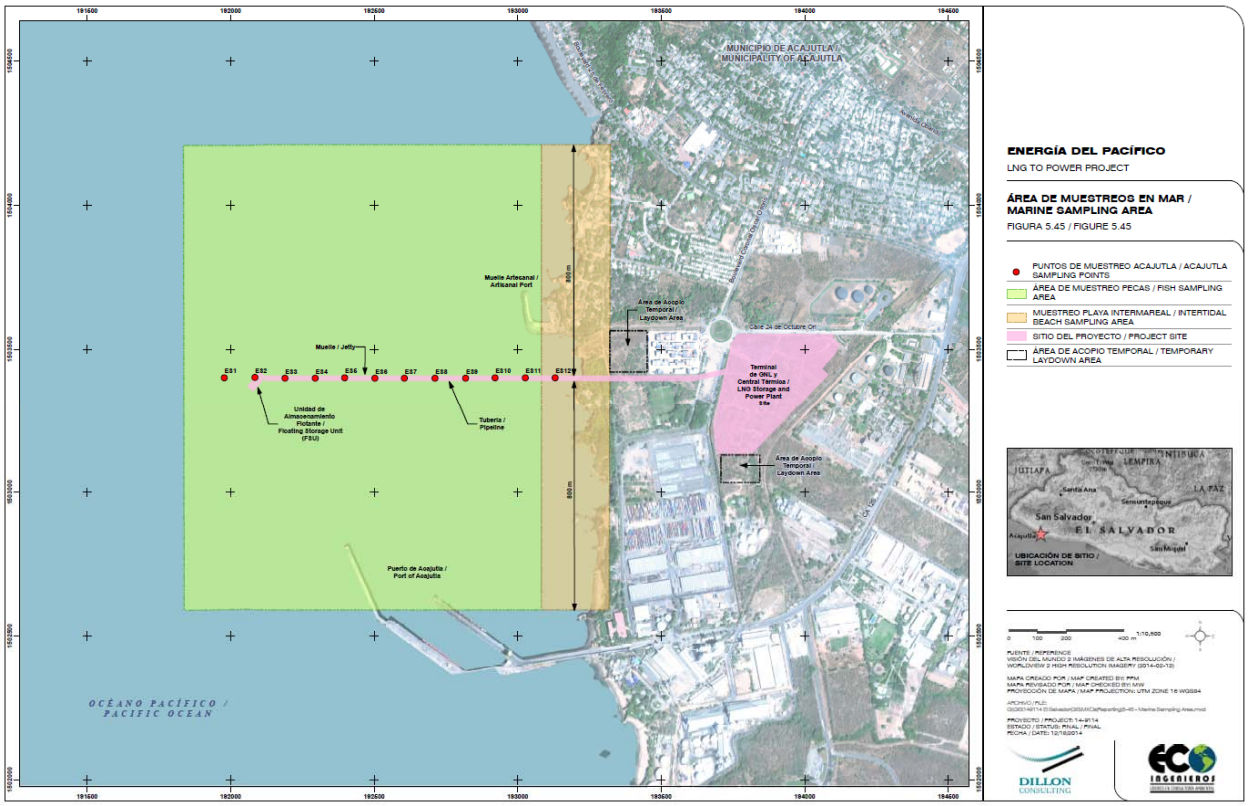


Figure 21: Sample Locations from Dillon Consulting (2014)

Table 1: Sieve Analysis of Samples from Land to Site E (Dillon 2014)

Sample No.	Fine Gravel	Coarse Sand [1]	Coarse Sand [2]	Fine Sand	Silty-Clay
ES1	3%	2%	9%	42%	45%
ES2	2%	1%	8%	39%	50%
ES3	2%	4%	21%	36%	37%
ES4	1%	2%	12%	40%	44%
ES5	0%	0%	3%	59%	39%
ES6	0%	0%	3%	66%	32%
ES7	2%	19%	60%	14%	4%
ES8	3%	18%	57%	16%	6%
ES9	1%	1%	5%	70%	24%
ES10	0%	1%	4%	60%	36%
ES11	0%	1%	2%	56%	41%
ES12	0%	0%	2%	68%	30%
Average	**1%**	**4%**	**16%**	**47%**	**32%**

[1] Sieve Size No. 10; [2] Sieve Size No. 40.

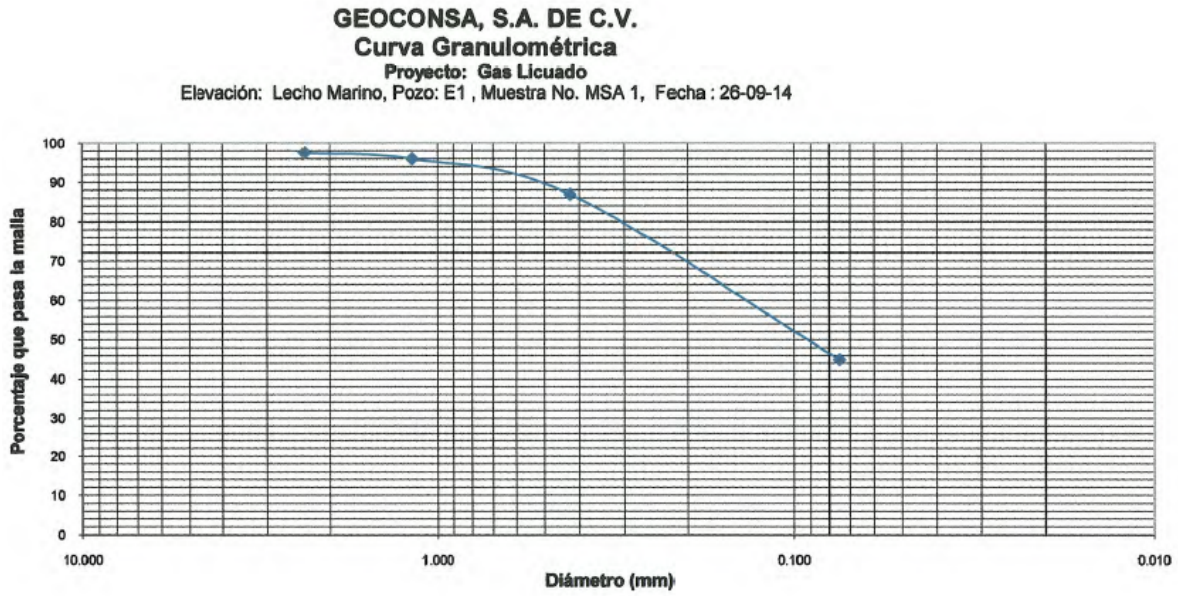


Figure 22: Sieve Curves for Sediment Sample ES1 at Site E

2.4.6 At Project Site

The geotechnical Contractor has progressed marine borings and reported the site-specific soil information in geotechnical report (dated August 2016). The locations of five completed boreholes (BH-3, BH-6B, BH-13, BH-14 and BH-15) are showed in Figure 23. Bore hole 6B is located at the northeast corner of the proposed terminal, and bore hole 13, bore hole 3 and 14 are along the subsea pipeline route from offshore to nearshore, bore hole 15 is located on land and not discussed here.

The sieve size analysis were conducted on all boreholes at different depths. The particle size distribution curve provides the relation between the particle size and the percentage of weight. Table 2 lists the percentage of each category soil grain by size. The D-values (e.g. D30, D50, D90) used to describing the particle size distributions are also included. At the terminal, 43% -50% is clay and silt; 51% - 57% is sand and no gravel was found. This is consistent with what was found at Site E. The average grain size (D50) is about 0.1mm at BH-6B from seabed to 6m below mudline. It is found that less percentage of fine sediment along the pipeline than at the terminal, thus the average grain size along the pipeline are larger. There are some variations of the fine sediment percentage along the pipeline, ranges from 11% to 33%. The average grain size is between 0.2mm and 1mm. These soil grain size information has been carried into the dredging plume study and was documented in a separate report.

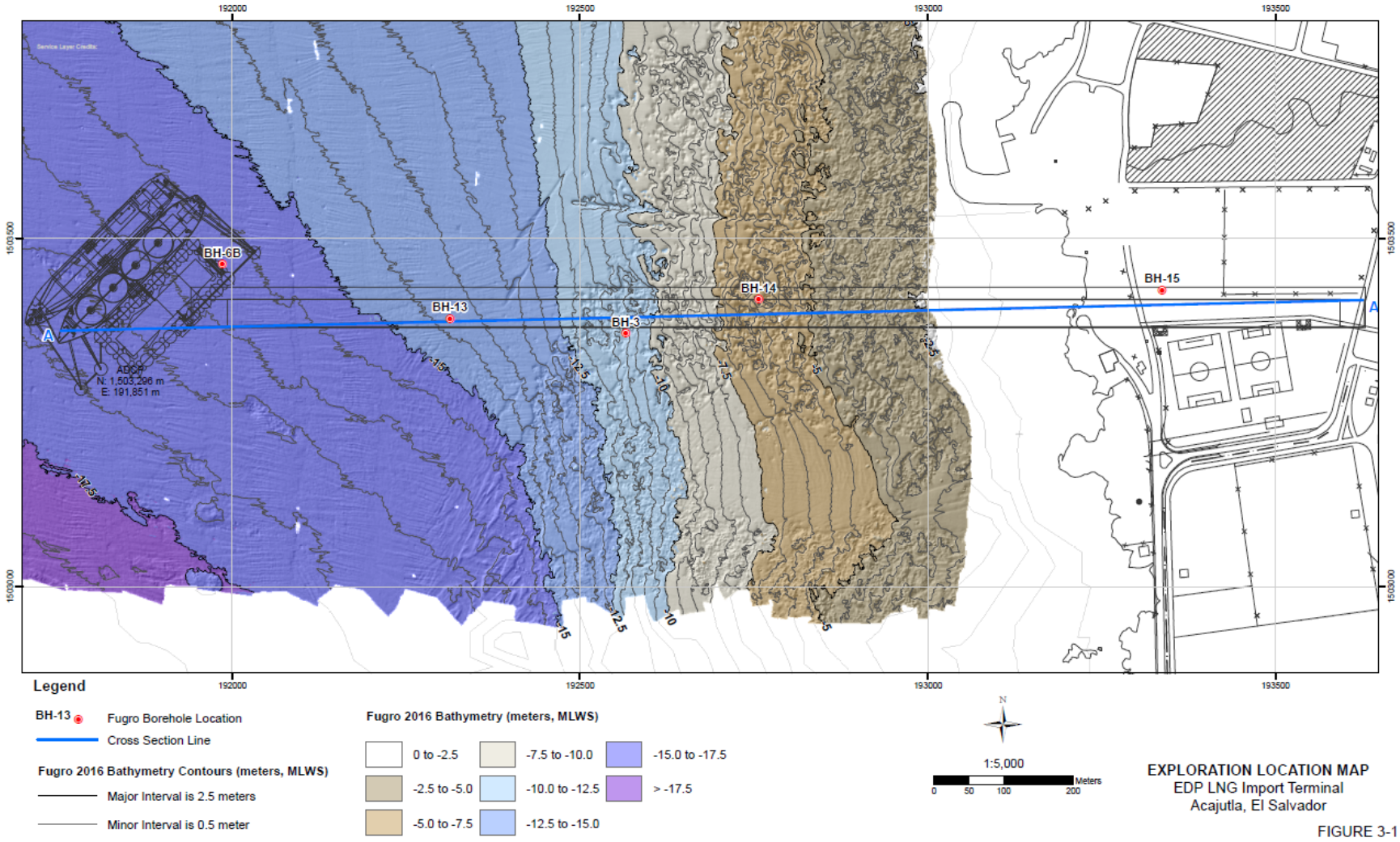


Figure 23: Borehole Locations overlaid with Bathymetry Contours (Fugro, 2016)

Table 2: Grain Size Distribution from the Completed Boreholes at the Project Site

Location	Terminal			Pipeline Route (offshore to nearshore)					
Sample No.	BH-6B	BH-6B	BH-6B	BH-13	BH-13	BH-13	BH-3	BH-3	BH-14
Depth below mudline (m)	0	3.6	5.7	0	2.2	3.5	1.5	5.1	0
Fines - total	45%	49%	43%	23%	14%	30%	33%	94%	11%
Clay	21%	N/A	18%	N/A	N/A	N/A	N/A	N/A	N/A
Silt	24%	N/A	25%	N/A	N/A	N/A	N/A	N/A	N/A
Sand - total	55%	51%	57%	73%	80%	68%	51%	6%	69%
Fine sand	53%	47%	45%	48%	35%	51%	15%	5%	25%
Medium sand	2%	4%	13%	19%	37%	10%	24%	0%	27%
Coarse sand	0%	0%	0%	6%	8%	7%	13%	0%	18%
Gravel - total	0%	0%	0%	4%	6%	3%	16%	0%	21%
D30 (mm)	0.027	N/A	0.021	0.093	0.287	0.075	N/A	N/A	0.334
D50 (mm)	0.083	0.081	0.100	0.173	0.442	0.096	0.491	N/A	1.05
D90 (mm)	0.188	0.35	0.539	1.98	3.14	1.80	8.19	N/A	9.52

2.4.7 Sediment Characteristics Summary

The most suitable sediment sample information for this study is the borehole information provided by Fugro in their geotechnical report (2016). . The information described in Section 2.4.6 allows characterization at the terminal berth and along the subsea pipeline route. The samples from BH-6B show high percentage composition of fine sands and clay at the terminal. Along the subsea pipeline, the percentage of fine sediment is less. The medium particle size D_{50} is about 0.1 mm at the terminal. The D50 along the pipeline has some variations, and it is in the range of 0.1mm to 1mm. Based on the Hjulström curve (Figure 24), the minimum currents required to trigger erosion is about 0.2 m/s (corresponding to an average grain size of 0.1mm). The fine sediment suspends and re-settles between 0.02 m/s and 0.2 m/s, but it doesn't cause any significant erosion.

Under normal conditions, the measured AWAC data indicates bottom currents of 0.1 to 0.2 m/s. Given the fine size of the sediments, the possibility of picking and actually moving sediments at the terminal is very low. Strong currents caused by waves during extreme conditions will cause significant changes in shoreline.

Ideally, bottom and suspended sediment samples in the immediate vicinity of the proposed terminal location would be needed to provide more information about the sediment type and composition, grain size and bulk characteristics.

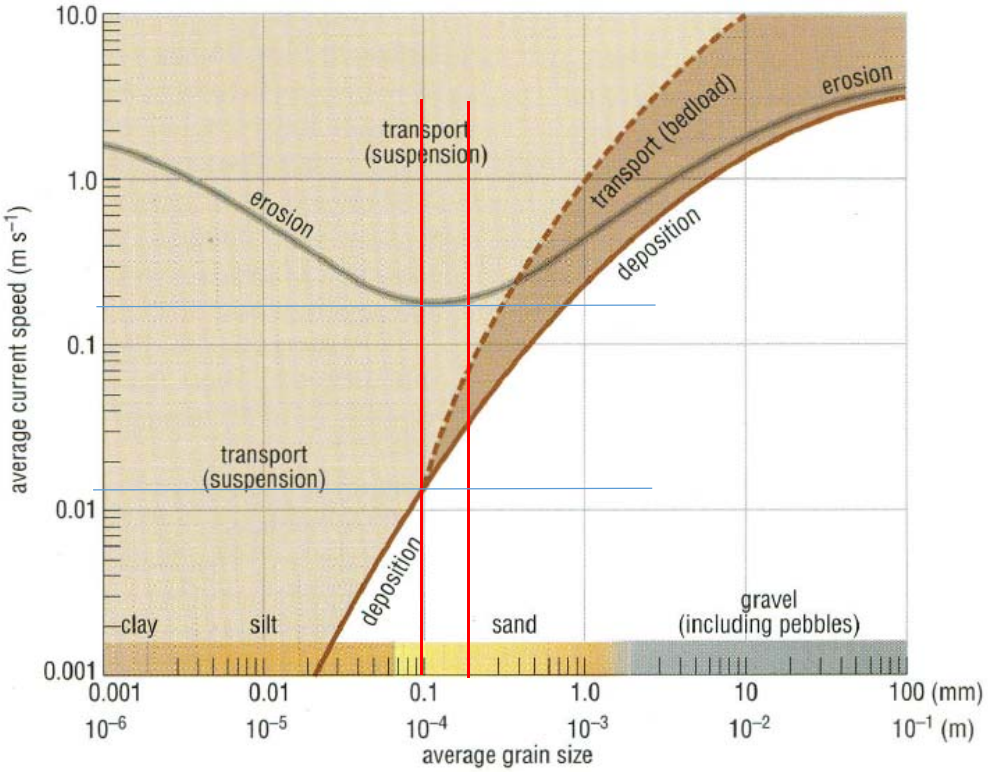


Figure 24: Revised Hjulström Curve (Open University 1999)

2.5 Historical Dredging Records

The Port of Acajutla was initially constructed in the 1960s, and expanded in the 1970s. Based on previous study (CEPA 2012), the Port of Acajutla has never carried out maintenance dredging since inauguration in 1961. In July 2011 the MARN authorized CEPA to study the feasibility of maintenance dredging works to remove mud accumulating in the berth areas. It is yet to be confirmed from the Port if any dredging has been completed since the 2012 feasibility study. It is necessary to point out that one of the potential dredging material disposal sites is very close to the terminal site, northwest of Pier C.

The lack of maintenance dredge suggests that sedimentation is not a significant factor in the Port. The lack of historical dredging is not necessarily conclusive in terms of conditions.

A future issue for the EDP LNG terminal may be sediment transport from a future dredge disposal site, particularly if there is dredging at the terminal. Sinks, areas of lower bathymetry compared

to surrounding sea bed, naturally accumulate sediments. Referring to Section 2.2, the prevailing directions for waves approaching the terminal site are southwest (SW) and south-southwest (SSW) and the maximum current velocities are predicted in the direction south travelling north.

3 Baseline Conditions

Using the information gathered in Section 2, baseline conditions for the sediment transport and forcing mechanisms associated with sediment transport can be summarized. As noted throughout this memo, many of the statements are speculative and based on incomplete data or assumptions. As further information becomes available, updates to the baseline conditions will be provided.

- Bathymetry comparison between the 2016 Fugro multi-beam survey and British Admiralty Nautical Chart #1946 is limited due to differences in resolution. The apparent 1 m accretion at the site is not supported by other data sources. Therefore, it is concluded that very minor changes in bathymetry in the vicinity of the terminal site have been observed between 2011 and 2016.

- The prevailing wave direction approaching the site is from the SW and SSW. Given the depths of waters at the proposed terminal, wave agitation leading to movement of bed sediments is unlikely.

- The sea bottom current velocity was measured in the range of 0.1 to 0.2 m/s during the period end of March to beginning of May, 2016. The maximum current occurs near the surface with a magnitude of up to 1 m/s. The direction of the current switches between north and south, indicating the currents move alongshore. Therefore, sediments present in the water column would be moved alongshore with the currents.

- The shoreline is relatively stable between the rocky headlands and bluffs. Morphological change is apparent and visible along the northern sandy beach. This is attributed primarily to fluvial influence rather than coastal, although overall erosion losses are reported. Removal of vegetation along the dunes (for development – appearing residential) does look to have contributed to localised beach erosion. This is attributed to upland influences and not changes in the wave or hydrodynamic conditions.

- San Pedro and Sensunapán Rivers are sources of sediments. Extreme overflow of the river is a cause of sedimentation deposition in the northern areas.

- No maintenance dredging is performed at the Port of Acajutla, indicating that sedimentation of the berths is not a significant problem. The feasibility of maintenance dredging was studied in 2012, and the location of one of the proposed dredging material disposal sites (northwest of Pier C) could lead to an issue for the EDP LNG terminal site in terms of suspended dredge spoil infill.

- The existing piers at the Port of Acajutla would interrupt the longshore transport, and build-up sediment or erosion would happen if longshore transport is significant. No maintenance dredging at the Port indicates minimal movement of longshore transport. Weak bottom currents support the minor longshore transport under normal condition.
- Under normal conditions, as identified by AWAC measurements, the bottom currents with mostly fine particles would only relate to minor movement of particles and would not lead to severe erosion.

In conclusion, the area around Port of Acajutla and the proposed EDP LNG terminal is not predicted to be an area of significant coastal sedimentation or sediment transport. Shoreline morphology is driven either by fluvial deposits/erosion, or by bluff erosion contained by rocky headlands. There is not predicted to be a significant nearshore cross-shore transport component, nor a significant offshore longshore component. Sediment movement is predominantly in the nearshore zone.

4 Potential Impact of EDP LNG Terminal

The marine terminal is proposed to be located in approximately 16 m above MLWS, about 1.25 km offshore of the Port of Acajutla. An associated subsea pipeline will be installed either by horizontal directional drilling (HDD) or conventional trenching. HDD is not considered in this memo since it has a lesser impact on sediment transport than trenching, which is assumed to be a shallow embedment.

Given the site condition data gathered and the baseline conditions determined in Section 3, the following is a prediction of the potential impact of the EDP LNG terminal on the baseline sediment transport characteristics in Acajutla. Also discussed will be potential scour at the terminal site and subsea pipeline, and potential impacts during construction.

4.1 Potential Impact of the Project Footprint to Long-term Sediment Transport

The footprint of the terminal is relatively small compared to the open coastline and scale of longshore transport. There may be localized impacts in the immediate vicinity of the terminal infrastructure since the cellular structure will block currents in north-south direction, and incoming waves from the SW/SSW. Given the water depths and predicted sediment budget at this offshore location, this is more likely to create localized scour than sediment transport.

The project footprint is not predicted to have an impact on cross-shore transport. The depth at the terminal is outside of “depth of closure,” which is the seaward limit of effective profile change over long-term time scales.

For the purposes of this desktop memo, the subsea pipeline is assumed to protrude from the sea bed by no more than 0.5 m. At the outer limits of the pipeline (at the terminal) this protrusion is

not predicted to impact sediment transport. The water depths are too great, and the natural undulation of the sea bed is likely to be similar in variation. The connection to the PLEM (PipeLine End Manifold) from the seabed will be too narrow to cause an obstruction to currents. However, as the pipeline reaches land, the emergent line will cause a minor obstruction to sediments on the beach. However, as the potential landfall sites are all beaches between rocky headlands, this is not predicted to have an impact other than localized scour to the pipeline itself. Any disruption to sediment transport will be local between the headlands. Scour of the pipeline is discussed in the next section.

In conclusion, there is predicted to be little to no impact from the proposed EDP LNG terminal on long-term sediment transport in the vicinity of Acajutla Port.

4.2 Potential Scour at the Terminal Site and Subsea Pipeline Route

Sediment samples at Site E are assumed the closest sampling location relevant to the proposed EDP LNG terminal. The D50 grain size of the sediments is extracted to be 0.1 mm at the terminal and up to 1 mm along the subsea pipeline. The Hjulström curve shown in Figure 24 relates grain particle size to average current speed. With a medium grain size of 0.1 to 1 mm, sediments will require a minimum velocity of 0.2 m/s for erosion to start.

4.2.1 Normal Conditions

The bottom current velocity at the terminal is about 0.1 to 0.2 m/s based on AWAC data and current velocity along the pipeline is even less. The possibility of erosion along the pipeline is low. No or minimal scour will occur. At the terminal, the grain size is relatively small, and current velocity can locally increase at the edge of the berth. This may lead to some local scour at the terminal berth. Localised scour protection can be installed around the gravity structures to limit scour.

4.2.2 Tsunami Conditions

From the M&N Tsunami Report (2016), the 20% exceedance current speeds along the berth direction are between 2.2 and 2.7 m/s. The nearshore currents in shallower water along the pipeline are expected to be even larger. Therefore, scour is predicted to occur particularly along the nearshore subsea pipeline during tsunami conditions. Therefore scour protection is recommended for these areas.

4.3 Impacts Due to Dredging and Construction

It is likely that there will be dredging activities at the berth in order to safely accommodate underkeel clearance. In addition, during trenching of the subsea pipeline (if that method is employed), sediments could be released and become suspended in the water column. M&N dredging plume report (2016) provides information on the potential trajectory of the plume and the likely concentrations during and after dredging activities.

5 Conclusions and Recommendations

The following conclusions are made regarding the determined sediment conditions and potential impacts as a result of the installation and operation of the EDP LNG terminal. It is noted that no numerical modeling was performed in the characterization of the predicted sediment transport:

- The area around Port of Acajutla and the proposed EDP LNG terminal is not predicted to be an area of significant coastal sedimentation or sediment transport. Shoreline morphology is driven either by fluvial deposits/erosion, or by bluff erosion contained by rocky headlands. There is not predicted to be a significant nearshore cross-shore transport component, nor a significant offshore longshore component. Sediment movement is predominantly in the nearshore zone.
- Sediment characteristics (e.g., grain size) have been extracted from various sources in the vicinity of Acajutla, including those from recent site-specific boreholes. Preliminary data suggests that, excluding tsunami events, currents will not significantly mobilise bed material.
- Given the footprint and offshore location of the terminal, little to no impact will result from the proposed EDP LNG terminal; no long-term sediment transport in the vicinity of Acajutla Port is predicted.

6 References

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Attachment A

Lab Report of Sediment Samples at Site E

GEOCONSA, S.A. de C.V.

GEOTECNIA Y CONSTRUCCION, S. A. DE C. V.

San Salvador, 30 de septiembre de 2014.

Señores
ECO Ingenieros, S.A. de C.V.
Presente

Atn. *Arq. María Teresa García*

Estimados Señores:

Adjunto a la presente estamos remitiéndoles los resultados de laboratorio de ensayos granulométricos practicados en doce (12) muestras de sedimento del lecho marino del proyecto ***"Gas Licuado"****, ubicado en Acajutla, Departamento de Sonsonate.*

Sin otro particular por el momento, aprovechamos la oportunidad para saludarlos.

Atentamente,
GEOCONSA, S.A. de C.V.

GEOTECNIA Y CONSTRUCCION GEOCONSA S.A. de C.V. EL SALVADOR, C.A.

Juan Carlos Figueroa Hernández
Ingeniero Civil

Colonia Layco, Pasaje Lorena No. 4, entre 15a. y 17a. Av. Norte, San Salvador, Telefax: 2225-6691, Tel. 2235-3607

ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-1 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 893.0 **Tara (gr):** 179.5 **Peso Neto (gr):** 713.5
P. Net. Corr.(gr): 634.6

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"					
3/8"	0.0	0	0	100	
No. 4	16.0	3	3	97	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	9.7	2	4	96	
No. 16					
No. 40	57.5	9	13	87	
No. 50					
No. 200	266.1	42	55	45	
Pasan No. 200	285.3	45	100	0	
Suma	634.6				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	245.3
PS+TARA:	229.0
TARA:	97.9
AGUA:	16.3
PESO SECO:	131.1
W%:	12.4

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	634.6
RETENIDO TOTAL	359.5
PASA EN LAVADO	275.1
PASA EN TAMIZADO FINAL	10.2
PASA MALLA 200 TOTAL	285.3

Laboratorista Téc Miguel A. Hernández
Fecha 26-sep-14

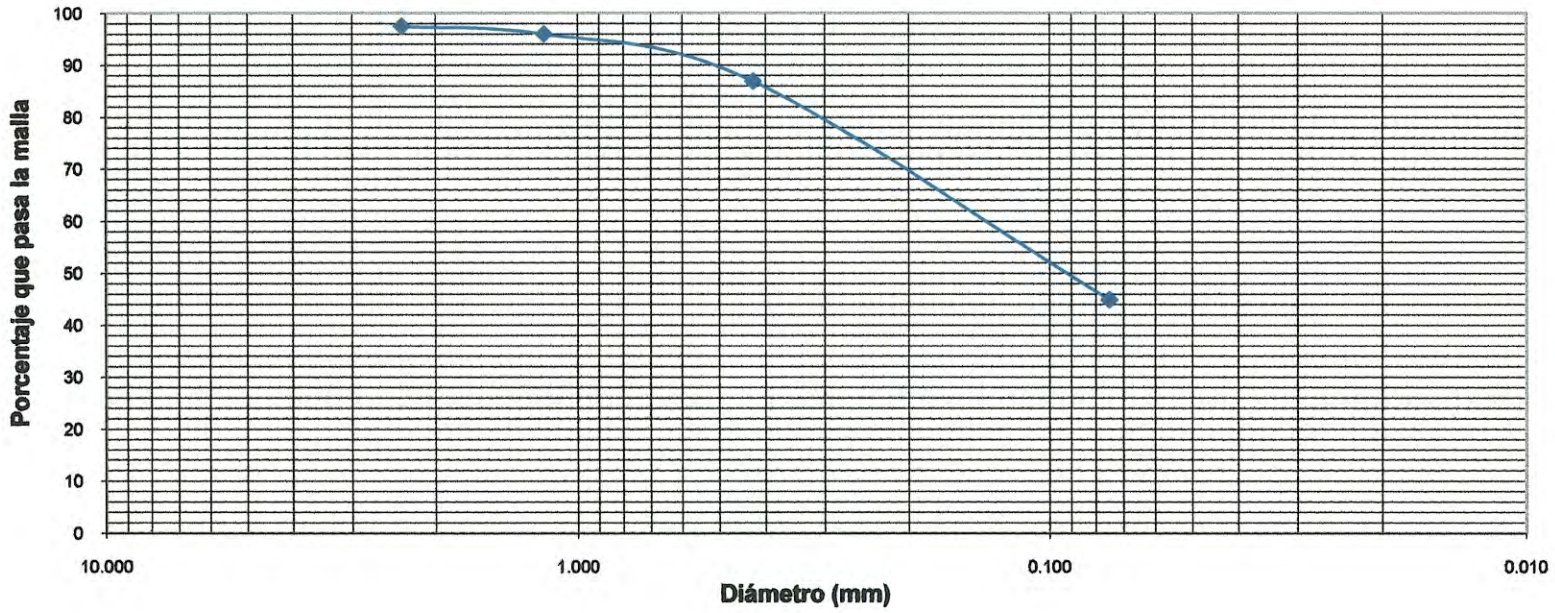
Revisó Ing. Juan Carlos Figueroa H.
Fecha 26-sep-14

GEOCONSA, S.A. DE C.V.

Curva Granulométrica

Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E1 , Muestra No. MSA 1, Fecha : 26-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-2 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 1216.5 **Tara (gr):** 179.5 **Peso Neto (gr):** 1037.0
P. Net. Corr.(gr): 859.5

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"					
3/8"	0.0	0	0	100	
No. 4	20.0	2	2	98	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	12.7	1	4	96	
No. 16					
No. 40	66.4	8	12	88	
No. 50					
No. 200	333.5	39	50	50	
Pasan No. 200	426.9	50	100	0	
Suma	859.5				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	326.1
PS+TARA:	291.7
TARA:	125.1
AGUA:	34.4
PESO SECO:	166.6
W%:	**20.6**

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	859.5
RETENIDO TOTAL	442.2
PASA EN LAVADO	417.3
PASA EN TAMIZADO FINAL	9.6
PASA MALLA 200 TOTAL	426.9

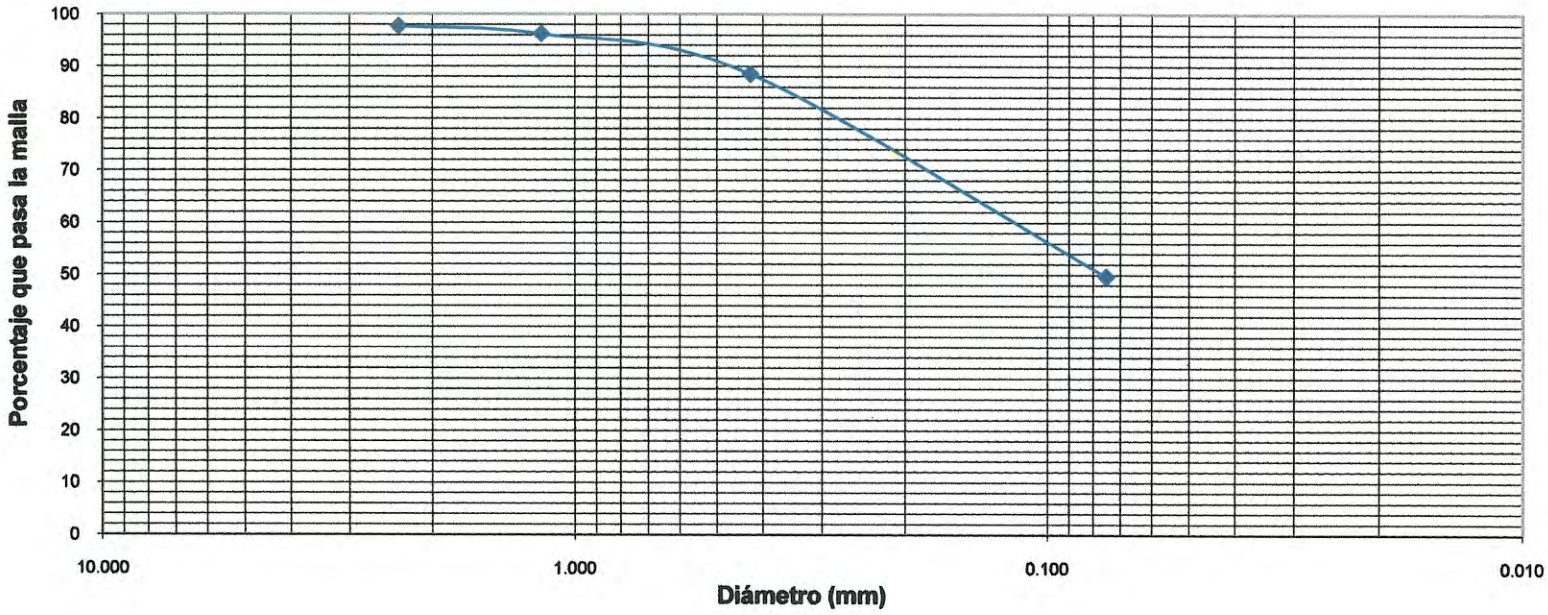
Laboratorista Téc Miguel A. Hernández
Fecha 26-sep-14

Revisó Ing. Juan Carlos Figueroa H.
Fecha 26-sep-14

GEOCONSA, S.A.de C.V. – Laboratorio de Suelos y Materiales
Colonia Layco, Pasaje Lorena No. 4, entre 15a. y 17a. Av. Norte, San Salvador, Teléfonos 2225-6691, 2235-3607
geoconsaes@gmail.com

GEOCONSA, S.A. DE C.V.
Curva Granulométrica
Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E2 , Muestra No. MSA 1, Fecha : 26-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-3 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 861.0 **Tara (gr):** 179.5 **Peso Neto (gr):** 681.5
P. Net. Corr.(gr): 673.2

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"					
3/8"	0.0	0	0	100	
No. 4	10.1	2	2	98	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	26.5	4	5	95	
No. 16					
No. 40	141.6	21	26	74	
No. 50					
No. 200	243.5	36	63	37	
Pasan No. 200	251.5	37	100	0	
Suma	673.2				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	211.5
PS+TARA:	209.8
TARA:	71.8
AGUA:	1.7
PESO SECO:	138.0
W%:	1.2

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	673.2
RETENIDO TOTAL	430.2
PASA EN LAVADO	243.0
PASA EN TAMIZADO FINAL	8.5
PASA MALLA 200 TOTAL	251.5

Laboratorista Téc Miguel A. Hernández
Fecha 26-sep-14

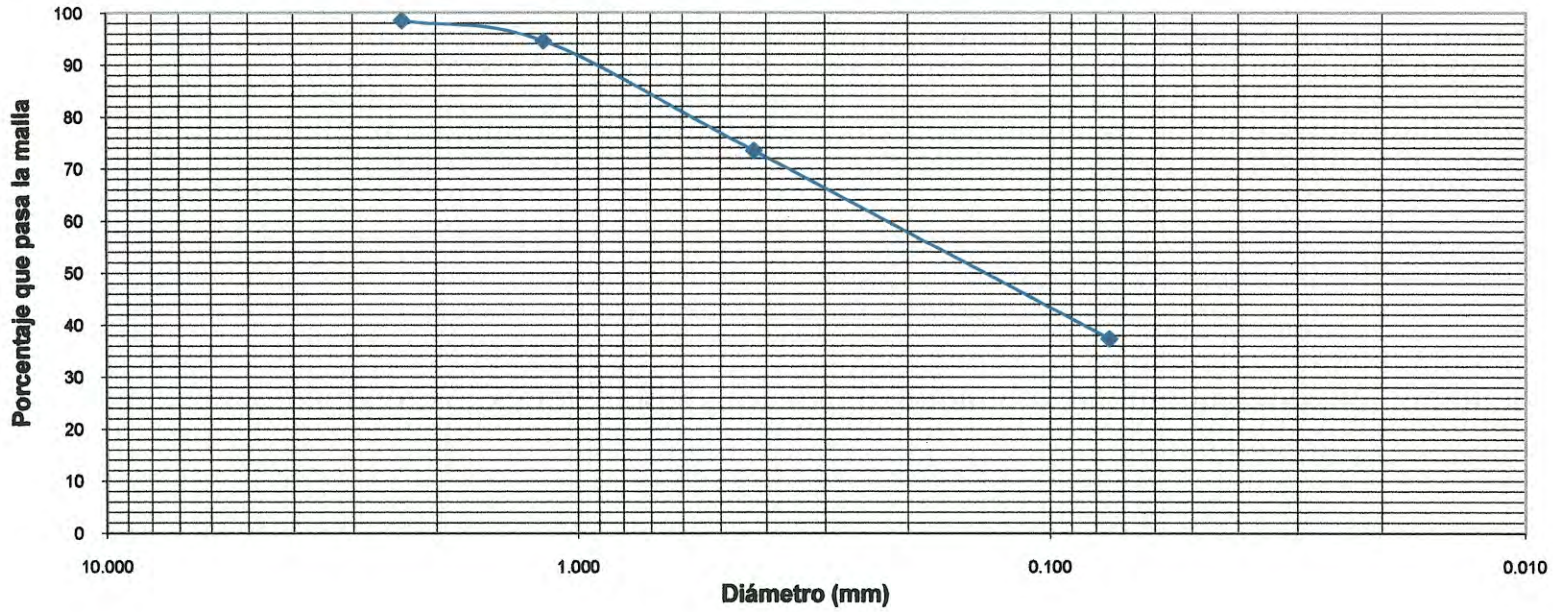
Revisó Ing. Juan Carlos Figueroa H.
Fecha 26-sep-14

GEOCONSA, S.A. DE C.V.

Curva Granulométrica

Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E3 , Muestra No. MSA 1, Fecha : 26-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-4 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 697.6 **Tara (gr):** 179.5 **Peso Neto (gr):** 518.1
P. Net. Corr.(gr): 490.0

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"	0.0	0	0	100	
3/8"	3.3	1	1	99	
No. 4	4.8	1	2	98	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	12.2	2	4	96	
No. 16					
No. 40	60.8	12	17	83	
No. 50					
No. 200	196.4	40	56	44	
Pasan No. 200	214.0	44	100	0	
Suma	491.5				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	278.0
PS+TARA:	269.8
TARA:	127.0
AGUA:	8.2
PESO SECO:	142.8
W%:	5.7

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

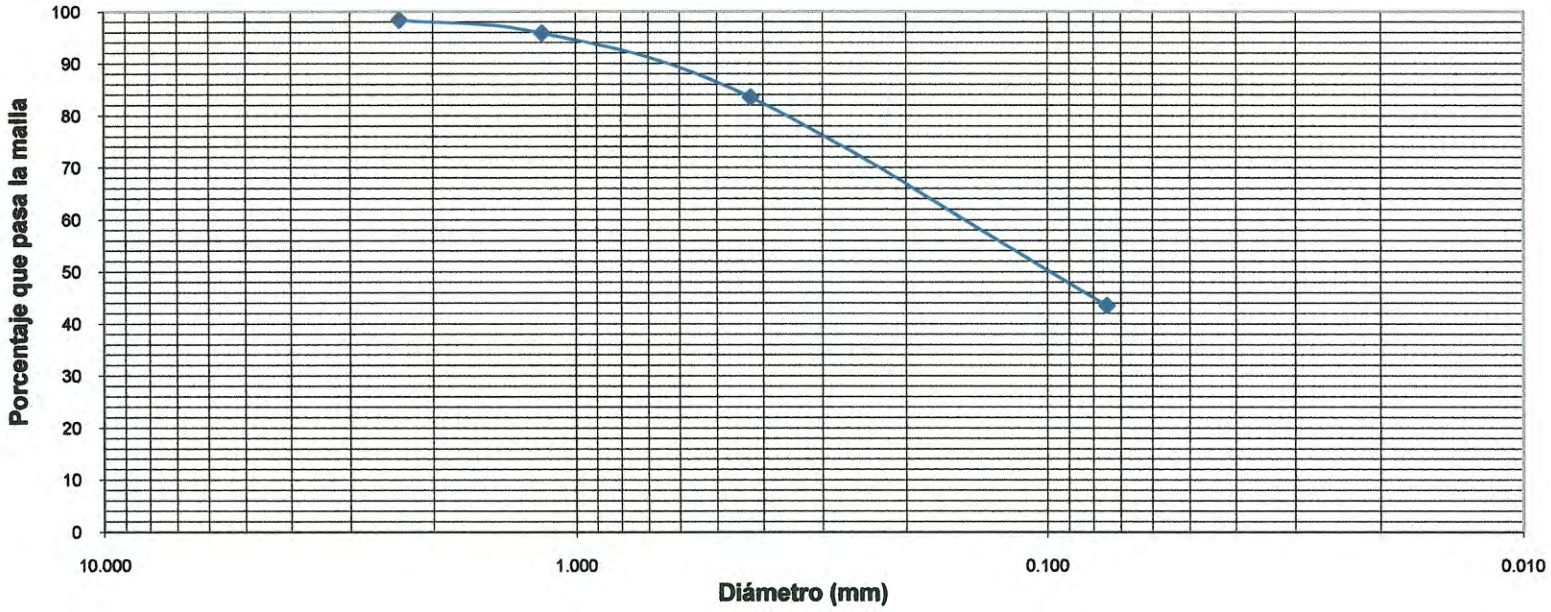
MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	490.0
RETENIDO TOTAL	283.3
PASA EN LAVADO	206.7
PASA EN TAMIZADO FINAL	7.3
PASA MALLA 200 TOTAL	214.0

Laboratorista Téc Miguel A. Hernández
Fecha 26-sep-14

Revisó Ing. Juan Carlos Figueroa H.
Fecha 26-sep-14

GEOCONSA, S.A. DE C.V.
Curva Granulométrica
Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E4 , Muestra No. MSA 1, Fecha : 26-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-5 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 798.0 **Tara (gr):** 190.6 **Peso Neto (gr):** 607.4
P. Net. Corr.(gr): 584.2

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"					
3/8"					
No. 4	0.0	0	0	100	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	0.7	0	0	100	
No. 16					
No. 40	14.8	3	3	97	
No. 50					
No. 200	342.3	59	61	39	
Pasan No. 200	226.4	39	100	0	
Suma	584.2				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	321.0
PS+TARA:	313.4
TARA:	122.0
AGUA:	7.6
PESO SECO:	191.4
W%:	**4.0**

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	584.2
RETENIDO TOTAL	367.8
PASA EN LAVADO	216.4
PASA EN TAMIZADO FINAL	10.0
PASA MALLA 200 TOTAL	226.4

Laboratorista Téc Miguel A. Hernández
Fecha 27-sep-14

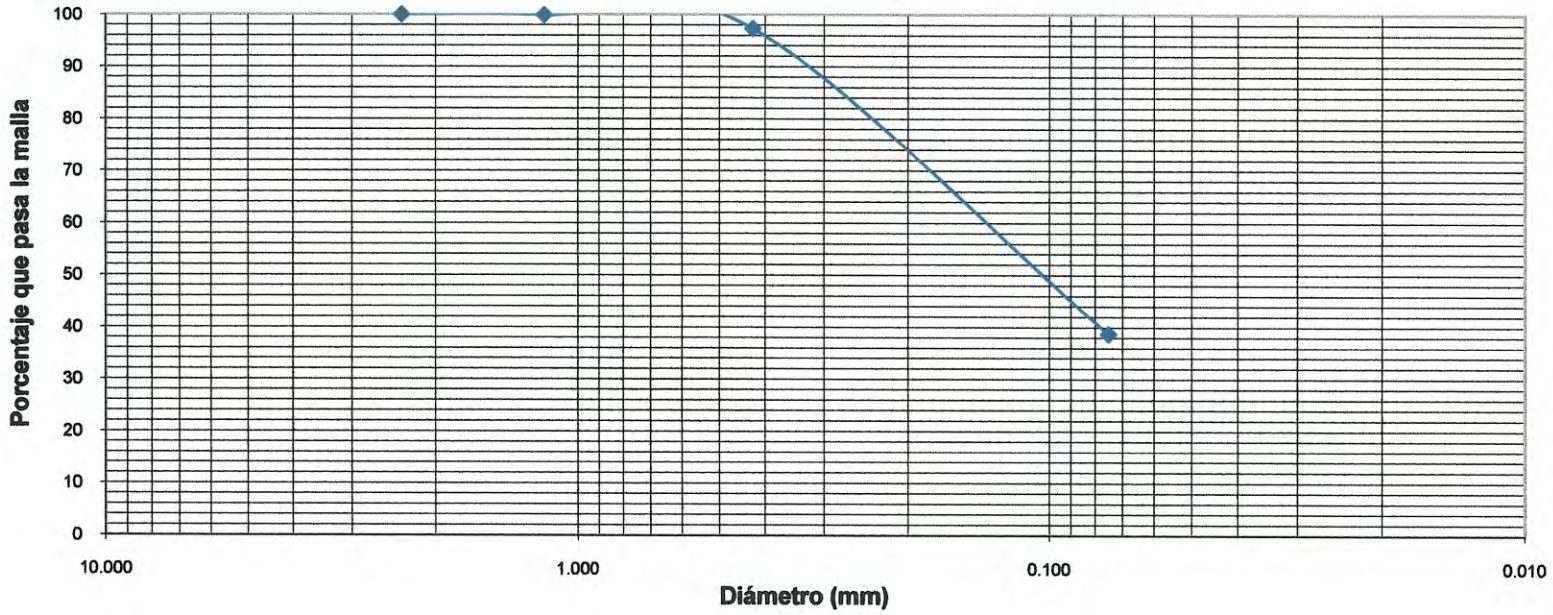
Revisó Ing. Juan Carlos Figueroa H.
Fecha 27-sep-14

GEOCONSA, S.A. DE C.V.

Curva Granulométrica

Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E5 , Muestra No. MSA 1, Fecha : 27-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-6 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 839.5 **Tara (gr):** 179.5 **Peso Neto (gr):** 660.0
P. Net. Corr.(gr): 652.5

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"					
3/8"					
No. 4	0.0	0	0	100	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	0.5	0	0	100	
No. 16					
No. 40	16.6	3	3	97	
No. 50					
No. 200	428.6	66	68	32	
Pasan No. 200	206.8	32	100	0	
Suma	652.5				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	217.2
PS+TARA:	215.8
TARA:	94.1
AGUA:	1.4
PESO SECO:	121.7
W%:	**1.2**

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	652.5
RETENIDO TOTAL	461.7
PASA EN LAVADO	190.8
PASA EN TAMIZADO FINAL	16.0
PASA MALLA 200 TOTAL	206.8

Laboratorista Téc Miguel A. Hernández
Fecha 26-sep-14

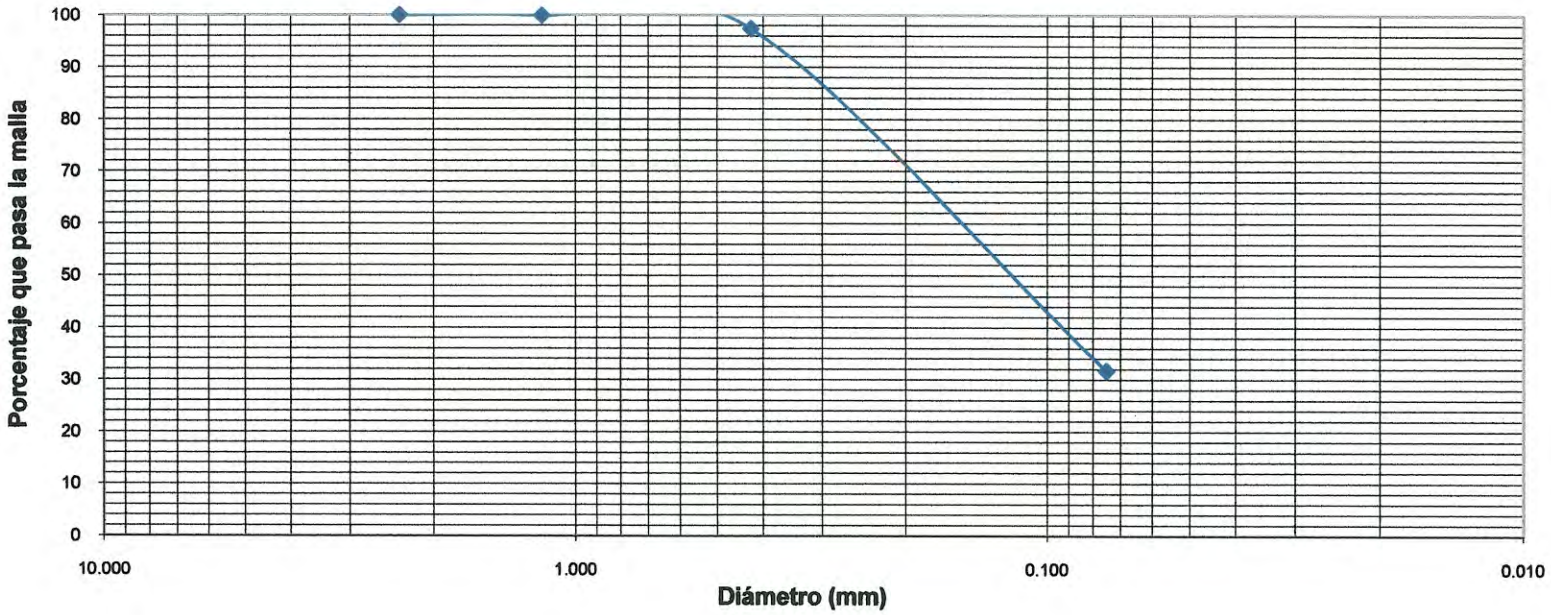
Revisó Ing. Juan Carlos Figueroa H.
Fecha 26-sep-14

GEOCONSA, S.A. DE C.V.

Curva Granulométrica

Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E6 , Muestra No. MSA 1, Fecha : 26-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-7 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 1216.3 **Tara (gr):** 179.5 **Peso Neto (gr):** 1036.8
P. Net. Corr.(gr): 981.4

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"	0.0	0	0	100	
3/8"	15.6	2	2	98	
No. 4	19.5	2	4	96	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	184.8	19	22	78	
No. 16					
No. 40	585.8	60	82	18	
No. 50					
No. 200	136.7	14	96	4	
Pasan No. 200	39.0	4	100	0	
Suma	981.4				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	348.5
PS+TARA:	336.4
TARA:	121.9
AGUA:	12.1
PESO SECO:	214.5
W%:	**5.6**

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color

Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	981.4
RETENIDO TOTAL	945.7
PASA EN LAVADO	35.7
PASA EN TAMIZADO FINAL	3.3
PASA MALLA 200 TOTAL	39.0

Laboratorista Téc Miguel A. Hernández
Fecha 26-sep-14

Revisó Ing. Juan Carlos Figueroa H.
Fecha 26-sep-14

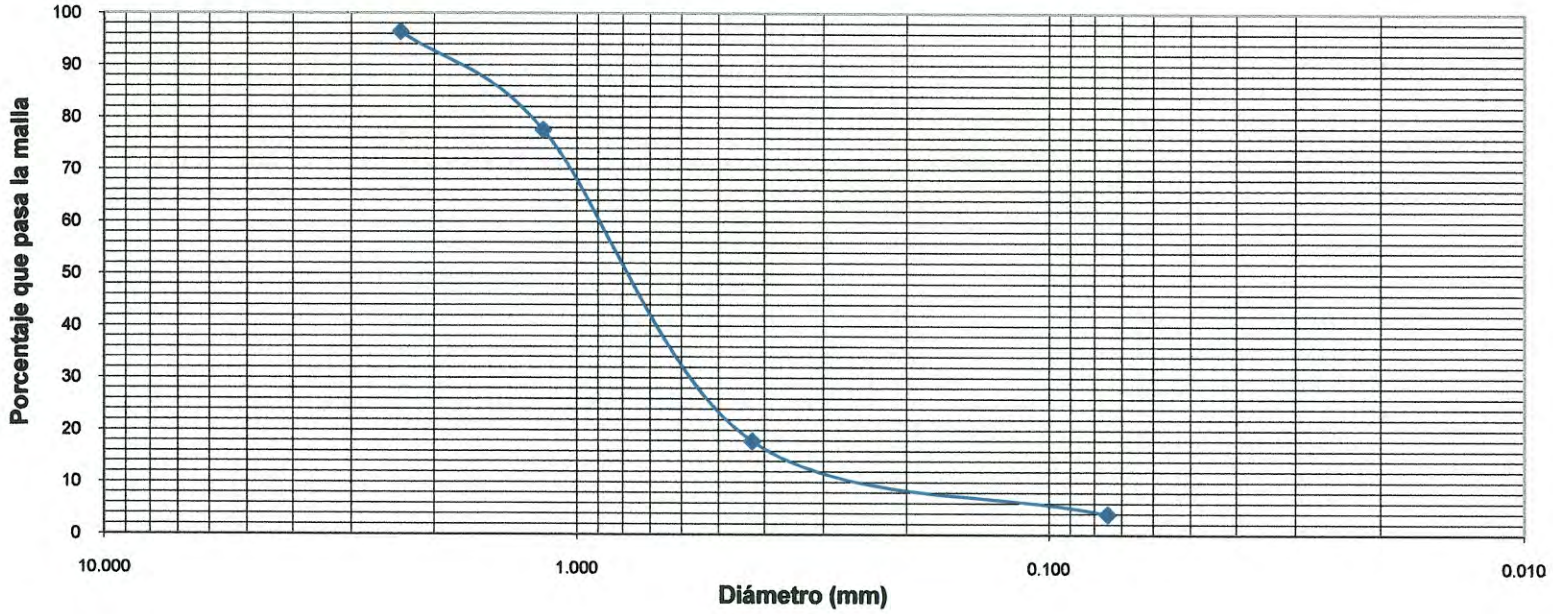
GEOCONSA, S.A.de C.V. - Laboratorio de Suelos y Materiales
Colonia Layco, Pasaje Lorena No. 4, entre 15a. y 17a. Av. Norte, San Salvador, Teléfonos 2225-6691, 2235-3607
geoconsaes@gmail.com

GEOCONSA, S.A. DE C.V.

Curva Granulométrica

Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E7 , Muestra No. MSA 1, Fecha : 26-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-8 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 1127.0 **Tara (gr):** 190.6 **Peso Neto (gr):** 936.4
P. Net. Corr.(gr): 897.7

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"					
3/8"	0.0	0	0	100	
No. 4	26.1	3	3	97	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	160.6	18	21	79	
No. 16					
No. 40	515.2	57	78	22	
No. 50					
No. 200	144.3	16	94	6	
Pasan No. 200	51.5	6	100	0	
Suma	897.7				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	352.8
PS+TARA:	343.5
TARA:	127.5
AGUA:	9.3
PESO SECO:	216.0
W%:	**4.3**

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	897.7
RETENIDO TOTAL	847.4
PASA EN LAVADO	50.3
PASA EN TAMIZADO FINAL	1.2
PASA MALLA 200 TOTAL	51.5

Laboratorista Téc Miguel A. Hernández
Fecha 26-sep-14

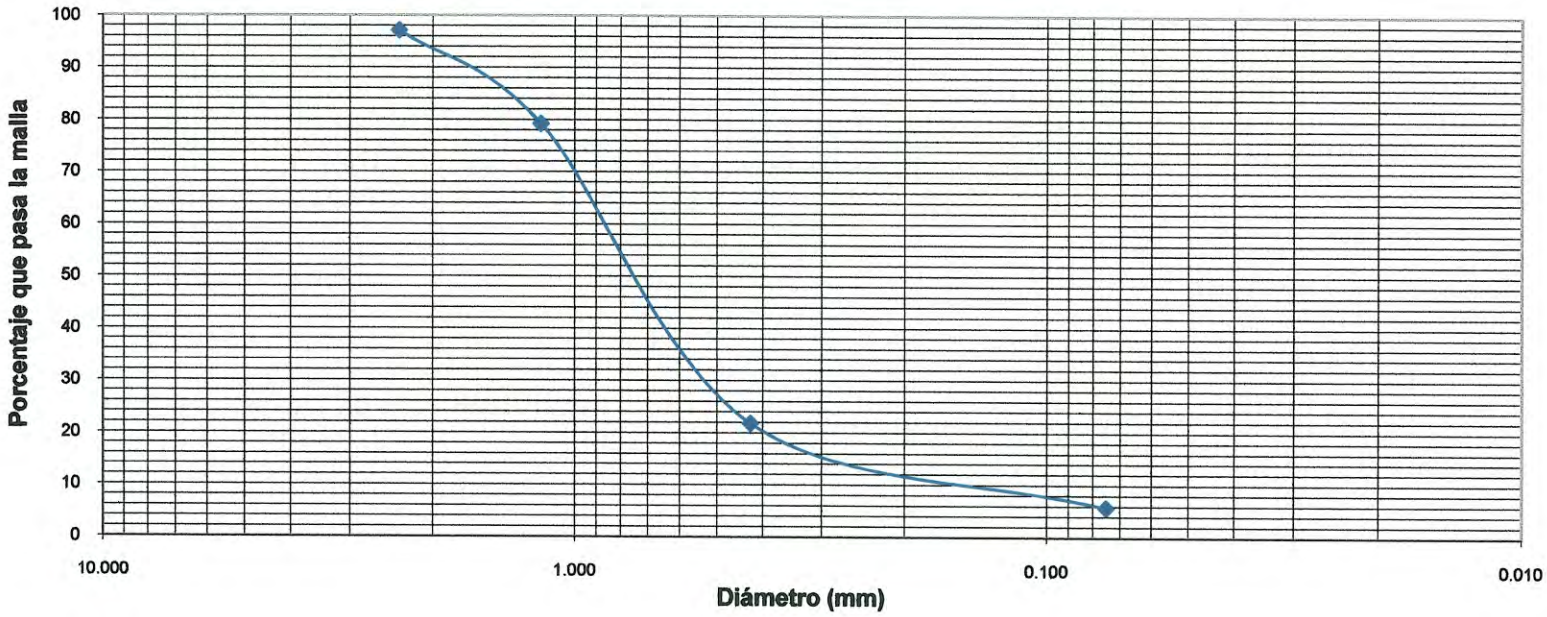
Revisó Ing. Juan Carlos Figueroa H.
Fecha 26-sep-14

GEOCONSA, S.A. DE C.V.

Curva Granulométrica

Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E8 , Muestra No. MSA 1, Fecha : 26-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-9 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 904.5 **Tara (gr):** 190.6 **Peso Neto (gr):** 713.9
P. Net. Corr.(gr): 659.9

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"					
3/8"	0.0	0	0	100	
No. 4	3.3	1	1	99	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	3.3	1	1	99	
No. 16					
No. 40	33.2	5	6	94	
No. 50					
No. 200	462.2	70	76	24	
Pasan No. 200	157.9	24	100	0	
Suma	659.9				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	367.0
PS+TARA:	348.2
TARA:	118.3
AGUA:	18.8
PESO SECO:	229.9
W%:	**8.2**

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	659.9
RETENIDO TOTAL	513.8
PASA EN LAVADO	146.1
PASA EN TAMIZADO FINAL	11.8
PASA MALLA 200 TOTAL	157.9

Laboratorista Téc Miguel A. Hernández
Fecha 27-sep-14

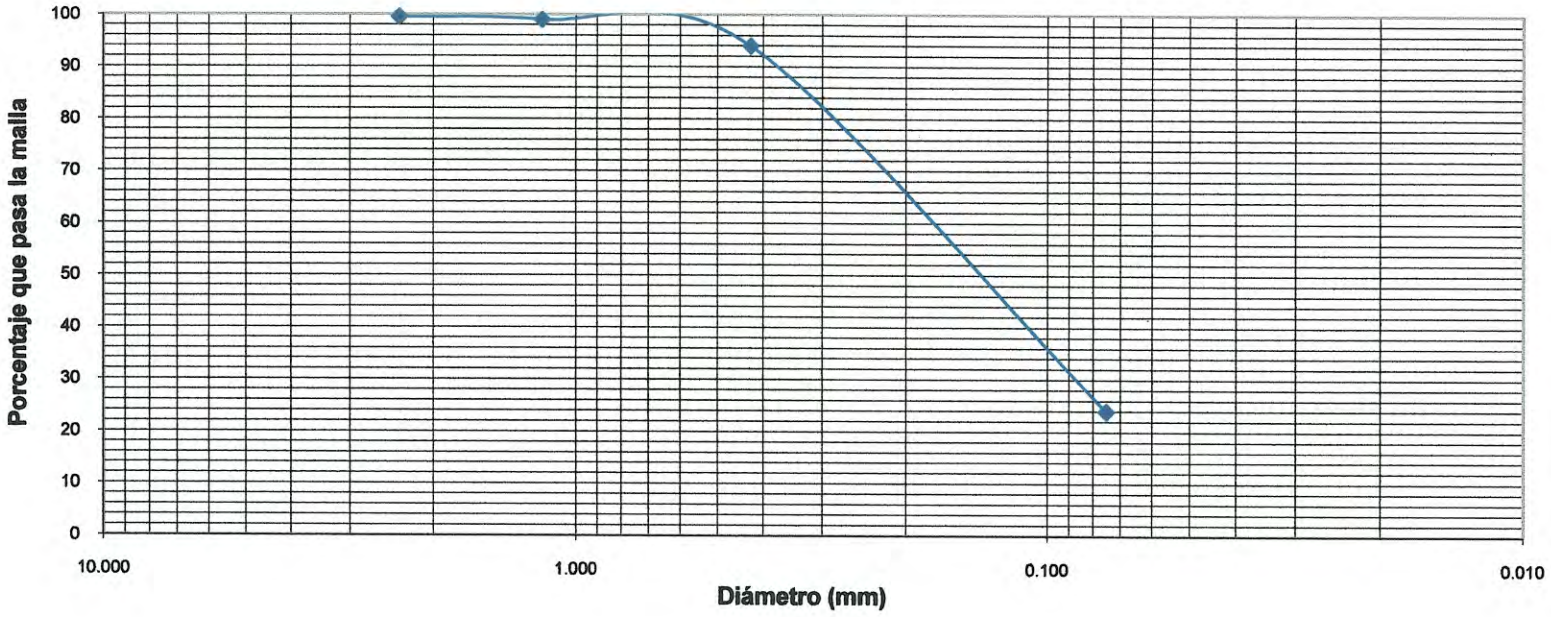
Revisó Ing. Juan Carlos Figueroa H.
Fecha 27-sep-14

GEOCONSA, S.A. DE C.V.

Curva Granulométrica

Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E9 , Muestra No. MSA 1, Fecha : 27-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-10 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 826.4 **Tara (gr):** 190.6 **Peso Neto (gr):** 635.8
P. Net. Corr.(gr): 524.7

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"					
3/8"					
No. 4	0.0	0	0	100	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	4.7	1	1	99	
No. 16					
No. 40	20.3	4	5	95	
No. 50					
No. 200	313.2	60	64	36	
Pasan No. 200	186.5	36	100	0	
Suma	524.7				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	382.5
PS+TARA:	337.6
TARA:	125.6
AGUA:	44.9
PESO SECO:	212.0
W%:	**21.2**

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	524.7
RETENIDO TOTAL	345.1
PASA EN LAVADO	179.6
PASA EN TAMIZADO FINAL	6.9
PASA MALLA 200 TOTAL	186.5

Laboratorista Téc Miguel A. Hernández
Fecha 26-sep-14

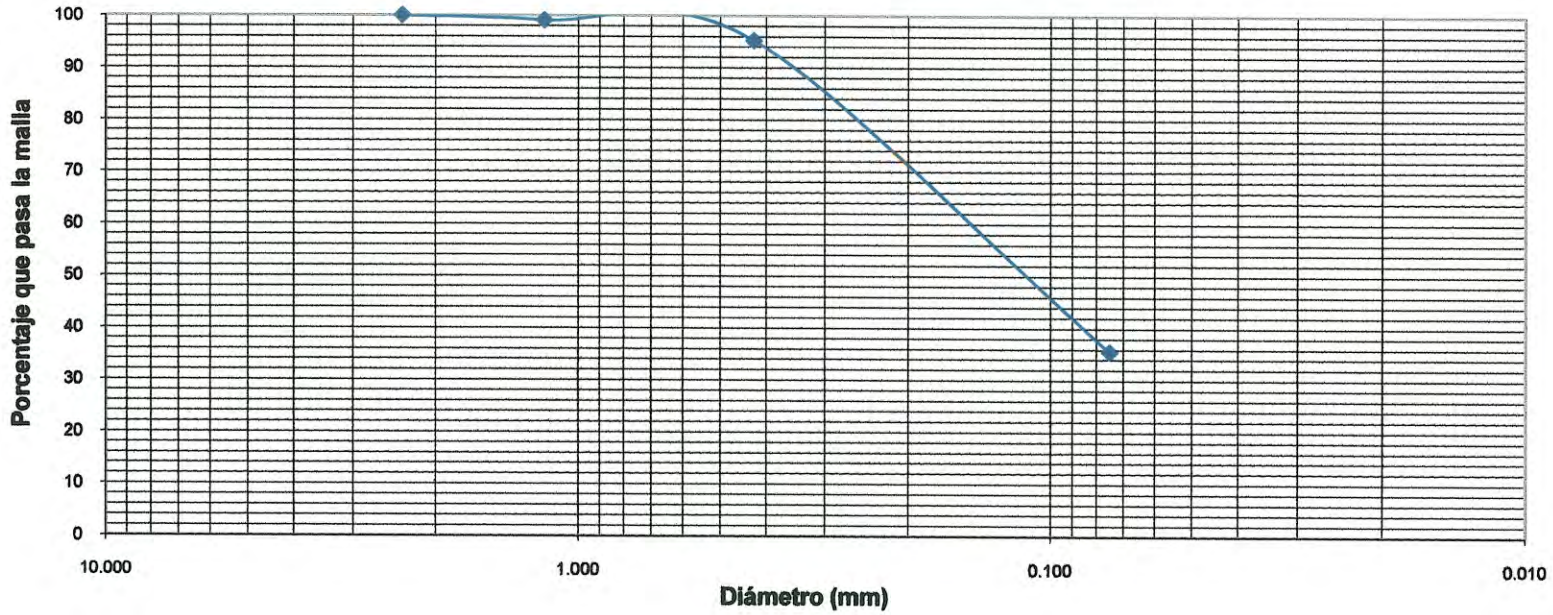
Revisó Ing. Juan Carlos Figueroa H.
Fecha 26-sep-14

GEOCONSA, S.A. DE C.V.

Curva Granulométrica

Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E10 , Muestra No. MSA 1, Fecha : 26-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-11 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 906.6 **Tara (gr):** 190.6 **Peso Neto (gr):** 716.0
P. Net. Corr.(gr): 662.5

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"					
3/8"	0.0	0	0	100	
No. 4	2.5	0	0	100	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	3.7	1	1	99	
No. 16					
No. 40	14.2	2	3	97	
No. 50					
No. 200	370.6	56	59	41	
Pasan No. 200	271.5	41	100	0	
Suma	662.5				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	369.7
PS+TARA:	351.5
TARA:	125.9
AGUA:	18.2
PESO SECO:	225.6
W%:	8.1

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	662.5
RETENIDO TOTAL	401.3
PASA EN LAVADO	261.2
PASA EN TAMIZADO FINAL	10.3
PASA MALLA 200 TOTAL	271.5

Laboratorista Téc Miguel A. Hernández
Fecha 26-sep-14

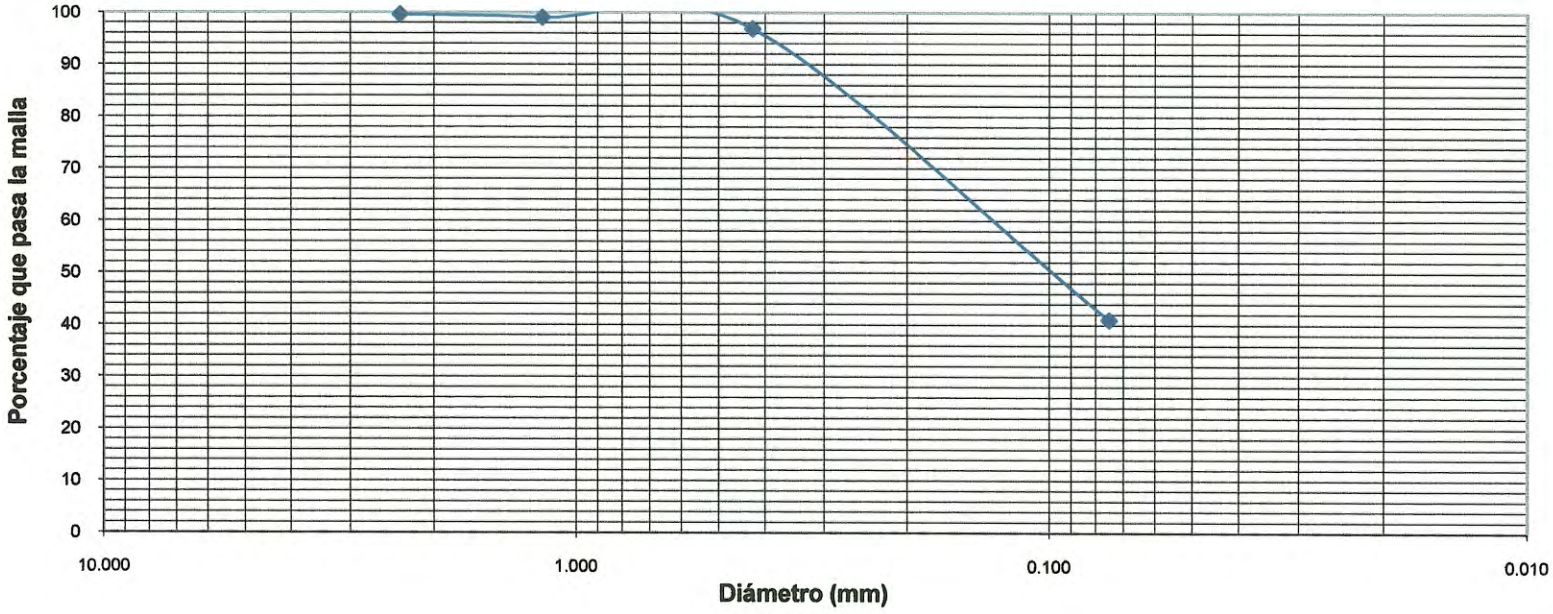
Revisó Ing. Juan Carlos Figueroa H.
Fecha 26-sep-14

GEOCONSA, S.A. DE C.V.

Curva Granulométrica

Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E11 , Muestra No. MSA 1, Fecha : 26-09-14



ANÁLISIS GRANULOMETRICO DE AGREGADOS FINO Y GRUESO

DESIGNACIÓN ASTM D 422

Proyecto: Gas Licuado
Ubicación: Municipio de Acajutla, Departamento de Sonsonate
Solicitante: ECO Ingenieros, S.A. de C.V.
Pozo No.: E-12 **Muestra:** MSA 1 **Elevación:** Lecho Marino
Localización: Acajutla
Peso Bruto(gr): 875.5 **Tara (gr):** 190.6 **Peso Neto (gr):** 684.9
P. Net. Corr.(gr): 593.9

MATERIAL GRUESO

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
3"					
2					
1"					
3/4"					
1/2"					
3/8"					
No. 4	0.0	0	0	100	
Pasa No. 4					
Suma					

MATERIAL TAMIZADO POR MALLA No. 4

Malla	Peso Reten. Parc. (gr)	% Retenido Parcial	%Retenido Acumulativo	% Que Pasa la Malla	Observaciones
No. 8					
No. 10	1.3	0	0	100	
No. 16					
No. 40	12.7	2	2	98	
No. 50					
No. 200	402.7	68	70	30	
Pasan No. 200	177.2	30	100	0	
Suma	593.9				

OBSERVACIONES:

HUMEDAD ENSAYO:

PH+TARA:	321.0
PS+TARA:	290.2
TARA:	89.1
AGUA:	30.8
PESO SECO:	201.1
W%:	15.3

CLASIFICACION AASHTO

CLASIFICACION SUCS

Color
Café Oscuro

MATERIAL LAVADO EN MALLA No. 200	Peso Seco gr
INICIAL	593.9
RETENIDO TOTAL	420.7
PASA EN LAVADO	173.2
PASA EN TAMIZADO FINAL	4.0
PASA MALLA 200 TOTAL	177.2

Laboratorista Téc Miguel A. Hernández
Fecha 26-sep-14

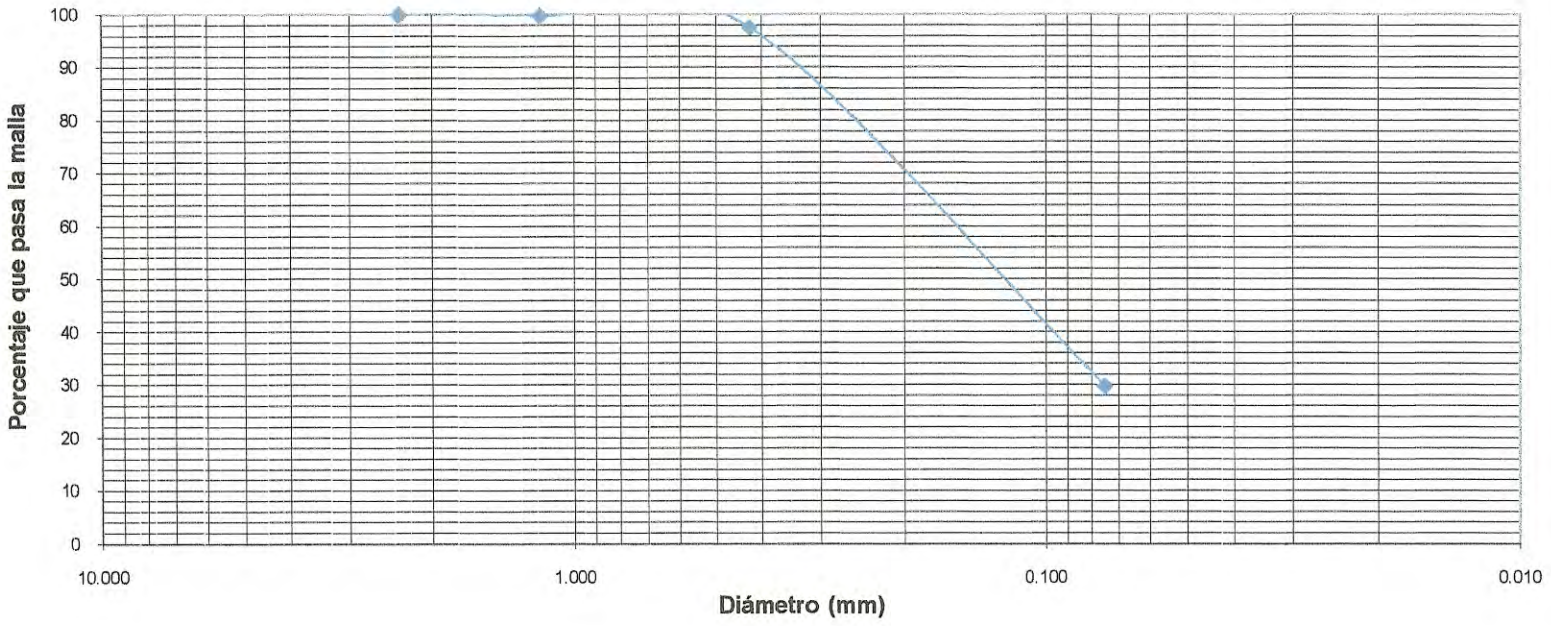
Revisó Ing. Juan Carlos Figueroa H.
Fecha 26-sep-14

GEOCONSA, S.A. DE C.V.

Curva Granulométrica

Proyecto: Gas Licuado

Elevación: Lecho Marino, Pozo: E12 , Muestra No. MSA 1, Fecha : 26-09-14



Appendix 7E–

Definitions Associated with Tools for Evaluation of Ecosystem Services

APPENDIX 7C: DEFINITIONS ASSOCIATED TO TOOLS FOR EVALUATION OF ECOSYSTEM SERVICES	
Provisioning services: The goods and products obtained from ecosystems	
Food from crops, livestock, capture fisheries, aquaculture, and wild foods	Cultivated plants or agricultural produce harvested by people for human or animal consumption as food. Examples: Grains, vegetables, fruit Animals raised for domestic or commercial consumption or use. Examples: Chicken, pigs, cattle Wild fish captured through trawling and other non-farming methods. Examples: Cod, crabs, tuna Fish, shellfish, and/or plants that are bred and reared in ponds, enclosures, and other forms of fresh- or salt-water confinement for purposes of harvesting. Examples: Shrimp, oysters, salmon Edible plant and animal species gathered or captured in the wild. Examples: Fruit and nuts, fungi, bushmeat
Biological raw materials from timber and other wood products, fibers and resins, animal skins, sand, and ornamental resources	Products made from trees harvested from natural forest ecosystems, plantations, or non-forested lands. Examples: Industrial roundwood, wood pulp, paper, construction materials Nonwood and nonfuel fibers and resins. Examples: Cotton, hemp, and silk, twine and rope, natural rubber Processed skins of cattle, deer, pig, snakes, sting rays, or other animals. Examples: Leather, rawhide, and cordwain Sand formed from coral and shells. Examples: White sand from coral and white shells, colored sand from shells Products derived from ecosystems that serve aesthetic purposes. Examples: Tagua nut, wild flowers, coral jewelry
Biomass fuel	Biological material derived from living or recently living organisms–both plant and animal–that serves as a source of energy. Examples: Fuelwood, charcoal, grain for ethanol production, dung
Freshwater	Inland bodies of water, groundwater, rainwater, and surface waters for household, industrial, and agricultural uses. Examples: Freshwater for drinking, cleaning, cooling, industrial processes, electricity generation, or mode of transportation
Genetic resources	Genes and genetic information used for animal breeding, plant improvement, and biotechnology. Example: Genes used to increase crop resistance to disease
Biochemicals, natural medicines, and pharmaceuticals	Medicines, biocides, food additives, and other biological materials derived from ecosystems for commercial or domestic use. Examples: Echinacea, ginseng, garlic; paclitaxel as basis for cancer drugs; tree extracts used for pest control

Regulating services: The benefits obtained from an ecosystem's control of natural processes	
Regulation of air quality	Influence ecosystems have on air quality by emitting chemicals to the atmosphere (i.e., serving as a "source") or extracting chemicals from the atmosphere (i.e., serving as a "sink"). Examples: Lakes serve as a sink for industrial emissions of sulfur compounds; vegetation fires emit particulates, ground-level ozone, and volatile organic compounds
Regulation of local, regional, and/ or global climate	Global: Influence ecosystems have on the global climate by emitting greenhouse gases or aerosols to the atmosphere or by absorbing greenhouse gases or aerosols from the atmosphere. Examples: Forests capture and store carbon dioxide; cattle and rice paddies emit methane Regional, local: Influence ecosystems have on local or regional temperature, precipitation, and other climatic factors. Example: Forests can impact regional rainfall levels, mountains have an effect on rainfalll patterns
Regulation of water timing and flows	Influence ecosystems have on the timing and magnitude of water runoff, flooding, and aquifer recharge, particularly in terms of the water storage potential of the ecosystem or landscape. Examples: Permeable soil facilitates aquifer recharge; river floodplains and wetlands retain water—which can decrease flooding during runoff peaks—reducing the need for engineered flood control infrastructure
Erosion control	Role vegetative cover plays in soil retention. Examples: Vegetation such as grass and trees prevents soil loss due to wind and rain; forests on slopes hold soil in place, thereby preventing landslides
Water purification and waste treatment	Role ecosystems play in the filtration and decomposition of organic wastes and pollutants in water; assimilation and detoxification of compounds through soil and subsoil processes. Examples: Wetlands remove harmful pollutants from water by trapping metals and organic materials; soil microbes degrade organic waste rendering it less harmful
Regulation of diseases	Influence ecosystems have on the incidence and abundance of human pathogens. Example: Intact forests reduce the occurrence of standing water—a breeding area for mosquitoes—and thereby can reduce the prevalence of malaria
Regulation of soil quality	Role ecosystems play in sustaining soil's biological activity, diversity, and productivity; in regulating and partitioning water and solute flow; and in storing and recycling nutrients and gases. Example: Some organisms aid in decomposition of organic matter, increasing soil nutrient levels; some organisms aerate soil, improve soil chemistry, and increase moisture retention; animal waste fertilizes soil

Regulation of pests	Influence ecosystems have on the prevalence of crop and livestock pests and diseases. Example: Predators from nearby forests—such as bats, toads, snakes—consume crop pests
Pollination	Role ecosystems play in transferring pollen from male to female flower parts. Example: Bees from nearby forests pollinate crops
Regulation of natural hazards	Capacity for ecosystems to reduce the damage caused by natural disasters such as hurricanes and to maintain natural fire frequency and intensity. Examples: Mangrove forests and coral reefs protect coastlines from storm surges; biological decomposition processes reduce potential fuel for wildfires
Cultural services: The nonmaterial benefits obtained from ecosystems	
Recreation and ecotourism	Recreational pleasure people derive from natural or cultivated ecosystems. Examples: Hiking, camping, bird watching, scuba diving, and going on safari
Ethical and spiritual values	Spiritual, religious, aesthetic, intrinsic, "existence" or other values people attach to ecosystems, landscapes, or species. Examples: Spiritual fulfillment derived from sacred lands and rivers; belief that all species are worth protecting regardless of their utility to people–"biodiversity for biodiversity's sake"
Educational and inspirational values	Information derived from ecosystems used for intellectual development, culture, art, design, and innovation. Examples: The structure of tree leaves has inspired technological improvements in solar power cells; school fieldtrips to nature preserves and parks aid in teaching scientific concepts and research skills
Supporting services: The natural processes that maintain the other ecosystem services	
Habitat	Natural spaces that maintain species populations and protect the capacity of ecological communities to recover from disturbances. Examples: Native plants in gardens and fields provide pollinators with food and structure for reproduction; rivers and estuaries provide nurseries for fish reproduction and juvenile development
Nutrient cycling	Flow of nutrients (e.g., nitrogen, sulfur, phosphorus, carbon) through ecosystems. Examples: Transfer of nitrogen from plants to soil, from soil to oceans, from oceans to the atmosphere, and from the atmosphere to plants; soil deposition by rivers
Primary production	Formation of biological material by plants through photosynthesis and nutrient assimilation. Examples: Algae transform sunlight and nutrients into biomass, thereby forming the base of the food chain in aquatic ecosystems
Water cycling	Flow of water through ecosystems in its solid, liquid, or gaseous forms. Examples: Transfer of water from soil to plants, plants to air, and air to rain

Fuente: Ecosistem Services, A guide for decision makers, World Resources Institute, 2008

Appendix 7F–

Questionnaire for Evaluation of Ecosystem Services

APPENDIX 7D:

Questionnaire for evaluation of ecosystem services

Ecosystem services	Q.1- Does the project depend on this service of ecosystem to function successfully? *S Yes, N not* *? It is not known*	2 - Project can replace this ecosystem service effectively cost? *S Yes, N not* *? It is not known*	Comments or supporting information Be as specific as possible in terms of ecosystem services on which depends the draft (currents of constant water, protection against landslides) and their substitutes	The project in this ecosystem service dependence **2** high dependency **1** medium-to-low dependence **0** no dependencies	Q.3.- What ecosystems provide this service of the ecosystem to the project (only for services of the ecosystem with "high dependence")?
Supply					
Food crops, livestock, fisheries, aquaculture and wild foods	**N**			**0**	
Materials biological raw timber and other wood products, fibers and resins, skins of animals, sand and ornamental resources	**N**			**0**	
Biomass fuel	**N**			**0**	
Freshwater	**S**	**S**	The project will use groundwater for human consumption, and other industrial processes. A substitute of this sweet water in its use for industrial processes, would be the use of sea water. There are other aquifers in the area in general which could lend their services to the project where the aquifer that is accessible from the site becomes unusable	**1**	

Ecosystem services	Q.1- Does the project depend on this service of ecosystem to function successfully? *S Yes, N not ? It is not known*	2 - ? Project can replace this ecosystem service effectively cost? *S Yes, N not ? It is not known*	Comments or supporting information Be as specific as possible in terms of ecosystem services on which depends the draft (currents of constant water, protection against landslides) and their substitutes	The project in this ecosystem service dependence	Q.3.- What ecosystems provide this service of the ecosystem to the project (only for services of the ecosystem with "high dependence")?
Genetic resources	**N**			**0**	
Biochemists, natural medicines and pharmaceutical products	**N**			**0**	
Regulation					
Regulation of air quality	**N**			**0**	
Regulation of the climate of local, regional, or global	**N**			**0**	
Regulation of the distribution of water and flows	**S**	**S**	The project will rely on continuous recharging of the local aquifer for the use of their ground water during operation. Substitute for fresh water in the use of industrial processes would be the use of sea water. A substitute of this sweet water in its use for industrial processes, would be the use of sea water. There are other aquifers in the area in general which could lend their services to the project where the aquifer that is accessible from the site becomes unusable.	**1**	
Erosion control	**N**			**0**	
Water purification and sewage treatment	**N**			**0**	

Ecosystem services	**Q.1- Does the project depend on this service of ecosystem to function successfully?** *S Yes, N not ? It is not known*	**2 - ? Project can replace this ecosystem service effectively cost?** *S Yes, N not ? It is not known*	**Comments or supporting information** Be as specific as possible in terms of ecosystem services on which depends the draft (currents of constant water, protection against landslides) and their substitutes	**The project in this ecosystem service dependence**	**Q.3.- What ecosystems provide this service of the ecosystem to the project (only for services of the ecosystem with "high dependence")?**
Regulation of diseases	**N**			**0**	
Regulation of the quality of the soil	**N**			**0**	
Regulation of pests	**N**			**0**	
Pollination	**N**			**0**	
Regulation of natural risks	**N**			**0**	
Cultural					
Recreation and ecotourism	**N**			**0**	
Ethical and spiritual values	**N**			**0**	
Educational and inspirational values	**N**			**0**	
Support					
Habitat	**N**			**0**	
Nutrient cycling	**N**			**0**	
Primary production	**N**			**0**	
The water cycle	**N**			**0**	
Other identified services					
Ocean water	**S**	**N**	The project will include the sea water for the transport of LNG through ships, to feed the power plant.	**2**	The ocean

IDENTIFYING THE DRIVERS OF ECOSYSTEM CHANGE LIKELY TO BE ASSOCIATED WITH THE PROJECT

		Q.1.1- Which drivers of ecosystem change are likely to be associated with the project? *Y Yes, likely to be associated* *N No, not likely to be associated* *? Don't know*	**Comments or supporting information** *List the activities or factors associated with the project and likely to lead to this driver of ecosystem change*	
Direct drivers of ecosystem change	Change in local land use and cover	**Y**	Construction of the project will involve clearing of land as well as changes to the sea floor and the introduction of structures to the water column.	
	Harvest and resource consumption	**N**		
	Pollution	**N**		
	Introduction of invasive species	**N**		
	Other direct driver of change (specify)	**N**		
Indirect drivers of ecosystem change	Demographic change	**N**		
	Economic change	**N**		
	Sociopolitical change	**N**		
	Cultural and religious change	**N**		
	Scientific and technological change	**N**		
	Other indirect driver of change (specify)	**N**		
Well-being of ecosystem service beneficiaries	Change in demand for ecosystem service for basic material for a good life	**N**		
	Change in demand for ecosystem service for health	**N**		

		Q.1.1- Which drivers of ecosystem change are likely to be associated with the project? *Y Yes, likely to be associated* *N No, not likely to be associated* *? Don't know*	Comments or supporting information *List the activities or factors associated with the project and likely to lead to this driver of ecosystem change*	
	Change in demand for ecosystem service for security	**N**		
	Change in demand for ecosystem service for good social relations	**N**		
	Other change in demand for ecosystem service (specify)	**N**		

ASSESSING THE SIGNIFICANCE OF IMPACT ON ECOSYSTEM SERVICES POTENTIALLY IMPACTED BY THE PROJECT

	Potential magnitude of negative impact on ecosystem services (pre-mitigation)		**Vulnerability of beneficiaries to negative impact on ecosystem services**		**Significance of project impact on this ecosystem service**
Ecosystem services identified as impacted	**Q.1.5- Could the project reduce the benefits that any beneficiaries derive from this ecosystem service?** ***Y*** *Yes* ***N*** *No* ***?*** *Don't know*	**Comments or supporting information**	**Q.1.6- Is this ecosystem service a major contributor to the well-being of any of the potentially affected beneficiaries?** ***Y*** *Yes* ***N*** *No* ***?*** *Don't know*	**Comments or supporting information**	***2*** *High significance of project impact* ***1*** *Medium significance of project impact* ***0*** *Low significance of project impact*
Provisioning					
Food from crops, livestock, capture fisheries, aquaculture, and wild foods	**Y**	The LNG to Power project will restrict access of artisanal fishers to fishing grounds for fish, lobster and oysters. The jetty will also create longer travel times for fishers accessing areas to the south.	**Y**	Many of the artisanal fishers in Acajutla rely on food and income from the capture of fish.	**2**
Biological raw materials from timber and other wood products, fibers and resins, animal skins, sand, and ornamental resources	**N**				**0**
Biomass fuel	**N**				**0**

	Potential magnitude of negative impact on ecosystem services (pre-mitigation)		Vulnerability of beneficiaries to negative impact on ecosystem services		Significance of project impact on this ecosystem service
Freshwater	**Y**	The LNG to Power project will use groundwater for operations if not managed properly, could influence salination of the groundwater. The project will been designed to be water efficient mitigating this impact.	**N**	The LNG to Power project will be using a well on the project property. Studies have indicated that it will not influence any of the surrounding wells.	**1**
Genetic resources	**N**				**0**
Biochemicals, natural medicines, and pharmaceuticals	**N**				**0**
Regulating					
Regulation of air quality	**N**				**0**
Regulation of local, regional, and/ or global climate	**Y**	The LNG to Power project will be removing approximately 9.4 ha of vegetation. Forests are known as GHG sinks and regulators of rainfall.	**N**	The 9.4 ha of vegetation is relavitely small and there are adjacent vegetetated areas that can maintain funciton. The project will also be planting trees as compensation (see Section 10 of the EIA)	**1**
Regulation of water timing and flows	**Y**	The LNG to Power Project will be changing landuse in the area of the power plant from permeable to impermeable thus reducing the areas capacity to manage water storage.	**N**	The Project will be built in an area that is already industrialized and not utilizing this ecosystem service.	**1**

	Potential magnitude of negative impact on ecosystem services (pre-mitigation)		Vulnerability of beneficiaries to negative impact on ecosystem services		Significance of project impact on this ecosystem service
Erosion control	**N**				**0**
Water purification and waste treatment	**N**				**0**
Regulation of diseases	**N**				**0**
Regulation of soil quality	**N**				**0**
Regulation of pests	**N**				**0**
Pollination	**N**				**0**
Regulation of natural hazards	**N**				**0**
Cultural					
Recreation and ecotourism	**N**				**0**
Ethical and spiritual values	**N**				**0**
Educational and inspirational values	**N**				**0**
Supporting					
Habitat	**Y**	The LNG to Power Project will result in some small short term losses of marine habitat used by benificiaries for fishing.	**N**	Although some fish habitat will be lost or impacted, the area of loss will be limited and the impacts due to sedimentation will be of short duration, thus not affecting the ecosystem service over time.	**1**

	Potential magnitude of negative impact on ecosystem services (pre-mitigation)		Vulnerability of beneficiaries to negative impact on ecosystem services		Significance of project impact on this ecosystem service
Nutrient cycling	**N**				**0**
Primary production	**N**				**0**
Water cycling	**N**				**0**
Other services identified					
Ocean Water	**N**				**0**
insert service					**0**

Energía del Pacífico

Apendix Chapter 8

December 2016 16-3489

ECO INGENIEROS
LÍDERES EN CONSULTORÍA AMBIENTAL

DILLON CONSULTING

Appendix 8A–
IFC Performance Standards

IFC Performance Standards on Environmental and Social Sustainability

Effective January 1, 2012

IFC International Finance Corporation
WORLD BANK GROUP

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Acronyms

EHS Guidelines	World Bank Group Environmental, Health and Safety Guidelines
ESMS	Environmental and Social Management System
FPIC	Free, Prior, and Informed Consent
GHG	Greenhouse gases
GIIP	Good international industry practice
ICP	Informed Consultation and Participation
ILO	International Labour Organisation
IPM	Integrated pest management
IUCN	International Union for the Conservation of Nature
IVM	Integrated vector management
UN	United Nations

Overview

1. IFC's Sustainability Framework articulates the Corporation's strategic commitment to sustainable development, and is an integral part of IFC's approach to risk management. The Sustainability Framework comprises IFC's Policy and Performance Standards on Environmental and Social Sustainability, and IFC's Access to Information Policy. The Policy on Environmental and Social Sustainability describes IFC's commitments, roles, and responsibilities related to environmental and social sustainability. IFC's Access to Information Policy reflects IFC's commitment to transparency and good governance on its operations, and outlines the Corporation's institutional disclosure obligations regarding its investment and advisory services. The Performance Standards are directed towards clients, providing guidance on how to identify risks and impacts, and are designed to help avoid, mitigate, and manage risks and impacts as a way of doing business in a sustainable way, including stakeholder engagement and disclosure obligations of the client in relation to project-level activities. In the case of its direct investments (including project and corporate finance provided through financial intermediaries), IFC requires its clients to apply the Performance Standards to manage environmental and social risks and impacts so that development opportunities are enhanced. IFC uses the Sustainability Framework along with other strategies, policies, and initiatives to direct the business activities of the Corporation in order to achieve its overall development objectives. The Performance Standards may also be applied by other financial institutions.

2. Together, the eight Performance Standards establish standards that the client[1] is to meet throughout the life of an investment by IFC:

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

[1] The term "client" is used throughout the Performance Standards broadly to refer to the party responsible for implementing and operating the project that is being financed, or the recipient of the financing, depending on the project structure and type of financing. The term "project" is defined in Performance Standard 1.

3. Performance Standard 1 establishes the importance of (i) integrated assessment to identify the environmental and social impacts, risks, and opportunities of projects; (ii) effective community engagement through disclosure of project-related information and consultation with local communities on matters that directly affect them; and (iii) the client's management of environmental and social performance throughout the life of the project. Performance Standards 2 through 8 establish objectives and requirements to avoid, minimize, and where residual impacts remain, to compensate/offset for risks and impacts to workers, Affected Communities, and the environment. While all relevant environmental and social risks and potential impacts should be considered as part of the assessment, Performance Standards 2 through 8 describe potential environmental and social risks and impacts that require particular attention. Where environmental or social risks and impacts are identified, the client is required to manage them through its Environmental and Social Management System (ESMS) consistent with Performance Standard 1.

4. Performance Standard 1 applies to all projects that have environmental and social risks and impacts. Depending on project circumstances, other Performance Standards may apply as well. The Performance Standards should be read together and cross-referenced as needed. The requirements section of each Performance Standard applies to all activities financed under the project, unless otherwise noted in the specific limitations described in each paragraph. Clients are encouraged to apply the ESMS developed under Performance Standard 1 to all their project activities, regardless of financing source. A number of cross-cutting topics such as climate change, gender, human rights, and water, are addressed across multiple Performance Standards.

5. In addition to meeting the requirements under the Performance Standards, clients must comply with applicable national law, including those laws implementing host country obligations under international law.

6. The World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines) are technical reference documents with general and industry-specific examples of good international industry practice. IFC uses the EHS Guidelines as a technical source of information during project appraisal. The EHS Guidelines contain the performance levels and measures that are normally acceptable to IFC, and that are generally considered to be achievable in new facilities at reasonable costs by existing technology. For IFC-financed projects, application of the EHS Guidelines to existing facilities may involve the establishment of site-specific targets with an appropriate timetable for achieving them. The environmental assessment process may recommend alternative (higher or lower) levels or measures, which, if acceptable to IFC, become project- or site-specific requirements. The General EHS Guideline contains information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors. It should be used together with the relevant industry sector guideline(s). The EHS Guidelines may be occasionally updated.

7. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent. If less

stringent levels or measures are appropriate in view of specific project circumstances, a full and detailed justification for any proposed alternatives is needed as part of the site-specific environmental assessment. This justification should demonstrate that the choice for any alternative performance level is protective of human health and the environment.

8. A set of eight Guidance Notes, corresponding to each Performance Standard, and an additional Interpretation Note on Financial Intermediaries offer guidance on the requirements contained in the Performance Standards, including reference materials, and on good sustainability practices to help clients improve project performance. These Guidance/ Interpretation Notes may be occasionally updated.

Performance Standard 1

Assessment and Management of Environmental and Social Risks and Impacts

Introduction

1. Performance Standard 1 underscores the importance of managing environmental and social performance throughout the life of a project. An effective Environmental and Social Management System (ESMS) is a dynamic and continuous process initiated and supported by management, and involves engagement between the client, its workers, local communities directly affected by the project (the Affected Communities) and, where appropriate, other stakeholders.[1] Drawing on the elements of the established business management process of "plan, do, check, and act," the ESMS entails a methodological approach to managing environmental and social risks[2] and impacts[3] in a structured way on an ongoing basis. A good ESMS appropriate to the nature and scale of the project promotes sound and sustainable environmental and social performance, and can lead to improved financial, social, and environmental outcomes.

2. At times, the assessment and management of certain environmental and social risks and impacts may be the responsibility of the government or other third parties over which the client does not have control or influence.[4] Examples of where this may happen include: (i) when early planning decisions are made by the government or third parties which affect the project site selection and/or design; and/or (ii) when specific actions directly related to the project are carried out by the government or third parties such as providing land for a project which may have previously involved the resettlement of communities or individuals and/or leading to loss of biodiversity. While the client cannot control these government or third party actions, an effective ESMS should identify the different entities involved and the roles they play, the corresponding risks they present to the client, and opportunities to collaborate with these third parties in order to help

[1] Other stakeholders are those not directly affected by the project but that have an interest in it. These could include national and local authorities, neighboring projects, and/or nongovernmental organizations.

[2] Environmental and social risk is a combination of the probability of certain hazard occurrences and the severity of impacts resulting from such an occurrence.

[3] Environmental and social impacts refer to any change, potential or actual, to (i) the physical, natural, or cultural environment, and (ii) impacts on surrounding community and workers, resulting from the business activity to be supported.

[4] Contractors retained by, or acting on behalf of the client(s), are considered to be under direct control of the client and not considered third parties for the purposes of this Performance Standard.

achieve environmental and social outcomes that are consistent with the Performance Standards. In addition, this Performance Standard supports the use of an effective grievance mechanism that can facilitate early indication of, and prompt remediation for those who believe that they have been harmed by a client's actions.

3. Business should respect human rights, which means to avoid infringing on the human rights of others and address adverse human rights impacts business may cause or contribute to. Each of the Performance Standards has elements related to human rights dimensions that a project may face in the course of its operations. Due diligence against these Performance Standards will enable the client to address many relevant human rights issues in its project.

Objectives

- To identify and evaluate environmental and social risks and impacts of the project.
- To adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimize,[5] and, where residual impacts remain, compensate/offset for risks and impacts to workers, Affected Communities, and the environment.
- To promote improved environmental and social performance of clients through the effective use of management systems.
- To ensure that grievances from Affected Communities and external communications from other stakeholders are responded to and managed appropriately.
- To promote and provide means for adequate engagement with Affected Communities throughout the project cycle on issues that could potentially affect them and to ensure that relevant environmental and social information is disclosed and disseminated.

Scope of Application

4. This Performance Standard applies to business activities with environmental and/or social risks and/or impacts. For the purposes of this Performance Standard, the term "project" refers to a defined set of business activities, including those where specific physical elements, aspects, and facilities likely to generate risks and impacts, have yet to be identified.[6] Where applicable, this could include aspects from the early developmental stages through the entire life cycle (design, construction, commissioning, operation, decommissioning, closure or, where applicable, post-closure) of a physical asset.[7] The requirements of this Performance Standard apply to all business activities unless otherwise noted in the specific limitations described in each of the paragraphs below.

[5] Acceptable options to minimize will vary and include: abate, rectify, repair, and/or restore impacts, as appropriate. The risk and impact mitigation hierarchy is further discussed and specified in the context of Performance Standards 2 through 8, where relevant.

[6] For example, corporate entities which have portfolios of existing physical assets, and/or intend to develop or acquire new facilities, and investment funds or financial intermediaries with existing portfolios of assets and/or which intend to invest in new facilities.

[7] Recognizing that this Performance Standard is used by a variety of financial institutions, investors, insurers, and owner/operators, each user should separately specify the business activities to which this Performance Standard should apply.

Requirements

Environmental and Social Assessment and Management System

5. The client, in coordination with other responsible government agencies and third parties as appropriate,[8] will conduct a process of environmental and social assessment, and establish and maintain an ESMS appropriate to the nature and scale of the project and commensurate with the level of its environmental and social risks and impacts. The ESMS will incorporate the following elements: (i) policy; (ii) identification of risks and impacts; (iii) management programs; (iv) organizational capacity and competency; (v) emergency preparedness and response; (vi) stakeholder engagement; and (vii) monitoring and review.

Policy

6. The client will establish an overarching policy defining the environmental and social objectives and principles that guide the project to achieve sound environmental and social performance.[9] The policy provides a framework for the environmental and social assessment and management process, and specifies that the project (or business activities, as appropriate) will comply with the applicable laws and regulations of the jurisdictions in which it is being undertaken, including those laws implementing host country obligations under international law. The policy should be consistent with the principles of the Performance Standards. Under some circumstances, clients may also subscribe to other internationally recognized standards, certification schemes, or codes of practice and these too should be included in the policy. The policy will indicate who, within the client's organization, will ensure conformance with the policy and be responsible for its execution (with reference to an appropriate responsible government agency or third party, as necessary). The client will communicate the policy to all levels of its organization.

Identification of Risks and Impacts

7. The client will establish and maintain a process for identifying the environmental and social risks and impacts of the project (see paragraph 18 for competency requirements). The type, scale, and location of the project guide the scope and level of effort devoted to the risks and impacts identification process. The scope of the risks and impacts identification process will be consistent with good international industry practice,[10] and will determine the appropriate and relevant methods and assessment tools. The process may comprise a full-scale environmental and social impact assessment, a limited or focused environmental and social assessment, or straightforward application of environmental siting, pollution standards, design criteria, or

[8] That is, those parties legally obligated and responsible for assessing and managing specific risks and impacts (e.g., government-led resettlement).

[9] This requirement is a stand-alone, project-specific policy and is not intended to affect (or require alteration of) existing policies the client may have defined for non-related projects, business activities, or higher-level corporate activities.

[10] Defined as the exercise of professional skill, diligence, prudence, and foresight that would reasonably be expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally or regionally.

construction standards.[11] When the project involves existing assets, environmental and/or social audits or risk/hazard assessments can be appropriate and sufficient to identify risks and impacts. If assets to be developed, acquired or financed have yet to be defined, the establishment of an environmental and social due diligence process will identify risks and impacts at a point in the future when the physical elements, assets, and facilities are reasonably understood. The risks and impacts identification process will be based on recent environmental and social baseline data at an appropriate level of detail. The process will consider all relevant environmental and social risks and impacts of the project, including the issues identified in Performance Standards 2 through 8, and those who are likely to be affected by such risks and impacts.[12] The risks and impacts identification process will consider the emissions of greenhouse gases, the relevant risks associated with a changing climate and the adaptation opportunities, and potential transboundary effects, such as pollution of air, or use or pollution of international waterways.

8. Where the project involves specifically identified physical elements, aspects, and facilities that are likely to generate impacts, environmental and social risks and impacts will be identified in the context of the project's area of influence. This area of influence encompasses, as appropriate:

- The area likely to be affected by: (i) the project[13] and the client's activities and facilities that are directly owned, operated or managed (including by contractors) and that are a component of the project;[14] (ii) impacts from unplanned but predictable developments caused by the project that may occur later or at a different location; or (iii) indirect project impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent.
- Associated facilities, which are facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable.[15]
- Cumulative impacts[16] that result from the incremental impact, on areas or resources used or directly impacted by the project, from other existing, planned or reasonably defined developments at the time the risks and impacts identification process is conducted.

[11] For greenfield developments or large expansions with specifically indentified physical elements, aspects, and facilities that are likely to generate potential significant environmental or social impacts, the client will conduct a comprehensive Environmental and Social Impact Assessment, including an examination of alternatives, where appropriate.

[12] In limited high risk circumstances, it may be appropriate for the client to complement its environmental and social risks and impacts identification process with specific human rights due diligence as relevant to the particular business.

[13] Examples include the project's sites, the immediate airshed and watershed, or transport corridors.

[14] Examples include power transmission corridors, pipelines, canals, tunnels, relocation and access roads, borrow and disposal areas, construction camps, and contaminated land (e.g., soil, groundwater, surface water, and sediments).

[15] Associated facilities may include railways, roads, captive power plants or transmission lines, pipelines, utilities, warehouses, and logistics terminals.

[16] Cumulative impacts are limited to those impacts generally recognized as important on the basis of scientific concerns and/or concerns from Affected Communities. Examples of cumulative impacts include: incremental contribution of gaseous emissions to an airshed; reduction of water flows in a watershed due to multiple withdrawals; increases in sediment loads to a watershed; interference with migratory routes or wildlife movement; or more traffic congestion and accidents due to increases in vehicular traffic on community roadways.

9. In the event of risks and impacts in the project's area of influence resulting from a third party's actions, the client will address those risks and impacts in a manner commensurate with the client's control and influence over the third parties, and with due regard to conflict of interest.

10. Where the client can reasonably exercise control, the risks and impacts identification process will also consider those risks and impacts associated with primary supply chains, as defined in Performance Standard 2 (paragraphs 27–29) and Performance Standard 6 (paragraph 30).

11. Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate environmental and social impacts, the identification of risks and impacts will take into account the findings and conclusions of related and applicable plans, studies, or assessments prepared by relevant government authorities or other parties that are directly related to the project and its area of influence.[17] These include master economic development plans, country or regional plans, feasibility studies, alternatives analyses, and cumulative, regional, sectoral, or strategic environmental assessments where relevant. The risks and impacts identification will take account of the outcome of the engagement process with Affected Communities as appropriate.

12. Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, and as part of the process of identifying risks and impacts, the client will identify individuals and groups that may be directly and differentially or disproportionately affected by the project because of their disadvantaged or vulnerable status.[18] Where individuals or groups are identified as disadvantaged or vulnerable, the client will propose and implement differentiated measures so that adverse impacts do not fall disproportionately on them and they are not disadvantaged in sharing development benefits and opportunities.

Management Programs

13. Consistent with the client's policy and the objectives and principles described therein, the client will establish management programs that, in sum, will describe mitigation and performance improvement measures and actions that address the identified environmental and social risks and impacts of the project.

14. Depending on the nature and scale of the project, these programs may consist of some documented combination of operational procedures, practices, plans, and related supporting documents (including legal agreements) that are managed in a systematic

[17] The client can take these into account by focusing on the project's incremental contribution to selected impacts generally recognized as important on the basis of scientific concern or concerns from the Affected Communities within the area addressed by these larger scope regional studies or cumulative assessments.

[18] This disadvantaged or vulnerable status may stem from an individual's or group's race, color, sex, language, religion, political or other opinion, national or social origin, property, birth, or other status. The client should also consider factors such as gender, age, ethnicity, culture, literacy, sickness, physical or mental disability, poverty or economic disadvantage, and dependence on unique natural resources.

way.[19] The programs may apply broadly across the client's organization, including contractors and primary suppliers over which the organization has control or influence, or to specific sites, facilities, or activities. The mitigation hierarchy to address identified risks and impacts will favor the avoidance of impacts over minimization, and, where residual impacts remain, compensation/offset, wherever technically[20] and financially feasible.[21]

15. Where the identified risks and impacts cannot be avoided, the client will identify mitigation and performance measures and establish corresponding actions to ensure the project will operate in compliance with applicable laws and regulations, and meet the requirements of Performance Standards 1 through 8. The level of detail and complexity of this collective management program and the priority of the identified measures and actions will be commensurate with the project's risks and impacts, and will take account of the outcome of the engagement process with Affected Communities as appropriate.

16. The management programs will establish environmental and social Action Plans,[22] which will define desired outcomes and actions to address the issues raised in the risks and impacts identification process, as measurable events to the extent possible, with elements such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods, and with estimates of the resources and responsibilities for implementation. As appropriate, the management program will recognize and incorporate the role of relevant actions and events controlled by third parties to address identified risks and impacts. Recognizing the dynamic nature of the project, the management program will be responsive to changes in circumstances, unforeseen events, and the results of monitoring and review.

Organizational Capacity and Competency

17. The client, in collaboration with appropriate and relevant third parties, will establish, maintain, and strengthen as necessary an organizational structure that defines roles, responsibilities, and authority to implement the ESMS. Specific personnel, including management representative(s), with clear lines of responsibility and authority should be designated. Key environmental and social responsibilities should be well defined and communicated to the relevant personnel and to the rest of the

[19] Existing legal agreements between the client and third parties that address mitigation actions with regard to specific impacts constitute part of a program. Examples are government-managed resettlement responsibilities specified in an agreement.

[20] Technical feasibility is based on whether the proposed measures and actions can be implemented with commercially available skills, equipment, and materials, taking into consideration prevailing local factors such as climate, geography, demography, infrastructure, security, governance, capacity, and operational reliability.

[21] Financial feasibility is based on commercial considerations, including relative magnitude of the incremental cost of adopting such measures and actions compared to the project's investment, operating, and maintenance costs, and on whether this incremental cost could make the project nonviable to the client.

[22] Action plans may include an overall Environmental and Social Action Plan necessary for carrying out a suite of mitigation measures or thematic action plans, such as Resettlement Action Plans or Biodiversity Action Plans. Action plans may be plans designed to fill in the gaps of existing management programs to ensure consistency with the Performance Standards, or they may be stand alone plans that specify the project's mitigation strategy. The "Action plan" terminology is understood by some communities of practice to mean Management plans, or Development plans. In this case, examples are numerous and include various types of environmental and social management plans.

client's organization. Sufficient management sponsorship and human and financial resources will be provided on an ongoing basis to achieve effective and continuous environmental and social performance.

18. Personnel within the client's organization with direct responsibility for the project's environmental and social performance will have the knowledge, skills, and experience necessary to perform their work, including current knowledge of the host country's regulatory requirements and the applicable requirements of Performance Standards 1 through 8. Personnel will also possess the knowledge, skills, and experience to implement the specific measures and actions required under the ESMS and the methods required to perform the actions in a competent and efficient manner.

19. The process of identification of risks and impacts will consist of an adequate, accurate, and objective evaluation and presentation, prepared by competent professionals. For projects posing potentially significant adverse impacts or where technically complex issues are involved, clients may be required to involve external experts to assist in the risks and impacts identification process.

Emergency Preparedness and Response

20. Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, the ESMS will establish and maintain an emergency preparedness and response system so that the client, in collaboration with appropriate and relevant third parties, will be prepared to respond to accidental and emergency situations associated with the project in a manner appropriate to prevent and mitigate any harm to people and/or the environment. This preparation will include the identification of areas where accidents and emergency situations may occur, communities and individuals that may be impacted, response procedures, provision of equipment and resources, designation of responsibilities, communication, including that with potentially Affected Communities and periodic training to ensure effective response. The emergency preparedness and response activities will be periodically reviewed and revised, as necessary, to reflect changing conditions.

21. Where applicable, the client will also assist and collaborate with the potentially Affected Communities (see Performance Standard 4) and the local government agencies in their preparations to respond effectively to emergency situations, especially when their participation and collaboration are necessary to ensure effective response. If local government agencies have little or no capacity to respond effectively, the client will play an active role in preparing for and responding to emergencies associated with the project. The client will document its emergency preparedness and response activities, resources, and responsibilities, and will provide appropriate information to potentially Affected Community and relevant government agencies.

Monitoring and Review

22. The client will establish procedures to monitor and measure the effectiveness of the management program, as well as compliance with any related legal and/or contractual obligations and regulatory requirements. Where the government or other third party has responsibility for managing specific risks and

impacts and associated mitigation measures, the client will collaborate in establishing and monitoring such mitigation measures. Where appropriate, clients will consider involving representatives from Affected Communities to participate in monitoring activities.[23] The client's monitoring program should be overseen by the appropriate level in the organization. For projects with significant impacts, the client will retain external experts to verify its monitoring information. The extent of monitoring should be commensurate with the project's environmental and social risks and impacts and with compliance requirements.

23. In addition to recording information to track performance and establishing relevant operational controls, the client should use dynamic mechanisms, such as internal inspections and audits, where relevant, to verify compliance and progress toward the desired outcomes. Monitoring will normally include recording information to track performance and comparing this against the previously established benchmarks or requirements in the management program. Monitoring should be adjusted according to performance experience and actions requested by relevant regulatory authorities. The client will document monitoring results and identify and reflect the necessary corrective and preventive actions in the amended management program and plans. The client, in collaboration with appropriate and relevant third parties, will implement these corrective and preventive actions, and follow up on these actions in upcoming monitoring cycles to ensure their effectiveness.

24. Senior management in the client organization will receive periodic performance reviews of the effectiveness of the ESMS, based on systematic data collection and analysis. The scope and frequency of such reporting will depend upon the nature and scope of the activities identified and undertaken in accordance with the client's ESMS and other applicable project requirements. Based on results within these performance reviews, senior management will take the necessary and appropriate steps to ensure the intent of the client's policy is met, that procedures, practices, and plans are being implemented, and are seen to be effective.

Stakeholder Engagement

25. Stakeholder engagement is the basis for building strong, constructive, and responsive relationships that are essential for the successful management of a project's environmental and social impacts.[24] Stakeholder engagement is an ongoing process that may involve, in varying degrees, the following elements: stakeholder analysis and planning, disclosure and dissemination of information, consultation and participation, grievance mechanism, and ongoing reporting to Affected Communities. The nature, frequency, and level of effort of stakeholder engagement may vary considerably and will be commensurate with the project's risks and adverse impacts, and the project's phase of development.

[23] For example, participatory water monitoring.

[24] Requirements regarding engagement of workers and related grievance redress procedures are found in Performance Standard 2.

Stakeholder Analysis and Engagement Planning

26. Clients should identify the range of stakeholders that may be interested in their actions and consider how external communications might facilitate a dialog with all stakeholders (paragraph 34 below). Where projects involve specifically identified physical elements, aspects and/or facilities that are likely to generate adverse environmental and social impacts to Affected Communities the client will identify the Affected Communities and will meet the relevant requirements described below.

27. The client will develop and implement a Stakeholder Engagement Plan that is scaled to the project risks and impacts and development stage, and be tailored to the characteristics and interests of the Affected Communities. Where applicable, the Stakeholder Engagement Plan will include differentiated measures to allow the effective participation of those identified as disadvantaged or vulnerable. When the stakeholder engagement process depends substantially on community representatives,[25] the client will make every reasonable effort to verify that such persons do in fact represent the views of Affected Communities and that they can be relied upon to faithfully communicate the results of consultations to their constituents.

28. In cases where the exact location of the project is not known, but it is reasonably expected to have significant impacts on local communities, the client will prepare a Stakeholder Engagement Framework, as part of its management program, outlining general principles and a strategy to identify Affected Communities and other relevant stakeholders and plan for an engagement process compatible with this Performance Standard that will be implemented once the physical location of the project is known.

Disclosure of Information

29. Disclosure of relevant project information helps Affected Communities and other stakeholders understand the risks, impacts and opportunities of the project. The client will provide Affected Communities with access to relevant information[26] on: (i) the purpose, nature, and scale of the project; (ii) the duration of proposed project activities; (iii) any risks to and potential impacts on such communities and relevant mitigation measures; (iv) the envisaged stakeholder engagement process; and (v) the grievance mechanism.

Consultation

30. When Affected Communities are subject to identified risks and adverse impacts from a project, the client will undertake a process of consultation in a manner that provides the Affected Communities with opportunities to express their views on project risks, impacts and mitigation measures, and allows the client to consider and respond to them. The extent and degree of engagement

[25] For example, community and religious leaders, local government representatives, civil society representatives, politicians, school teachers, and/or others representing one or more affected stakeholder groups.

[26] Depending on the scale of the project and significance of the risks and impacts, relevant document(s) could range from full Environmental and Social Assessments and Action Plans (i.e., Stakeholder Engagement Plan, Resettlement Action Plans, Biodiversity Action Plans, Hazardous Materials Management Plans, Emergency Preparedness and Response Plans, Community Health and Safety Plans, Ecosystem Restoration Plans, and Indigenous Peoples Development Plans, etc.) to easy-to-understand summaries of key issues and commitments. These documents could also include the client's environmental and social policy and any supplemental measures and actions defined as a result of independent due diligence conducted by financiers.

required by the consultation process should be commensurate with the project's risks and adverse impacts and with the concerns raised by the Affected Communities. Effective consultation is a two-way process that should: (i) begin early in the process of identification of environmental and social risks and impacts and continue on an ongoing basis as risks and impacts arise; (ii) be based on the prior disclosure and dissemination of relevant, transparent, objective, meaningful and easily accessible information which is in a culturally appropriate local language(s) and format and is understandable to Affected Communities; (iii) focus inclusive[27] engagement on those directly affected as opposed to those not directly affected; (iv) be free of external manipulation, interference, coercion, or intimidation; (v) enable meaningful participation, where applicable; and (vi) be documented. The client will tailor its consultation process to the language preferences of the Affected Communities, their decision-making process, and the needs of disadvantaged or vulnerable groups. If clients have already engaged in such a process, they will provide adequate documented evidence of such engagement.

Informed Consultation and Participation

31. For projects with potentially significant adverse impacts on Affected Communities, the client will conduct an Informed Consultation and Participation (ICP) process that will build upon the steps outlined above in Consultation and will result in the Affected Communities' informed participation. ICP involves a more in-depth exchange of views and information, and an organized and iterative consultation, leading to the client's incorporating into their decision-making process the views of the Affected Communities on matters that affect them directly, such as the proposed mitigation measures, the sharing of development benefits and opportunities, and implementation issues. The consultation process should (i) capture both men's and women's views, if necessary through separate forums or engagements, and (ii) reflect men's and women's different concerns and priorities about impacts, mitigation mechanisms, and benefits, where appropriate. The client will document the process, in particular the measures taken to avoid or minimize risks to and adverse impacts on the Affected Communities, and will inform those affected about how their concerns have been considered.

Indigenous Peoples

32. For projects with adverse impacts to Indigenous Peoples, the client is required to engage them in a process of ICP and in certain circumstances the client is required to obtain their Free, Prior, and Informed Consent (FPIC). The requirements related to Indigenous Peoples and the definition of the special circumstances requiring FPIC are described in Performance Standard 7.

Private Sector Responsibilities Under Government-Led Stakeholder Engagement

33. Where stakeholder engagement is the responsibility of the host government, the client will collaborate with the responsible government agency, to the extent permitted by the agency, to achieve outcomes that are consistent with the objectives of this Performance Standard. In addition, where government capacity is limited, the client will play an active role during the stakeholder engagement planning, implementation, and

[27] Such as men, women, the elderly, youth, displaced persons, and vulnerable and disadvantaged persons or groups.

monitoring. If the process conducted by the government does not meet the relevant requirements of this Performance Standard, the client will conduct a complementary process and, where appropriate, identify supplemental actions.

External Communications and Grievance Mechanisms

External Communications

34. Clients will implement and maintain a procedure for external communications that includes methods to (i) receive and register external communications from the public; (ii) screen and assess the issues raised and determine how to address them; (iii) provide, track, and document responses, if any; and (iv) adjust the management program, as appropriate. In addition, clients are encouraged to make publicly available periodic reports on their environmental and social sustainability.

Grievance Mechanism for Affected Communities

35. Where there are Affected Communities, the client will establish a grievance mechanism to receive and facilitate resolution of Affected Communities' concerns and grievances about the client's environmental and social performance. The grievance mechanism should be scaled to the risks and adverse impacts of the project and have Affected Communities as its primary user. It should seek to resolve concerns promptly, using an understandable and transparent consultative process that is culturally appropriate and readily accessible, and at no cost and without retribution to the party that originated the issue or concern. The mechanism should not impede access to judicial or administrative remedies. The client will inform the Affected Communities about the mechanism in the course of the stakeholder engagement process.

Ongoing Reporting to Affected Communities

36. The client will provide periodic reports to the Affected Communities that describe progress with implementation of the project Action Plans on issues that involve ongoing risk to or impacts on Affected Communities and on issues that the consultation process or grievance mechanism have identified as a concern to those Communities. If the management program results in material changes in or additions to the mitigation measures or actions described in the Action Plans on issues of concern to the Affected Communities, the updated relevant mitigation measures or actions will be communicated to them. The frequency of these reports will be proportionate to the concerns of Affected Communities but not less than annually.

Performance Standard 2

Labor and Working Conditions

Introduction

1. Performance Standard 2 recognizes that the pursuit of economic growth through employment creation and income generation should be accompanied by protection of the fundamental[1] rights of workers. For any business, the workforce is a valuable asset, and a sound worker-management relationship is a key ingredient in the sustainability of a company. Failure to establish and foster a sound worker-management relationship can undermine worker commitment and retention, and can jeopardize a project. Conversely, through a constructive worker-management relationship, and by treating the workers fairly and providing them with safe and healthy working conditions, clients may create tangible benefits, such as enhancement of the efficiency and productivity of their operations.

2. The requirements set out in this Performance Standard have been in part guided by a number of international conventions and instruments, including those of the International Labour Organization (ILO) and the United Nations (UN).[2]

Objectives

- To promote the fair treatment, non-discrimination, and equal opportunity of workers.
- To establish, maintain, and improve the worker-management relationship.
- To promote compliance with national employment and labor laws.
- To protect workers, including vulnerable categories of workers such as children,

[1] As guided by the ILO Conventions listed in footnote 2.

[2] These conventions are:
ILO Convention 87 on Freedom of Association and Protection of the Right to Organize
ILO Convention 98 on the Right to Organize and Collective Bargaining
ILO Convention 29 on Forced Labor
ILO Convention 105 on the Abolition of Forced Labor
ILO Convention 138 on Minimum Age (of Employment)
ILO Convention 182 on the Worst Forms of Child Labor
ILO Convention 100 on Equal Remuneration
ILO Convention 111 on Discrimination (Employment and Occupation)
UN Convention on the Rights of the Child, Article 32.1
UN Convention on the Protection of the Rights of all Migrant Workers and Members of their Families

migrant workers, workers engaged by third parties, and workers in the client's supply chain.
- To promote safe and healthy working conditions, and the health of workers.
- To avoid the use of forced labor.

Scope of Application

3. The applicability of this Performance Standard is established during the environmental and social risks and impacts identification process. The implementation of the actions necessary to meet the requirements of this Performance Standard is managed through the client's Environmental and Social Management System (ESMS), the elements of which are outlined in Performance Standard 1.

4. The scope of application of this Performance Standard depends on the type of employment relationship between the client and the worker. It applies to workers directly engaged by the client (direct workers), workers engaged through third parties to perform work related to core business processes[3] of the project for a substantial duration (contracted workers), as well as workers engaged by the client's primary suppliers (supply chain workers).[4]

Direct Workers

5. With respect to direct workers, the client will apply the requirements of paragraphs 8–23 of this Performance Standard.

Contracted Workers

6. With respect to contracted workers, the client will apply the requirements of paragraphs 23–26 of this Performance Standard.

Supply Chain Workers

7. With respect to supply chain workers, the client will apply the requirements of paragraphs 27–29 of this Performance Standard.

Requirements

Working Conditions and Management of Worker Relationship

Human Resources Policies and Procedures

8. The client will adopt and implement human resources policies and procedures appropriate to its size and workforce that set out its approach to managing workers consistent with the requirements of this Performance Standard and national law.

9. The client will provide workers with documented information that is clear and understandable, regarding their rights under national labor and employment law and any applicable collective agreements, including their rights related to hours of work, wages, overtime, compensation, and benefits upon beginning the working relationship and when any material changes occur.

Working Conditions and Terms of Employment

10. Where the client is a party to a collective bargaining agreement with a workers' organization, such agreement will be respected. Where such agreements do not exist, or do not address working

[3] Core business processes constitute those production and/or service processes essential for a specific business activity without which the business activity could not continue.

[4] Primary suppliers are those suppliers who, on an ongoing basis, provide goods or materials essential for the core business processes of the project.

conditions and terms of employment,[5] the client will provide reasonable working conditions and terms of employment.[6]

11. The client will identify migrant workers and ensure that they are engaged on substantially equivalent terms and conditions to non-migrant workers carrying out similar work.

12. Where accommodation services[7] are provided to workers covered by the scope of this Performance Standard, the client will put in place and implement policies on the quality and management of the accommodation and provision of basic services.[8] The accommodation services will be provided in a manner consistent with the principles of non-discrimination and equal opportunity. Workers' accommodation arrangements should not restrict workers' freedom of movement or of association.

Workers' Organizations

13. In countries where national law recognizes workers' rights to form and to join workers' organizations of their choosing without interference and to bargain collectively, the client will comply with national law. Where national law substantially restricts workers' organizations, the client will not restrict workers from developing alternative mechanisms to express their grievances and protect their rights regarding working conditions and terms of employment. The client should not seek to influence or control these mechanisms.

14. In either case described in paragraph 13 of this Performance Standard, and where national law is silent, the client will not discourage workers from electing worker representatives, forming or joining workers' organizations of their choosing, or from bargaining collectively, and will not discriminate or retaliate against workers who participate, or seek to participate, in such organizations and collective bargaining. The client will engage with such workers' representatives and workers' organizations, and provide them with information needed for meaningful negotiation in a timely manner. Workers' organizations are expected to fairly represent the workers in the workforce.

Non-Discrimination and Equal Opportunity

15. The client will not make employment decisions on the basis of personal characteristics[9] unrelated to inherent job requirements. The client will base the employment relationship on the principle of equal opportunity and fair treatment, and will not discriminate with respect to any aspects of the employment relationship, such

[5] Working conditions and terms of employment examples are wages and benefits; wage deductions; hours of work; overtime arrangements and overtime compensation; breaks; rest days; and leave for illness, maternity, vacation or holiday.

[6] Reasonable working conditions and terms of employment could be assessed by reference to (i) conditions established for work of the same character in the trade or industry concerned in the area/region where the work is carried out; (ii) collective agreement or other recognized negotiation between other organizations of employers and workers' representatives in the trade or industry concerned; (iii) arbitration award; or (iv) conditions established by national law.

[7] Those services might be provided either directly by the client or by third parties.

[8] Basic services requirements refer to minimum space, supply of water, adequate sewage and garbage disposal system, appropriate protection against heat, cold, damp, noise, fire and disease-carrying animals, adequate sanitary and washing facilities, ventilation, cooking and storage facilities and natural and artificial lighting, and in some cases basic medical services.

[9] Such as gender, race, nationality, ethnic, social and indigenous origin, religion or belief, disability, age, or sexual orientation.

as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices. The client will take measures to prevent and address harassment, intimidation, and/or exploitation, especially in regard to women. The principles of non-discrimination apply to migrant workers.

16. In countries where national law provides for non-discrimination in employment, the client will comply with national law. When national laws are silent on non-discrimination in employment, the client will meet this Performance Standard. In circumstances where national law is inconsistent with this Performance Standard, the client is encouraged to carry out its operations consistent with the intent of paragraph 15 above without contravening applicable laws.

17. Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job will not be deemed as discrimination, provided they are consistent with national law.

Retrenchment

18. Prior to implementing any collective dismissals,[10] the client will carry out an analysis of alternatives to retrenchment.[11] If the analysis does not identify viable alternatives to retrenchment, a retrenchment plan will be developed and implemented to reduce the adverse impacts of retrenchment on workers. The retrenchment plan will be based on the principle of non-discrimination and will reflect the client's consultation with workers, their organizations, and, where appropriate, the government, and comply with collective bargaining agreements if they exist. The client will comply with all legal and contractual requirements related to notification of public authorities, and provision of information to, and consultation with workers and their organizations.

19. The client should ensure that all workers receive notice of dismissal and severance payments mandated by law and collective agreements in a timely manner. All outstanding back pay and social security benefits and pension contributions and benefits will be paid (i) on or before termination of the working relationship to the workers, (ii) where appropriate, for the benefit of the workers, or (iii) payment will be made in accordance with a timeline agreed through a collective agreement. Where payments are made for the benefit of workers, workers will be provided with evidence of such payments.

Grievance Mechanism

20. The client will provide a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns. The client will inform the workers of the grievance mechanism at the time of recruitment and make it easily accessible to them. The mechanism should involve an appropriate level of management and address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned, without any retribution. The mechanism

[10] Collective dismissals cover all multiple dismissals that are a result of an economic, technical, or organizational reason; or other reasons that are not related to performance or other personal reasons.

[11] Examples of alternatives may include negotiated working-time reduction programs, employee capacity-building programs; long-term maintenance works during low production periods, etc.

should also allow for anonymous complaints to be raised and addressed. The mechanism should not impede access to other judicial or administrative remedies that might be available under the law or through existing arbitration procedures, or substitute for grievance mechanisms provided through collective agreements.

Protecting the Work Force

Child Labor

21. The client will not employ children in any manner that is economically exploitative, or is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. The client will identify the presence of all persons under the age of 18. Where national laws have provisions for the employment of minors, the client will follow those laws applicable to the client. Children under the age of 18 will not be employed in hazardous work.[12] All work of persons under the age of 18 will be subject to an appropriate risk assessment and regular monitoring of health, working conditions, and hours of work.

Forced Labor

22. The client will not employ forced labor, which consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. This covers any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. The client will not employ trafficked persons.[13]

Occupational Health and Safety

23. The client will provide a safe and healthy work environment, taking into account inherent risks in its particular sector and specific classes of hazards in the client's work areas, including physical, chemical, biological, and radiological hazards, and specific threats to women. The client will take steps to prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, as far as reasonably practicable, the causes of hazards. In a manner consistent with good international industry practice,[14] as reflected in various internationally recognized sources including the World Bank Group Environmental, Health and Safety Guidelines, the client will address areas that include the (i) identification of potential hazards to workers, particularly those that may be life-threatening; (ii) provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances; (iii) training of workers; (iv) documentation and reporting of occupational accidents, diseases, and incidents; and (v) emergency prevention,

[12] Examples of hazardous work activities include work (i) with exposure to physical, psychological, or sexual abuse; (ii) underground, underwater, working at heights, or in confined spaces; (iii) with dangerous machinery, equipment, or tools, or involving handling of heavy loads; (iv) in unhealthy environments exposing the worker to hazardous substances, agents, processes, temperatures, noise, or vibration damaging to health; or (v) under difficult conditions such as long hours, late night, or confinement by employer.

[13] Trafficking in persons is defined as the recruitment, transportation, transfer, harboring, or receipt of persons, by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power, or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Women and children are particularly vulnerable to trafficking practices.

[14] Defined as the exercise of professional skill, diligence, prudence, and foresight that would reasonably be expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances, globally or regionally.

preparedness, and response arrangements. For additional information related to emergency preparedness and response refer to Performance Standard 1.

Workers Engaged by Third Parties

24. With respect to contracted workers the client will take commercially reasonable efforts to ascertain that the third parties who engage these workers are reputable and legitimate enterprises and have an appropriate ESMS that will allow them to operate in a manner consistent with the requirements of this Performance Standard, except for paragraphs 18–19, and 27–29.

25. The client will establish policies and procedures for managing and monitoring the performance of such third party employers in relation to the requirements of this Performance Standard. In addition, the client will use commercially reasonable efforts to incorporate these requirements in contractual agreements with such third party employers.

26. The client will ensure that contracted workers, covered in paragraphs 24–25 of this Performance Standard, have access to a grievance mechanism. In cases where the third party is not able to provide a grievance mechanism the client will extend its own grievance mechanism to serve workers engaged by the third party.

Supply Chain

27. Where there is a high risk of child labor or forced labor[15] in the primary supply chain, the client will identify those risks consistent with paragraphs 21 and 22 above. If child labor or forced labor cases are identified, the client will take appropriate steps to remedy them. The client will monitor its primary supply chain on an ongoing basis in order to identify any significant changes in its supply chain and if new risks or incidents of child and/or forced labor are identified, the client will take appropriate steps to remedy them.

28. Additionally, where there is a high risk of significant safety issues related to supply chain workers, the client will introduce procedures and mitigation measures to ensure that primary suppliers within the supply chain are taking steps to prevent or to correct life-threatening situations.

29. The ability of the client to fully address these risks will depend upon the client's level of management control or influence over its primary suppliers. Where remedy is not possible, the client will shift the project's primary supply chain over time to suppliers that can demonstrate that they are complying with this Performance Standard.

[15] The potential risk of child labor and forced labor will be determined during the risks and impacts identification process as required in Performance Standard 1.

Performance Standard 3

Resource Efficiency and Pollution Prevention

Introduction

1. Performance Standard 3 recognizes that increased economic activity and urbanization often generate increased levels of pollution to air, water, and land, and consume finite resources in a manner that may threaten people and the environment at the local, regional, and global levels.[1] There is also a growing global consensus that the current and projected atmospheric concentration of greenhouse gases (GHG) threatens the public health and welfare of current and future generations. At the same time, more efficient and effective resource use and pollution prevention[2] and GHG emission avoidance and mitigation technologies and practices have become more accessible and achievable in virtually all parts of the world. These are often implemented through continuous improvement methodologies similar to those used to enhance quality or productivity, which are generally well known to most industrial, agricultural, and service sector companies.

2. This Performance Standard outlines a project-level approach to resource efficiency and pollution prevention and control in line with internationally disseminated technologies and practices. In addition, this Performance Standard promotes the ability of private sector companies to adopt such technologies and practices as far as their use is feasible in the context of a project that relies on commercially available skills and resources.

Objectives

- To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities.
- To promote more sustainable use of resources, including energy and water.
- To reduce project-related GHG emissions.

[1] For the purposes of this Performance Standard, the term "pollution" is used to refer to both hazardous and non hazardous chemical pollutants in the solid, liquid, or gaseous phases, and includes other components such as pests, pathogens, thermal discharge to water, GHG emissions, nuisance odors, noise, vibration, radiation, electromagnetic energy, and the creation of potential visual impacts including light.

[2] For the purpose of this Performance Standard, the term "pollution prevention" does not mean absolute elimination of emissions, but the avoidance at source whenever possible, and, if not possible, then subsequent minimization of pollution to the extent that the Performance Standard objectives are satisfied.

Scope of Application

3. The applicability of this Performance Standard is established during the environmental and social risks and impacts identification process. The implementation of the actions necessary to meet the requirements of this Performance Standard is managed through the client's Environmental and Social Management System, the elements of which are outlined in Performance Standard 1.

Requirements

4. During the project life-cycle, the client will consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention principles and techniques that are best suited to avoid, or where avoidance is not possible, minimize adverse impacts on human health and the environment.[3] The principles and techniques applied during the project life-cycle will be tailored to the hazards and risks associated with the nature of the project and consistent with good international industry practice (GIIP),[4] as reflected in various internationally recognized sources, including the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines).

5. The client will refer to the EHS Guidelines or other internationally recognized sources, as appropriate, when evaluating and selecting resource efficiency and pollution prevention and control techniques for the project. The EHS Guidelines contain the performance levels and measures that are normally acceptable and applicable to projects. When host country regulations differ from the levels and measures presented in the EHS Guidelines, clients will be required to achieve whichever is more stringent. If less stringent levels or measures than those provided in the EHS Guidelines are appropriate in view of specific project circumstances, the client will provide full and detailed justification for any proposed alternatives through the environmental and social risks and impacts identification and assessment process. This justification must demonstrate that the choice for any alternate performance levels is consistent with the objectives of this Performance Standard.

Resource Efficiency

6. The client will implement technically and financially feasible and cost effective[5] measures for improving efficiency in its consumption of energy, water, as well as other resources and material inputs, with a focus on areas that are considered core business activities. Such measures will integrate the principles of cleaner production into product

[3] Technical feasibility is based on whether the proposed measures and actions can be implemented with commercially available skills, equipment, and materials, taking into consideration prevailing local factors such as climate, geography, infrastructure, security, governance, capacity and operational reliability. Financial feasibility is based on commercial considerations, including relative magnitude of the incremental cost of adopting such measures and actions compared to the project's investment, operating, and maintenance costs.

[4] GIIP is defined as the exercise of professional skill, diligence, prudence, and foresight that would reasonably be expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally or regionally. The outcome of such exercise should be that the project employs the most appropriate technologies in the project-specific circumstances.

[5] Cost-effectiveness is determined according to the capital and operational cost and financial benefits of the measure considered over the life of the measure. For the purpose of this Performance Standard, a resource efficiency or GHG emissions reduction measure is considered cost-effective if it is expected to provide a risk-rated return on investment at least comparable to the project itself.

design and production processes with the objective of conserving raw materials, energy, and water. Where benchmarking data are available, the client will make a comparison to establish the relative level of efficiency.

Greenhouse Gases

7. In addition to the resource efficiency measures described above, the client will consider alternatives and implement technically and financially feasible and cost-effective options to reduce project-related GHG emissions during the design and operation of the project. These options may include, but are not limited to, alternative project locations, adoption of renewable or low carbon energy sources, sustainable agricultural, forestry and livestock management practices, the reduction of fugitive emissions and the reduction of gas flaring.

8. For projects that are expected to or currently produce more than 25,000 tonnes of CO_2-equivalent annually,[6] the client will quantify direct emissions from the facilities owned or controlled within the physical project boundary,[7] as well as indirect emissions associated with the off-site production of energy[8] used by the project. Quantification of GHG emissions will be conducted by the client annually in accordance with internationally recognized methodologies and good practice.[9]

Water Consumption

9. When the project is a potentially significant consumer of water, in addition to applying the resource efficiency requirements of this Performance Standard, the client shall adopt measures that avoid or reduce water usage so that the project's water consumption does not have significant adverse impacts on others. These measures include, but are not limited to, the use of additional technically feasible water conservation measures within the client's operations, the use of alternative water supplies, water consumption offsets to reduce total demand for water resources to within the available supply, and evaluation of alternative project locations.

Pollution Prevention

10. The client will avoid the release of pollutants or, when avoidance is not feasible, minimize and/or control the intensity and mass flow of their release. This applies to the release of pollutants to air, water, and land due to routine, non-routine, and accidental circumstances with the potential for local, regional, and transboundary impacts.[10] Where historical pollution such as land or ground water contamination exists, the client will seek to determine whether it is responsible for mitigation measures. If it is determined that the client is legally responsible, then these liabilities will be resolved in accordance with national law, or where this is silent, with GIIP.[11]

[6] The quantification of emissions should consider all significant sources of greenhouse gas emissions, including non-energy related sources such as methane and nitrous oxide, among others.

[7] Project-induced changes in soil carbon content or above ground biomass, and project-induced decay of organic matter may contribute to direct emissions sources and shall be included in this emissions quantification where such emissions are expected to be significant.

[8] Refers to the off-site generation by others of electricity, and heating and cooling energy used in the project.

[9] Estimation methodologies are provided by the Intergovernmental Panel on Climate Change, various international organizations, and relevant host country agencies.

[10] Transboundary pollutants include those covered under the Convention on Long-Range Transboundary Air Pollution.

[11] This may require coordination with national and local government, communities, and the contributors to the contamination, and that any assessment follows a risk-based approach consistent with GIIP as reflected in the EHS Guidelines.

11. To address potential adverse project impacts on existing ambient conditions,[12] the client will consider relevant factors, including, for example (i) existing ambient conditions; (ii) the finite assimilative capacity[13] of the environment; (iii) existing and future land use; (iv) the project's proximity to areas of importance to biodiversity; and (v) the potential for cumulative impacts with uncertain and/or irreversible consequences. In addition to applying resource efficiency and pollution control measures as required in this Performance Standard, when the project has the potential to constitute a significant source of emissions in an already degraded area, the client will consider additional strategies and adopt measures that avoid or reduce negative effects. These strategies include, but are not limited to, evaluation of project location alternatives and emissions offsets.

Wastes

12. The client will avoid the generation of hazardous and non-hazardous waste materials. Where waste generation cannot be avoided, the client will reduce the generation of waste, and recover and reuse waste in a manner that is safe for human health and the environment. Where waste cannot be recovered or reused, the client will treat, destroy, or dispose of it in an environmentally sound manner that includes the appropriate control of emissions and residues resulting from the handling and processing of the waste material. If the generated waste is considered hazardous,[14] the client will adopt GIIP alternatives for its environmentally sound disposal while adhering to the limitations applicable to its transboundary movement.[15] When hazardous waste disposal is conducted by third parties, the client will use contractors that are reputable and legitimate enterprises licensed by the relevant government regulatory agencies and obtain chain of custody documentation to the final destination. The client should ascertain whether licensed disposal sites are being operated to acceptable standards and where they are, the client will use these sites. Where this is not the case, clients should reduce waste sent to such sites and consider alternative disposal options, including the possibility of developing their own recovery or disposal facilities at the project site.

Hazardous Materials Management

13. Hazardous materials are sometimes used as raw material or produced as product by the project. The client will avoid or, when avoidance is not possible, minimize and control the release of hazardous materials. In this context, the production, transportation, handling, storage, and use of hazardous materials for project activities should be assessed. The client will consider less hazardous substitutes where hazardous materials are intended to be used in manufacturing processes or other operations. The client will avoid the manufacture, trade, and use of chemicals and hazardous materials subject to international bans or

[12] Such as air, surface and groundwater, and soils.

[13] The capacity of the environment for absorbing an incremental load of pollutants while remaining below a threshold of unacceptable risk to human health and the environment.

[14] As defined by international conventions or local legislation.

[15] Transboundary movement of hazardous materials should be consistent with national, regional and international law, including the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter.

phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer.[16]

Pesticide Use and Management

14. The client will, where appropriate, formulate and implement an integrated pest management (IPM) and/or integrated vector management (IVM) approach targeting economically significant pest infestations and disease vectors of public health significance. The client's IPM and IVM program will integrate coordinated use of pest and environmental information along with available pest control methods, including cultural practices, biological, genetic, and, as a last resort, chemical means to prevent economically significant pest damage and/or disease transmission to humans and animals.

15. When pest management activities include the use of chemical pesticides, the client will select chemical pesticides that are low in human toxicity, that are known to be effective against the target species, and that have minimal effects on non-target species and the environment. When the client selects chemical pesticides, the selection will be based upon requirements that the pesticides be packaged in safe containers, be clearly labeled for safe and proper use, and that the pesticides have been manufactured by an entity currently licensed by relevant regulatory agencies.

16. The client will design its pesticide application regime to (i) avoid damage to natural enemies of the target pest, and where avoidance is not possible, minimize, and (ii) avoid the risks associated with the development of resistance in pests and vectors, and where avoidance is not possible minimize. In addition, pesticides will be handled, stored, applied, and disposed of in accordance with the Food and Agriculture Organization's International Code of Conduct on the Distribution and Use of Pesticides or other GIIP.

17. The client will not purchase, store, use, manufacture, or trade in products that fall in WHO Recommended Classification of Pesticides by Hazard Class Ia (extremely hazardous); or Ib (highly hazardous). The client will not purchase, store, use, manufacture or trade in Class II (moderately hazardous) pesticides, unless the project has appropriate controls on manufacture, procurement, or distribution and/or use of these chemicals. These chemicals should not be accessible to personnel without proper training, equipment, and facilities to handle, store, apply, and dispose of these products properly.

[16] Consistent with the objectives of the Stockholm Convention on Persistent Organic Pollutants and the Montreal Protocol on Substances that Deplete the Ozone Layer. Similar considerations will apply to certain World Health Organization (WHO) classes of pesticides.

Performance Standard 4

Community Health, Safety, and Security

Introduction

1. Performance Standard 4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration and/or intensification of impacts due to project activities. While acknowledging the public authorities' role in promoting the health, safety, and security of the public, this Performance Standard addresses the client's responsibility to avoid or minimize the risks and impacts to community health, safety, and security that may arise from project related-activities, with particular attention to vulnerable groups.

2. In conflict and post-conflict areas, the level of risks and impacts described in this Performance Standard may be greater. The risks that a project could exacerbate an already sensitive local situation and stress scarce local resources should not be overlooked as it may lead to further conflict.

Objectives

- To anticipate and avoid adverse impacts on the health and safety of the Affected Community during the project life from both routine and non-routine circumstances.
- To ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to the Affected Communities.

Scope of Application

3. The applicability of this Performance Standard is established during the environmental and social risks and impacts identification process. The implementation of the actions necessary to meet the requirements of this Performance Standard is managed through the client's Environmental and Social Management System, the elements of which are outlined in Performance Standard 1.

4. This Performance Standard addresses potential risks and impacts to the Affected Communities from project activities. Occupational health and safety requirements for workers are included in Performance Standard 2, and environmental standards to avoid or minimize impacts on human health and the environment due to pollution are included in Performance Standard 3.

Requirements

Community Health and Safety

5. The client will evaluate the risks and impacts to the health and safety of the Affected Communities during the project life-cycle and will establish preventive and control measures consistent with good international industry practice (GIIP),[1] such as in the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines) or other internationally recognized sources. The client will identify risks and impacts and propose mitigation measures that are commensurate with their nature and magnitude. These measures will favor the avoidance of risks and impacts over minimization.

Infrastructure and Equipment Design and Safety

6. The client will design, construct, operate, and decommission the structural elements or components of the project in accordance with GIIP, taking into consideration safety risks to third parties or Affected Communities. When new buildings and structures will be accessed by members of the public, the client will consider incremental risks of the public's potential exposure to operational accidents and/or natural hazards and be consistent with the principles of universal access. Structural elements will be designed and constructed by competent professionals, and certified or approved by competent authorities or professionals. When structural elements or components, such as dams, tailings dams, or ash ponds are situated in high-risk locations, and their failure or malfunction may threaten the safety of communities, the client will engage one or more external experts with relevant and recognized experience in similar projects, separate from those responsible for the design and construction, to conduct a review as early as possible in project development and throughout the stages of project design, construction, operation, and decommissioning. For projects that operate moving equipment on public roads and other forms of infrastructure, the client will seek to avoid the occurrence of incidents and injuries to members of the public associated with the operation of such equipment.

Hazardous Materials Management and Safety

7. The client will avoid or minimize the potential for community exposure to hazardous materials and substances that may be released by the project. Where there is a potential for the public (including workers and their families) to be exposed to hazards, particularly those that may be life threatening, the client will exercise special care to avoid or minimize their exposure by modifying, substituting, or eliminating the condition or material causing the potential hazards. Where hazardous materials are part of existing project infrastructure or components, the client

[1] Defined as the exercise of professional skill, diligence, prudence, and foresight that would reasonably be expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally or regionally.

will exercise special care when conducting decommissioning activities in order to avoid exposure to the community. The client will exercise commercially reasonable efforts to control the safety of deliveries of hazardous materials, and of transportation and disposal of hazardous wastes, and will implement measures to avoid or control community exposure to pesticides, in accordance with the requirements of Performance Standard 3.

Ecosystem Services

8. The project's direct impacts on priority ecosystem services may result in adverse health and safety risks and impacts to Affected Communities. With respect to this Performance Standard, ecosystem services are limited to provisioning and regulating services as defined in paragraph 2 of Performance Standard 6. For example, land use changes or the loss of natural buffer areas such as wetlands, mangroves, and upland forests that mitigate the effects of natural hazards such as flooding, landslides, and fire, may result in increased vulnerability and community safety-related risks and impacts. The diminution or degradation of natural resources, such as adverse impacts on the quality, quantity, and availability of freshwater,[2] may result in health-related risks and impacts. Where appropriate and feasible, the client will identify those risks and potential impacts on priority ecosystem services that may be exacerbated by climate change. Adverse impacts should be avoided, and if these impacts are unavoidable, the client will implement mitigation measures in accordance with paragraphs 24 and 25 of Performance Standard 6. With respect to the use of and loss of access to provisioning services, clients will implement mitigation measures in accordance with paragraphs 25–29 of Performance Standard 5.

Community Exposure to Disease

9. The client will avoid or minimize the potential for community exposure to water-borne, water based, water-related, and vector-borne diseases, and communicable diseases that could result from project activities, taking into consideration differentiated exposure to and higher sensitivity of vulnerable groups. Where specific diseases are endemic in communities in the project area of influence, the client is encouraged to explore opportunities during the project life-cycle to improve environmental conditions that could help minimize their incidence.

10. The client will avoid or minimize transmission of communicable diseases that may be associated with the influx of temporary or permanent project labor.

Emergency Preparedness and Response

11. In addition to the emergency preparedness and response requirements described in Performance Standard 1, the client will also assist and collaborate with the Affected Communities, local government agencies, and other relevant parties, in their preparations to respond effectively to emergency situations, especially when their participation and collaboration are necessary to respond to such emergency situations. If local government agencies have little or no capacity to respond effectively, the client will play an active role in preparing for and responding to emergencies associated with the project. The client will document its emergency preparedness and response activities, resources, and responsibilities, and will disclose appropriate information to Affected Communities, relevant government agencies, or other relevant parties.

[2] Freshwater is an example of provisioning ecosystem services.

Security Personnel

12. When the client retains direct or contracted workers to provide security to safeguard its personnel and property, it will assess risks posed by its security arrangements to those within and outside the project site. In making such arrangements, the client will be guided by the principles of proportionality and good international practice[3] in relation to hiring, rules of conduct, training, equipping, and monitoring of such workers, and by applicable law. The client will make reasonable inquiries to ensure that those providing security are not implicated in past abuses; will train them adequately in the use of force (and where applicable, firearms), and appropriate conduct toward workers and Affected Communities; and require them to act within the applicable law. The client will not sanction any use of force except when used for preventive and defensive purposes in proportion to the nature and extent of the threat. The client will provide a grievance mechanism for Affected Communities to express concerns about the security arrangements and acts of security personnel.

13. The client will assess and document risks arising from the project's use of government security personnel deployed to provide security services. The client will seek to ensure that security personnel will act in a manner consistent with paragraph 12 above, and encourage the relevant public authorities to disclose the security arrangements for the client's facilities to the public, subject to overriding security concerns.

14. The client will consider and, where appropriate, investigate all allegations of unlawful or abusive acts of security personnel, take action (or urge appropriate parties to take action) to prevent recurrence, and report unlawful and abusive acts to public authorities.

[3] Including practice consistent with the United Nation's (UN) Code of Conduct for Law Enforcement Officials, and UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials.

Performance Standard 5

Land Acquisition and Involuntary Resettlement

Introduction

1. Performance Standard 5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons that use this land. Involuntary resettlement refers both to physical displacement (relocation or loss of shelter) and to economic displacement (loss of assets or access to assets that leads to loss of income sources or other means of livelihood[1]) as a result of project-related land acquisition[2] and/or restrictions on land use. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in physical or economic displacement. This occurs in cases of (i) lawful expropriation or temporary or permanent restrictions on land use and (ii) negotiated settlements in which the buyer can resort to expropriation or impose legal restrictions on land use if negotiations with the seller fail.

2. Unless properly managed, involuntary resettlement may result in long-term hardship and impoverishment for the Affected Communities and persons, as well as environmental damage and adverse socio-economic impacts in areas to which they have been displaced. For these reasons, involuntary resettlement should be avoided. However, where involuntary resettlement is unavoidable, it should be minimized and appropriate measures to mitigate adverse impacts on displaced persons and host communities[3] should be carefully planned and implemented. The government often plays a central role in the land acquisition and resettlement process, including the determination of compensation, and is therefore an important third party in many situations. Experience demonstrates that the direct involvement of the client in resettlement activities can result in more cost-effective, efficient, and timely implementation of those activities, as well as in the introduction of innovative approaches to improving the livelihoods of those affected by resettlement.

[1] The term "livelihood" refers to the full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

[2] Land acquisition includes both outright purchases of property and acquisition of access rights, such as easements or rights of way.

[3] A host community is any community receiving displaced persons.

3. To help avoid expropriation and eliminate the need to use governmental authority to enforce relocation, clients are encouraged to use negotiated settlements meeting the requirements of this Performance Standard, even if they have the legal means to acquire land without the seller's consent.

Objectives

- To avoid, and when avoidance is not possible, minimize displacement by exploring alternative project designs.
- To avoid forced eviction.
- To anticipate and avoid, or where avoidance is not possible, minimize adverse social and economic impacts from land acquisition or restrictions on land use by (i) providing compensation for loss of assets at replacement cost[4] and (ii) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected.
- To improve, or restore, the livelihoods and standards of living of displaced persons.
- To improve living conditions among physically displaced persons through the provision of adequate housing with security of tenure[5] at resettlement sites.

Scope of Application

4. The applicability of this Performance Standard is established during the environmental and social risks and impacts identification process. The implementation of the actions necessary to meet the requirements of this Performance Standard is managed through the client's Environmental and Social Management System, the elements of which are outlined in Performance Standard 1.

5. This Performance Standard applies to physical and/or economic displacement resulting from the following types of land-related transactions:

- Land rights or land use rights acquired through expropriation or other compulsory procedures in accordance with the legal system of the host country;
- Land rights or land use rights acquired through negotiated settlements with property owners or those with legal rights to the land if failure to reach settlement would have resulted in expropriation or other compulsory procedures;[6]
- Project situations where involuntary restrictions on land use and access to natural resources cause a community or groups within a community to lose access to resource usage where they have traditional or recognizable usage rights;[7]

[4] Replacement cost is defined as the market value of the assets plus transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. Market value is defined as the value required to allow Affected Communities and persons to replace lost assets with assets of similar value. The valuation method for determining replacement cost should be documented and included in applicable Resettlement and/or Livelihood Restoration plans (see paragraphs 18 and 25).

[5] Security of tenure means that resettled individuals or communities are resettled to a site that they can legally occupy and where they are protected from the risk of eviction.

[6] This also applies to customary or traditional rights recognized or recognizable under the laws of the host country. The negotiations may be carried out by the government or by the company (in some circumstances, as an agent of the government).

[7] In such situations, affected persons frequently do not have formal ownership. This may include freshwater and marine environments. This Performance Standard may also apply when project-related biodiversity areas or legally designated buffer zones are established but not acquired by the client.

- Certain project situations requiring evictions of people occupying land without formal, traditional, or recognizable usage rights;[8] or
- Restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, freshwater, medicinal plants, hunting and gathering grounds and grazing and cropping areas.[9]

6. This Performance Standard does not apply to resettlement resulting from voluntary land transactions (i.e., market transactions in which the seller is not obliged to sell and the buyer cannot resort to expropriation or other compulsory procedures sanctioned by the legal system of the host country if negotiations fail). It also does not apply to impacts on livelihoods where the project is not changing the land use of the affected groups or communities.[10]

7. Where project impacts on land, assets, or access to assets become significantly adverse at any stage of the project, the client should consider applying requirements of this Performance Standard, even where no land acquisition or land use restriction is involved.

[8] While some people do not have rights over the land they occupy, this Performance Standard requires that non land assets be retained, replaced, or compensated for; relocation take place with security of tenure; and lost livelihoods be restored.

[9] Natural resource assets referred to in this Performance Standard are equivalent to ecosystem provisioning services as described in Performance Standard 6.

[10] More generalized impacts on communities or groups of people are covered in Performance Standard 1. For example, disruption of access to mineral deposits by artisanal miners is covered by Performance Standard 1.

Requirements

General

Project Design

8. The client will consider feasible alternative project designs to avoid or minimize physical and/or economic displacement, while balancing environmental, social, and financial costs and benefits, paying particular attention to impacts on the poor and vulnerable.

Compensation and Benefits for Displaced Persons

9. When displacement cannot be avoided, the client will offer displaced communities and persons compensation for loss of assets at full replacement cost and other assistance[11] to help them improve or restore their standards of living or livelihoods, as provided in this Performance Standard. Compensation standards will be transparent and applied consistently to all communities and persons affected by the displacement. Where livelihoods of displaced persons are land-based,[12] or where land is collectively owned, the client will, where feasible,[13] offer the displaced land-based compensation. The client will take possession of acquired land and related assets only after compensation has been made available[14] and, where applicable, resettlement sites and moving allowances

[11] As described in paragraphs 19 and 26.

[12] The term "land-based" includes livelihood activities such as subsistence cropping and grazing of livestock as well as the harvesting of natural resources.

[13] Refer to paragraph 26 of this Performance Standard for further requirements.

[14] In certain cases it may not be feasible to pay compensation to all those affected before taking possession of the land, for example when the ownership of the land in question is in dispute. Such circumstances shall be identified and agreed on a case-by-case basis, and compensation funds shall be made available for example through deposit into an escrow account before displacement takes place.

have been provided to the displaced persons in addition to compensation.[15] The client will also provide opportunities to displaced communities and persons to derive appropriate development benefits from the project.

Community Engagement

10. The client will engage with Affected Communities, including host communities, through the process of stakeholder engagement described in Performance Standard 1. Decision-making processes related to resettlement and livelihood restoration should include options and alternatives, where applicable. Disclosure of relevant information and participation of Affected Communities and persons will continue during the planning, implementation, monitoring, and evaluation of compensation payments, livelihood restoration activities, and resettlement to achieve outcomes that are consistent with the objectives of this Performance Standard.[16] Additional provisions apply to consultations with Indigenous Peoples, in accordance with Performance Standard 7.

Grievance Mechanism

11. The client will establish a grievance mechanism consistent with Performance Standard 1 as early as possible in the project development phase. This will allow the client to receive and address specific concerns about compensation and relocation raised by displaced persons or members of host communities in a timely fashion, including a recourse mechanism designed to resolve disputes in an impartial manner.

Resettlement and Livelihood Restoration Planning and Implementation

12. Where involuntary resettlement is unavoidable, either as a result of a negotiated settlement or expropriation, a census will be carried out to collect appropriate socio-economic baseline data to identify the persons who will be displaced by the project, determine who will be eligible for compensation and assistance,[17] and discourage ineligible persons, such as opportunistic settlers, from claiming benefits. In the absence of host government procedures, the client will establish a cut off date for eligibility. Information regarding the cut-off date will be well documented and disseminated throughout the project area.

13. In cases where affected persons reject compensation offers that meet the requirements of this Performance Standard and, as a result, expropriation or other legal procedures are initiated, the client will explore opportunities to collaborate with the responsible government agency, and, if permitted by the agency, play an active role in resettlement planning, implementation, and monitoring (see paragraphs 30–32).

[15] Unless government-managed resettlement is involved and where the client has no direct influence over the timing of compensation payments. Such cases should be handled in accordance with paragraphs 27–29 of this Performance Standard. Staggered compensation payments may be made where one-off cash payments would demonstrably undermine social and/or resettlement objectives, or where there are ongoing impacts to livelihood activities.

[16] The consultation process should ensure that women's perspectives are obtained and their interests factored into all aspects of resettlement planning and implementation. Addressing livelihood impacts may require intra household analysis in cases where women's and men's livelihoods are affected differently. Women's and men's preferences in terms of compensation mechanisms, such as compensation in kind rather than in cash, should be explored.

[17] Documentation of ownership or occupancy and compensation arrangements should be issued in the names of both spouses or heads of households, and other resettlement assistance, such as skills training, access to credit, and job opportunities, should be equally available to women and adapted to their needs. Where national law and tenure systems do not recognize the rights of women to hold or contract in property, measures should be considered to provide women as much protection as possible with the objective to achieve equity with men.

14. The client will establish procedures to monitor and evaluate the implementation of a Resettlement Action Plan or Livelihood Restoration Plan (see paragraphs 19 and 25) and take corrective action as necessary. The extent of monitoring activities will be commensurate with the project's risks and impacts. For projects with significant involuntary resettlement risks, the client will retain competent resettlement professionals to provide advice on compliance with this Performance Standard and to verify the client's monitoring information. Affected persons will be consulted during the monitoring process.

15. Implementation of a Resettlement Action Plan or Livelihood Restoration Plan will be considered completed when the adverse impacts of resettlement have been addressed in a manner that is consistent with the relevant plan as well as the objectives of this Performance Standard. It may be necessary for the client to commission an external completion audit of the Resettlement Action Plan or Livelihood Restoration Plan to assess whether the provisions have been met, depending on the scale and/or complexity of physical and economic displacement associated with a project. The completion audit should be undertaken once all mitigation measures have been substantially completed and once displaced persons are deemed to have been provided adequate opportunity and assistance to sustainably restore their livelihoods. The completion audit will be undertaken by competent resettlement professionals once the agreed monitoring period is concluded. The completion audit will include, at a minimum, a review of the totality of mitigation measures implemented by the client, a comparison of implementation outcomes against agreed objectives, and a conclusion as to whether the monitoring process can be ended.[18]

16. Where the exact nature or magnitude of the land acquisition or restrictions on land use related to a project with potential to cause physical and/or economic displacement is unknown due to the stage of project development, the client will develop a Resettlement and/or Livelihood Restoration Framework outlining general principles compatible with this Performance Standard. Once the individual project components are defined and the necessary information becomes available, such a framework will be expanded into a specific Resettlement Action Plan or Livelihood Restoration Plan and procedures in accordance with paragraphs 19 and 25 below.

Displacement

17. Displaced persons may be classified as persons (i) who have formal legal rights to the land or assets they occupy or use; (ii) who do not have formal legal rights to land or assets, but have a claim to land that is recognized or recognizable under national law;[19] or (iii) who have no recognizable legal right or claim to the land or assets they

[18] The completion audit of the Resettlement Action Plan and/or Livelihood Restoration Plan, will be undertaken by external resettlement experts once the agreed monitoring period is concluded, and will involve a more in-depth assessment than regular resettlement monitoring activities, including at a minimum a review of all mitigation measures with respect to the physical and/or economic displacement implemented by the Client, a comparison of implementation outcomes against agreed objectives, a conclusion as to whether the monitoring process can be ended and, where necessary, a Corrective Action Plan listing outstanding actions necessary to met the objectives.

[19] Such claims could be derived from adverse possession or from customary or traditional tenure arrangements.

occupy or use. The census will establish the status of the displaced persons.

18. Project-related land acquisition and/or restrictions on land use may result in the physical displacement of people as well as their economic displacement. Consequently, requirements of this Performance Standard in respect of physical displacement and economic displacement may apply simultaneously.[20]

Physical Displacement

19. In the case of physical displacement, the client will develop a Resettlement Action Plan that covers, at a minimum, the applicable requirements of this Performance Standard regardless of the number of people affected. This will include compensation at full replacement cost for land and other assets lost. The Plan will be designed to mitigate the negative impacts of displacement; identify development opportunities; develop a resettlement budget and schedule; and establish the entitlements of all categories of affected persons (including host communities). Particular attention will be paid to the needs of the poor and the vulnerable. The client will document all transactions to acquire land rights, as well as compensation measures and relocation activities.

20. If people living in the project area are required to move to another location, the client will (i) offer displaced persons choices among feasible resettlement options, including adequate replacement housing or cash compensation where appropriate; and (ii) provide relocation assistance suited to the needs of each group of displaced persons. New resettlement sites built for displaced persons must offer improved living conditions. The displaced persons' preferences with respect to relocating in preexisting communities and groups will be taken into consideration. Existing social and cultural institutions of the displaced persons and any host communities will be respected.

21. In the case of physically displaced persons under paragraph 17 (i) or (ii), the client will offer the choice of replacement property of equal or higher value, security of tenure, equivalent or better characteristics, and advantages of location or cash compensation where appropriate. Compensation in kind should be considered in lieu of cash. Cash compensation levels should be sufficient to replace the lost land and other assets at full replacement cost in local markets.[21]

22. In the case of physically displaced persons under paragraph 17 (iii), the client will offer them a choice of options for adequate housing with security of tenure so that they can resettle legally without having to face the risk of forced eviction. Where these displaced persons own and occupy structures, the client will compensate them for the loss of assets other than land, such as dwellings and other improvements to the land, at full replacement cost, provided that these persons have been occupying the project area prior to the cut-off date for eligibility. Based on consultation with such displaced persons,

[20] Where a project results in both physical and economic displacement, the requirements of paragraphs 25 and 26 (Economic Displacement) should be incorporated into the Resettlement Action Plan or Framework (i.e., there is no need to have a separate Resettlement Action Plan and Livelihood Restoration Plan).

[21] Payment of cash compensation for lost assets may be appropriate where (i) livelihoods are not land-based; (ii) livelihoods are land-based but the land taken for the project is a small fraction of the affected asset and the residual land is economically viable; or (iii) active markets for land, housing, and labor exist, displaced persons use such markets, and there is sufficient supply of land and housing.

the client will provide relocation assistance sufficient for them to restore their standard of living at an adequate alternative site.[22]

23. The client is not required to compensate or assist those who encroach on the project area after the cut-off date for eligibility, provided the cut-off date has been clearly established and made public.

24. Forced evictions[23] will not be carried out except in accordance with law and the requirements of this Performance Standard.

Economic Displacement

25. In the case of projects involving economic displacement only, the client will develop a Livelihood Restoration Plan to compensate affected persons and/or communities and offer other assistance that meet the objectives of this Performance Standard. The Livelihood Restoration Plan will establish the entitlements of affected persons and/or communities and will ensure that these are provided in a transparent, consistent, and equitable manner. The mitigation of economic displacement will be considered complete when affected persons or communities have received compensation and other assistance according to the requirements of the Livelihood Restoration Plan and this Performance Standard, and are deemed to have been provided with adequate opportunity to reestablish their livelihoods.

26. If land acquisition or restrictions on land use result in economic displacement defined as loss of assets and/or means of livelihood, regardless of whether or not the affected people are physically displaced, the client will meet the requirements in paragraphs 27–29 below, as applicable.

27. Economically displaced persons who face loss of assets or access to assets will be compensated for such loss at full replacement cost.

- In cases where land acquisition or restrictions on land use affect commercial structures, affected business owners will be compensated for the cost of reestablishing commercial activities elsewhere, for lost net income during the period of transition, and for the costs of the transfer and reinstallation of the plant, machinery, or other equipment.
- In cases affecting persons with legal rights or claims to land which are recognized or recognizable under national law (see paragraph 17 (i) and (ii)), replacement property (e.g., agricultural or commercial sites) of equal or greater value will be provided, or, where appropriate, cash compensation at full replacement cost.
- Economically displaced persons who are without legally recognizable claims to land (see paragraph 17 (iii)) will be compensated for lost assets other than land (such as crops, irrigation infrastructure and other improvements made to the land), at full replacement cost. The client is not required to compensate or assist opportunistic settlers who encroach on the project area after the cut-off date for eligibility.

[22] Relocation of informal settlers in urban areas may involve trade-offs. For example, the relocated families may gain security of tenure, but they may lose advantages of location. Changes in location that may affect livelihood opportunities should be addressed in accordance with the principles of this Performance Standard (see in particular paragraph 25).

[23] The permanent or temporary removal against the will of individuals, families, and/or communities from the homes and/or lands which they occupy without the provision of, and access to, appropriate forms of legal and other protection.

28. In addition to compensation for lost assets, if any, as required under paragraph 27, economically displaced persons whose livelihoods or income levels are adversely affected will also be provided opportunities to improve, or at least restore, their means of income-earning capacity, production levels, and standards of living:

- For persons whose livelihoods are land-based, replacement land that has a combination of productive potential, locational advantages, and other factors at least equivalent to that being lost should be offered as a matter of priority.
- For persons whose livelihoods are natural resource-based and where project related restrictions on access envisaged in paragraph 5 apply, implementation of measures will be made to either allow continued access to affected resources or provide access to alternative resources with equivalent livelihood-earning potential and accessibility. Where appropriate, benefits and compensation associated with natural resource usage may be collective in nature rather than directly oriented towards individuals or households.
- If circumstances prevent the client from providing land or similar resources as described above, alternative income earning opportunities may be provided, such as credit facilities, training, cash, or employment opportunities. Cash compensation alone, however, is frequently insufficient to restore livelihoods.

29. Transitional support should be provided as necessary to all economically displaced persons, based on a reasonable estimate of the time required to restore their income-earning capacity, production levels, and standards of living.

Private Sector Responsibilities Under Government-Managed Resettlement

30. Where land acquisition and resettlement are the responsibility of the government, the client will collaborate with the responsible government agency, to the extent permitted by the agency, to achieve outcomes that are consistent with this Performance Standard. In addition, where government capacity is limited, the client will play an active role during resettlement planning, implementation, and monitoring, as described below.

31. In the case of acquisition of land rights or access to land through compulsory means or negotiated settlements involving physical displacement, the client will identify and describe[24] government resettlement measures. If these measures do not meet the relevant requirements of this Performance Standard, the client will prepare a Supplemental Resettlement Plan that, together with the documents prepared by the responsible government agency, will address the relevant requirements of this Performance Standard (the General Requirements and requirements for Physical Displacement and Economic Displacement above). The client will need to include in its Supplemental Resettlement Plan, at a minimum (i) identification of affected people and impacts; (ii) a description of regulated

[24] Government documents, where available, may be used to identify such measures.

activities, including the entitlements of displaced persons provided under applicable national laws and regulations; (iii) the supplemental measures to achieve the requirements of this Performance Standard as described in paragraphs 19–29 in a way that is permitted by the responsible agency and implementation time schedule; and (iv) the financial and implementation responsibilities of the client in the execution of its Supplemental Resettlement Plan.

32. In the case of projects involving economic displacement only, the client will identify and describe the measures that the responsible government agency plans to use to compensate Affected Communities and persons. If these measures do not meet the relevant requirements of this Performance Standard, the client will develop an Environmental and Social Action Plan to complement government action. This may include additional compensation for lost assets, and additional efforts to restore lost livelihoods where applicable.

Performance Standard 6

Biodiversity Conservation and Sustainable Management of Living Natural Resources

Introduction

1. Performance Standard 6 recognizes that protecting and conserving biodiversity, maintaining ecosystem services, and sustainably managing living natural resources are fundamental to sustainable development. The requirements set out in this Performance Standard have been guided by the Convention on Biological Diversity, which defines biodiversity as "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems."

2. Ecosystem services are the benefits that people, including businesses, derive from ecosystems. Ecosystem services are organized into four types: (i) provisioning services, which are the products people obtain from ecosystems; (ii) regulating services, which are the benefits people obtain from the regulation of ecosystem processes; (iii) cultural services, which are the nonmaterial benefits people obtain from ecosystems; and (iv) supporting services, which are the natural processes that maintain the other services.[1]

3. Ecosystem services valued by humans are often underpinned by biodiversity. Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem services. This Performance Standard addresses how clients can sustainably manage and mitigate impacts on biodiversity and ecosystem services throughout the project's lifecycle.

- To protect and conserve biodiversity.
- To maintain the benefits from ecosystem services.
- To promote the sustainable management of living natural resources through the adoption of practices that integrate conservation needs and development priorities.

[1] Examples are as follows: (i) provisioning services may include food, freshwater, timber, fibers, medicinal plants; (ii) regulating services may include surface water purification, carbon storage and sequestration, climate regulation, protection from natural hazards; (iii) cultural services may include natural areas that are sacred sites and areas of importance for recreation and aesthetic enjoyment; and (iv) supporting services may include soil formation, nutrient cycling, primary production.

Scope of Application

4. The applicability of this Performance Standard is established during the environmental and social risks and impacts identification process. The implementation of the actions necessary to meet the requirements of this Performance Standard is managed through the client's Environmental and Social Management System (ESMS), the elements of which are outlined in Performance Standard 1.

5. Based on the risks and impacts identification process, the requirements of this Performance Standard are applied to projects (i) located in modified, natural, and critical habitats; (ii) that potentially impact on or are dependent on ecosystem services over which the client has direct management control or significant influence; or (iii) that include the production of living natural resources (e.g., agriculture, animal husbandry, fisheries, forestry).

Requirements

General

6. The risks and impacts identification process as set out in Performance Standard 1 should consider direct and indirect project-related impacts on biodiversity and ecosystem services and identify any significant residual impacts. This process will consider relevant threats to biodiversity and ecosystem services, especially focusing on habitat loss, degradation and fragmentation, invasive alien species, overexploitation, hydrological changes, nutrient loading, and pollution. It will also take into account the differing values attached to biodiversity and ecosystem services by Affected Communities and, where appropriate, other stakeholders. Where paragraphs 13–19 are applicable, the client should consider project-related impacts across the potentially affected landscape or seascape.

7. As a matter of priority, the client should seek to avoid impacts on biodiversity and ecosystem services. When avoidance of impacts is not possible, measures to minimize impacts and restore biodiversity and ecosystem services should be implemented. Given the complexity in predicting project impacts on biodiversity and ecosystem services over the long term, the client should adopt a practice of adaptive management in which the implementation of mitigation and management measures are responsive to changing conditions and the results of monitoring throughout the project's lifecycle.

8. Where paragraphs 13–15 are applicable, the client will retain competent professionals to assist in conducting the risks and impacts identification process. Where paragraphs 16–19 are applicable, the client should retain external experts with appropriate regional experience to assist in the development of a mitigation hierarchy that complies with this Performance Standard and to verify the implementation of those measures.

Protection and Conservation of Biodiversity

9. Habitat is defined as a terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the non-living environment. For the purposes of implementation of this Performance Standard, habitats are divided into modified, natural, and critical. Critical habitats are a subset of modified or natural habitats.

10. For the protection and conservation of biodiversity, the mitigation hierarchy includes biodiversity offsets, which may be considered only after appropriate avoidance, minimization, and restoration measures have been applied.[2] A biodiversity offset should be designed and implemented to achieve measurable conservation outcomes[3] that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity; however, a net gain is required in critical habitats. The design of a biodiversity offset must adhere to the "like-for-like or better" principle[4] and must be carried out in alignment with best available information and current practices. When a client is considering the development of an offset as part of the mitigation strategy, external experts with knowledge in offset design and implementation must be involved.

Modified Habitat

11. Modified habitats are areas that may contain a large proportion of plant and/or animal species of non-native origin, and/or where human activity has substantially modified an area's primary ecological functions and species composition.[5] Modified habitats may include areas managed for agriculture, forest plantations, reclaimed[6] coastal zones, and reclaimed wetlands.

12. This Performance Standard applies to those areas of modified habitat that include significant biodiversity value, as determined by the risks and impacts identification process required in Performance Standard 1. The client should minimize impacts on such biodiversity and implement mitigation measures as appropriate.

Natural Habitat

13. Natural habitats are areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition.

14. The client will not significantly convert or degrade[7] natural habitats, unless all of the following are demonstrated:

- No other viable alternatives within the region exist for development of the project on modified habitat;
- Consultation has established the views of stakeholders, including Affected

[2] Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development and persisting after appropriate avoidance, minimization and restoration measures have been taken.

[3] Measurable conservation outcomes for biodiversity must be demonstrated in situ (on-the-ground) and on an appropriate geographic scale (e.g., local, landscape-level, national, regional).

[4] The principle of "like-for-like or better" indicates that biodiversity offsets must be designed to conserve the same biodiversity values that are being impacted by the project (an "in-kind" offset). In certain situations, however, areas of biodiversity to be impacted by the project may be neither a national nor a local priority, and there may be other areas of biodiversity with like values that are a higher priority for conservation and sustainable use and under imminent threat or need of protection or effective management. In these situations, it may be appropriate to consider an "out-of-kind" offset that involves "trading up" (i.e., where the offset targets biodiversity of higher priority than that affected by the project) that will, for critical habitats, meet the requirements of paragraph 17 of this Performance Standard.

[5] This excludes habitat that has been converted in anticipation of the project.

[6] Reclamation as used in this context is the process of creating new land from sea or other aquatic areas for productive use.

[7] Significant conversion or degradation is (i) the elimination or severe diminution of the integrity of a habitat caused by a major and/or long-term change in land or water use; or (ii) a modification that substantially minimizes the habitat's ability to maintain viable populations of its native species.

Communities, with respect to the extent of conversion and degradation;[8] and
- Any conversion or degradation is mitigated according to the mitigation hierarchy.

15. In areas of natural habitat, mitigation measures will be designed to achieve no net loss[9] of biodiversity where feasible. Appropriate actions include:

- Avoiding impacts on biodiversity through the identification and protection of set asides;[10]
- Implementing measures to minimize habitat fragmentation, such as biological corridors;
- Restoring habitats during operations and/or after operations; and
- Implementing biodiversity offsets.

Critical Habitat

16. Critical habitats are areas with high biodiversity value, including (i) habitat of significant importance to Critically Endangered and/or Endangered[11] species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes.

17. In areas of critical habitat, the client will not implement any project activities unless all of the following are demonstrated:

- No other viable alternatives within the region exist for development of the project on modified or natural habitats that are not critical;
- The project does not lead to measurable adverse impacts on those biodiversity values for which the critical habitat was designated, and on the ecological processes supporting those biodiversity values;[12]
- The project does not lead to a net reduction in the global and/or national/

[8] Conducted as part of the stakeholder engagement and consultation process, as described in Performance Standard 1.

[9] No net loss is defined as the point at which project-related impacts on biodiversity are balanced by measures taken to avoid and minimize the project's impacts, to undertake on-site restoration and finally to offset significant residual impacts, if any, on an appropriate geographic scale (e.g., local, landscape-level, national, regional).

[10] Set-asides are land areas within the project site, or areas over which the client has management control, that are excluded from development and are targeted for the implementation of conservation enhancement measures. Set-asides will likely contain significant biodiversity values and/or provide ecosystem services of significance at the local, national and/or regional level. Set-asides should be defined using internationally recognized approaches or methodologies (e.g., High Conservation Value, systematic conservation planning).

[11] As listed on the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species. The determination of critical habitat based on other listings is as follows: (i) If the species is listed nationally / regionally as critically endangered or endangered, in countries that have adhered to IUCN guidance, the critical habitat determination will be made on a project by project basis in consultation with competent professionals; and (ii) in instances where nationally or regionally listed species' categorizations do not correspond well to those of the IUCN (e.g., some countries more generally list species as "protected" or "restricted"), an assessment will be conducted to determine the rationale and purpose of the listing. In this case, the critical habitat determination will be based on such an assessment.

[12] Biodiversity values and their supporting ecological processes will be determined on an ecologically relevant scale.

regional population[13] of any Critically Endangered or Endangered species over a reasonable period of time;[14] and

- A robust, appropriately designed, and long-term biodiversity monitoring and evaluation program is integrated into the client's management program.

18. In such cases where a client is able to meet the requirements defined in paragraph 17, the project's mitigation strategy will be described in a Biodiversity Action Plan and will be designed to achieve net gains[15] of those biodiversity values for which the critical habitat was designated.

19. In instances where biodiversity offsets are proposed as part of the mitigation strategy, the client must demonstrate through an assessment that the project's significant residual impacts on biodiversity will be adequately mitigated to meet the requirements of paragraph 17.

Legally Protected and Internationally Recognized Areas

20. In circumstances where a proposed project is located within a legally protected area[16] or an internationally recognized area,[17] the client will meet the requirements of paragraphs 13 through 19 of this Performance Standard, as applicable. In addition, the client will:

- Demonstrate that the proposed development in such areas is legally permitted;
- Act in a manner consistent with any government recognized management plans for such areas;
- Consult protected area sponsors and managers, Affected Communities, Indigenous Peoples and other stakeholders on the proposed project, as appropriate; and
- Implement additional programs, as appropriate, to promote and enhance the conservation aims and effective management of the area.[18]

Invasive Alien Species

21. Intentional or accidental introduction of alien, or non-native, species of flora and fauna into areas where they are not normally found can be a significant threat to biodiversity, since some alien species can become invasive, spreading rapidly and out-competing native species.

[13] Net reduction is a singular or cumulative loss of individuals that impacts on the species' ability to persist at the global and/or regional/national scales for many generations or over a long period of time. The scale (i.e., global and/or regional/national) of the potential net reduction is determined based on the species' listing on either the (global) IUCN Red List and/or on regional/national lists. For species listed on both the (global) IUCN Red List and the national/regional lists, the net reduction will be based on the national/regional population.

[14] The timeframe in which clients must demonstrate "no net reduction" of Critically Endangered and Endangered species will be determined on a case-by-case basis in consultation with external experts.

[15] Net gains are additional conservation outcomes that can be achieved for the biodiversity values for which the critical habitat was designated. Net gains may be achieved through the development of a biodiversity offset and/or, in instances where the client could meet the requirements of paragraph 17 of this Performance Standard without a biodiversity offset, the client should achieve net gains through the implementation of programs that could be implemented in situ (on-the-ground) to enhance habitat, and protect and conserve biodiversity.

[16] This Performance Standard recognizes legally protected areas that meet the IUCN definition: "A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." For the purposes of this Performance Standard, this includes areas proposed by governments for such designation.

[17] Exclusively defined as UNESCO Natural World Heritage Sites, UNESCO Man and the Biosphere Reserves, Key Biodiversity Areas, and wetlands designated under the Convention on Wetlands of International Importance (the Ramsar Convention).

[18] Implementing additional programs may not be necessary for projects that do not create a new footprint.

22. The client will not intentionally introduce any new alien species (not currently established in the country or region of the project) unless this is carried out in accordance with the existing regulatory framework for such introduction. Notwithstanding the above, the client will not deliberately introduce any alien species with a high risk of invasive behavior regardless of whether such introductions are permitted under the existing regulatory framework. All introductions of alien species will be subject to a risk assessment (as part of the client's environmental and social risks and impacts identification process) to determine the potential for invasive behavior. The client will implement measures to avoid the potential for accidental or unintended introductions including the transportation of substrates and vectors (such as soil, ballast, and plant materials) that may harbor alien species.

23. Where alien species are already established in the country or region of the proposed project, the client will exercise diligence in not spreading them into areas in which they have not already been established. As practicable, the client should take measures to eradicate such species from the natural habitats over which they have management control.

Management of Ecosystem Services

24. Where a project is likely to adversely impact ecosystem services, as determined by the risks and impacts identification process, the client will conduct a systematic review to identify priority ecosystem services. Priority ecosystem services are two-fold: (i) those services on which project operations are most likely to have an impact and, therefore, which result in adverse impacts to Affected Communities; and/or (ii) those services on which the project is directly dependent for its operations (e.g., water). When Affected Communities are likely to be impacted, they should participate in the determination of priority ecosystem services in accordance with the stakeholder engagement process as defined in Performance Standard 1.

25. With respect to impacts on priority ecosystem services of relevance to Affected Communities and where the client has direct management control or significant influence over such ecosystem services, adverse impacts should be avoided. If these impacts are unavoidable, the client will minimize them and implement mitigation measures that aim to maintain the value and functionality of priority services. With respect to impacts on priority ecosystem services on which the project depends, clients should minimize impacts on ecosystem services and implement measures that increase resource efficiency of their operations, as described in Performance Standard 3. Additional provisions for ecosystem services are included in Performance Standards 4, 5, 7, and 8.[19]

Sustainable Management of Living Natural Resources

26. Clients who are engaged in the primary production of living natural resources, including natural and plantation forestry, agriculture, animal husbandry, aquaculture, and fisheries, will be subject to the requirements of paragraphs 26 through 30, in addition to the rest of this Performance Standard. Where feasible, the client will locate land-based agribusiness and forestry projects on unforested land or land already converted. Clients who are

[19] Ecosystem service references are located in Performance Standard 4, paragraph 8; Performance Standard 5, paragraphs 5 and 25–29; Performance Standard 7, paragraphs 13–17 and 20; and Performance Standard 8, paragraph 11.

engaged in such industries will manage living natural resources in a sustainable manner, through the application of industry-specific good management practices and available technologies. Where such primary production practices are codified in globally, regionally, or nationally recognized standards, the client will implement sustainable management practices to one or more relevant and credible standards as demonstrated by independent verification or certification.

27. Credible globally, regionally, or nationally recognized standards for sustainable management of living natural resources are those which (i) are objective and achievable; (ii) are founded on a multi stakeholder consultative process; (iii) encourage step-wise and continual improvements; and (iv) provide for independent verification or certification through appropriate accredited bodies for such standards.[20]

28. Where relevant and credible standard(s) exist, but the client has not yet obtained independent verification or certification to such standard(s), the client will conduct a pre-assessment of its conformity to the applicable standard(s) and take actions to achieve such verification or certification over an appropriate period of time.

29. In the absence of a relevant and credible global, regional, or national standard for the particular living natural resource in the country concerned, the client will:

- Commit to applying good international industry operating principles, management practices, and technologies; and
- Actively engage and support the development of a national standard, where relevant, including studies that contribute to the definition and demonstration of sustainable practices.

Supply Chain

30. Where a client is purchasing primary production (especially but not exclusively food and fiber commodities) that is known to be produced in regions where there is a risk of significant conversion of natural and/or critical habitats, systems and verification practices will be adopted as part of the client's ESMS to evaluate its primary suppliers.[21] The systems and verification practices will (i) identify where the supply is coming from and the habitat type of this area; (ii) provide for an ongoing review of the client's primary supply chains; (iii) limit procurement to those suppliers that can demonstrate that they are not contributing to significant conversion of natural and/or critical habitats (this may be demonstrated by delivery of certified product, or progress towards verification or certification under a credible scheme in certain commodities and/or locations); and (iv) where possible, require actions to shift the client's primary supply chain over time to suppliers that can demonstrate that they are not significantly adversely impacting these areas. The ability of the client to fully address these risks will depend upon the client's level of management control or influence over its primary suppliers.

[20] A credible certification system would be one which is independent, cost-effective, based on objective and measurable performance standards and developed through consultation with relevant stakeholders, such as local people and communities, Indigenous Peoples, and civil society organizations representing consumer, producer and conservation interests. Such a system has fair, transparent and independent decision-making procedures that avoid conflicts of interest.

[21] Primary suppliers are those suppliers who, on an ongoing basis, provide the majority of living natural resources, goods, and materials essential for the core business processes of the project.

Performance Standard 7

Indigenous Peoples

Introduction

1. Performance Standard 7 recognizes that Indigenous Peoples, as social groups with identities that are distinct from mainstream groups in national societies, are often among the most marginalized and vulnerable segments of the population. In many cases, their economic, social, and legal status limits their capacity to defend their rights to, and interests in, lands and natural and cultural resources, and may restrict their ability to participate in and benefit from development. Indigenous Peoples are particularly vulnerable if their lands and resources are transformed, encroached upon, or significantly degraded. Their languages, cultures, religions, spiritual beliefs, and institutions may also come under threat. As a consequence, Indigenous Peoples may be more vulnerable to the adverse impacts associated with project development than non-indigenous communities. This vulnerability may include loss of identity, culture, and natural resource-based livelihoods, as well as exposure to impoverishment and diseases.

2. Private sector projects can create opportunities for Indigenous Peoples to participate in, and benefit from project-related activities that may help them fulfill their aspiration for economic and social development. Furthermore, Indigenous Peoples may play a role in sustainable development by promoting and managing activities and enterprises as partners in development. Government often plays a central role in the management of Indigenous Peoples' issues, and clients should collaborate with the responsible authorities in managing the risks and impacts of their activities.[1]

Objectives

- To ensure that the development process fosters full respect for the human rights, dignity, aspirations, culture, and natural resource-based livelihoods of Indigenous Peoples.
- To anticipate and avoid adverse impacts of projects on communities of Indigenous Peoples, or when avoidance is not possible, to minimize and/or compensate for such impacts.
- To promote sustainable development benefits and opportunities for Indigenous Peoples in a culturally appropriate manner.
- To establish and maintain an ongoing relationship based on Informed Consultation and Participation (ICP) with the Indigenous Peoples affected by a project throughout the project's life-cycle.
- To ensure the Free, Prior, and Informed Consent (FPIC) of the Affected Communities of Indigenous Peoples when the circumstances described in this Performance Standard are present.

[1] In addition to meeting the requirements under this Performance Standard, clients must comply with applicable national law, including those laws implementing host country obligations under international law.

- To respect and preserve the culture, knowledge, and practices of Indigenous Peoples.

Scope of Application

3. The applicability of this Performance Standard is established during the environmental and social risks and impacts identification process. The implementation of the actions necessary to meet the requirements of this Performance Standard is managed through the client's Environmental and Social Management System, the elements of which are outlined in Performance Standard 1.

4. There is no universally accepted definition of "Indigenous Peoples." Indigenous Peoples may be referred to in different countries by such terms as "Indigenous ethnic minorities," "aboriginals," "hill tribes," "minority nationalities," "scheduled tribes," "first nations," or "tribal groups."

5. In this Performance Standard, the term "Indigenous Peoples" is used in a generic sense to refer to a distinct social and cultural group possessing the following characteristics in varying degrees:

- Self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- Collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories;
- Customary cultural, economic, social, or political institutions that are separate from those of the mainstream society or culture; or
- A distinct language or dialect, often different from the official language or languages of the country or region in which they reside.

6. This Performance Standard applies to communities or groups of Indigenous Peoples who maintain a collective attachment, i.e., whose identity as a group or community is linked, to distinct habitats or ancestral territories and the natural resources therein. It may also apply to communities or groups that have lost collective attachment to distinct habitats or ancestral territories in the project area, occurring within the concerned group members' lifetime, because of forced severance, conflict, government resettlement programs, dispossession of their lands, natural disasters, or incorporation of such territories into an urban area.

7. The client may be required to seek inputs from competent professionals to ascertain whether a particular group is considered as Indigenous Peoples for the purpose of this Performance Standard.

Requirements

General

Avoidance of Adverse Impacts

8. The client will identify, through an environmental and social risks and impacts assessment process, all communities of Indigenous Peoples within the project area of influence who may be affected by the project, as well as the nature and degree of the expected direct and indirect economic, social, cultural (including cultural heritage[2]), and environmental impacts on them.

[2] Additional requirements on protection of cultural heritage are set out in Performance Standard 8.

9. Adverse impacts on Affected Communities of Indigenous Peoples should be avoided where possible. Where alternatives have been explored and adverse impacts are unavoidable, the client will minimize, restore, and/or compensate for these impacts in a culturally appropriate manner commensurate with the nature and scale of such impacts and the vulnerability of the Affected Communities of Indigenous Peoples. The client's proposed actions will be developed with the ICP of the Affected Communities of Indigenous Peoples and contained in a time-bound plan, such as an Indigenous Peoples Plan, or a broader community development plan with separate components for Indigenous Peoples.[3]

Participation and Consent

10. The client will undertake an engagement process with the Affected Communities of Indigenous Peoples as required in Performance Standard 1. This engagement process includes stakeholder analysis and engagement planning, disclosure of information, consultation, and participation, in a culturally appropriate manner. In addition, this process will:

- Involve Indigenous Peoples' representative bodies and organizations (e.g., councils of elders or village councils), as well as members of the Affected Communities of Indigenous Peoples; and
- Provide sufficient time for Indigenous Peoples' decision-making processes.[4]

11. Affected Communities of Indigenous Peoples may be particularly vulnerable to the loss of, alienation from or exploitation of their land and access to natural and cultural resources.[5] In recognition of this vulnerability, in addition to the General Requirements of this Performance Standard, the client will obtain the FPIC of the Affected Communities of Indigenous Peoples in the circumstances described in paragraphs 13–17 of this Performance Standard. FPIC applies to project design, implementation, and expected outcomes related to impacts affecting the communities of Indigenous Peoples. When any of these circumstances apply, the client will engage external experts to assist in the identification of the project risks and impacts.

12. There is no universally accepted definition of FPIC. For the purposes of Performance Standards 1, 7, and 8, "FPIC" has the meaning described in this paragraph. FPIC builds on and expands the process of ICP described in Performance Standard 1 and will be established through good faith negotiation between the client and the Affected Communities of Indigenous Peoples. The client will document: (i) the mutually accepted process between the client and Affected Communities of Indigenous Peoples, and (ii) evidence of agreement between the parties as the outcome of the negotiations. FPIC does not necessarily require unanimity and may be achieved even when individuals or groups within the community explicitly disagree.

[3] The determination of the appropriate plan may require the input of competent professionals. A community development plan may be appropriate in circumstances where Indigenous Peoples are a part of larger Affected Communities.

[4] Internal decision making processes are generally but not always collective in nature. There may be internal dissent, and decisions may be challenged by some in the community. The consultation process should be sensitive to such dynamics and allow sufficient time for internal decision making processes to reach conclusions that are considered legitimate by the majority of the concerned participants.

[5] Natural resources and natural areas with cultural value referred to in this Performance Standard are equivalent to ecosystem provisioning and cultural services as described in Performance Standard 6.

Circumstances Requiring Free, Prior, and Informed Consent

Impacts on Lands and Natural Resources Subject to Traditional Ownership or Under Customary Use

13. Indigenous Peoples are often closely tied to their lands and related natural resources.[6] Frequently, these lands are traditionally owned or under customary use.[7] While Indigenous Peoples may not possess legal title to these lands as defined by national law, their use of these lands, including seasonal or cyclical use, for their livelihoods, or cultural, ceremonial, and spiritual purposes that define their identity and community, can often be substantiated and documented.

14. If the client proposes to locate a project on, or commercially develop natural resources on lands traditionally owned by, or under the customary use of, Indigenous Peoples, and adverse impacts[8] can be expected, the client will take the following steps:

- Document efforts to avoid and otherwise minimize the area of land proposed for the project;
- Document efforts to avoid and otherwise minimize impacts on natural resources and natural areas of importance[9] to Indigenous People;
- Identify and review all property interests and traditional resource uses prior to purchasing or leasing land;
- Assess and document the Affected Communities of Indigenous Peoples' resource use without prejudicing any Indigenous Peoples' land claim.[10] The assessment of land and natural resource use should be gender inclusive and specifically consider women's role in the management and use of these resources;
- Ensure that Affected Communities of Indigenous Peoples are informed of their land rights under national law, including any national law recognizing customary use rights; and
- Offer Affected Communities of Indigenous Peoples compensation and due process in the case of commercial development of their land and natural resources, together with culturally appropriate sustainable development opportunities, including:
  - Providing land-based compensation or compensation-in-kind in lieu of cash compensation where feasible.[11]

[6] Examples include marine and aquatic resources timber, and non-timber forest products, medicinal plants, hunting and gathering grounds, and grazing and cropping areas. Natural resource assets, as referred to in this Performance Standard, are equivalent to provisioning ecosystem services as described in Performance Standard 6.

[7] The acquisition and/or leasing of lands with legal title is addressed in Performance Standard 5: Land Acquisition and Involuntary Resettlement.

[8] Such adverse impacts may include impacts from loss of access to assets or resources or restrictions on land use resulting from project activities.

[9] "Natural resources and natural areas of importance" as referred to in this Performance Standard are equivalent to priority ecosystem services as defined in Performance Standard 6. They refer to those services over which the client has direct management control or significant influence, and those services most likely to be sources of risk in terms of impacts on Affected Communities of Indigenous Peoples.

[10] While this Performance Standard requires substantiation and documentation of the use of such land, clients should also be aware that the land may already be under alternative use, as designated by the host government.

[11] If circumstances prevent the client from offering suitable replacement land, the client must provide verification that such is the case. Under such circumstances, the client will provide non land-based income-earning opportunities over and above cash compensation to the Affected Communities of Indigenous Peoples.

- Ensuring continued access to natural resources, identifying the equivalent replacement resources, or, as a last option, providing compensation and identifying alternative livelihoods if project development results in the loss of access to and the loss of natural resources independent of project land acquisition.
- Ensuring fair and equitable sharing of benefits associated with project usage of the resources where the client intends to utilize natural resources that are central to the identity and livelihood of Affected Communities of Indigenous Peoples and their usage thereof exacerbates livelihood risk.
- Providing Affected Communities of Indigenous Peoples with access, usage, and transit on land it is developing subject to overriding health, safety, and security considerations.

Relocation of Indigenous Peoples from Lands and Natural Resources Subject to Traditional Ownership or Under Customary Use

15. The client will consider feasible alternative project designs to avoid the relocation of Indigenous Peoples from communally held[12] lands and natural resources subject to traditional ownership or under customary use. If such relocation is unavoidable the client will not proceed with the project unless FPIC has been obtained as described above. Any relocation of Indigenous Peoples will be consistent with the requirements of Performance Standard 5. Where feasible, the relocated Indigenous Peoples should be able to return to their traditional or customary lands, should the cause of their relocation cease to exist.

Critical Cultural Heritage

16. Where a project may significantly impact on critical cultural heritage[13] that is essential to the identity and/or cultural, ceremonial, or spiritual aspects of Indigenous Peoples lives, priority will be given to the avoidance of such impacts. Where significant project impacts on critical cultural heritage are unavoidable, the client will obtain the FPIC of the Affected Communities of Indigenous Peoples.

17. Where a project proposes to use the cultural heritage including knowledge, innovations, or practices of Indigenous Peoples for commercial purposes, the client will inform the Affected Communities of Indigenous Peoples of (i) their rights under national law; (ii) the scope and nature of the proposed commercial development; (iii) the potential consequences of such development; and (iv) obtain their FPIC. The client will also ensure fair and equitable sharing of benefits from commercialization of such knowledge, innovation, or practice, consistent with the customs and traditions of the Indigenous Peoples.

[12] Typically, Indigenous Peoples claim rights and access to, and use of land and resources through traditional or customary systems, many of which entail communal property rights. These traditional claims to land and resources may not be recognized under national laws. Where members of the Affected Communities of Indigenous Peoples individually hold legal title, or where the relevant national law recognizes customary rights for individuals, the requirements of Performance Standard 5 will apply, rather than the requirements under paragraph 17 of this Performance Standard.

[13] Includes natural areas with cultural and/or spiritual value such as sacred groves, sacred bodies of water and waterways, sacred trees, and sacred rocks. Natural areas with cultural value are equivalent to priority ecosystem cultural services as defined in Performance Standard 6.

Mitigation and Development Benefits

18. The client and the Affected Communities of Indigenous Peoples will identify mitigation measures in alignment with the mitigation hierarchy described in Performance Standard 1 as well as opportunities for culturally appropriate and sustainable development benefits. The client will ensure the timely and equitable delivery of agreed measures to the Affected Communities of Indigenous Peoples.

19. The determination, delivery, and distribution of compensation and other benefit sharing measures to the Affected Communities of Indigenous Peoples will take account of the laws, institutions, and customs of these communities as well as their level of interaction with mainstream society. Eligibility for compensation can either be individually or collectively-based, or be a combination of both.[14] Where compensation occurs on a collective basis, mechanisms that promote the effective delivery and distribution of compensation to all eligible members of the group will be defined and implemented.

20. Various factors including, but not limited to, the nature of the project, the project context and the vulnerability of the Affected Communities of Indigenous Peoples will determine how these communities should benefit from the project. Identified opportunities should aim to address the goals and preferences of the Indigenous Peoples including improving their standard of living and livelihoods in a culturally appropriate manner, and to foster the long-term sustainability of the natural resources on which they depend.

Private Sector Responsibilities Where Government is Responsible for Managing Indigenous Peoples Issues

21. Where the government has a defined role in the management of Indigenous Peoples issues in relation to the project, the client will collaborate with the responsible government agency, to the extent feasible and permitted by the agency, to achieve outcomes that are consistent with the objectives of this Performance Standard. In addition, where government capacity is limited, the client will play an active role during planning, implementation, and monitoring of activities to the extent permitted by the agency.

22. The client will prepare a plan that, together with the documents prepared by the responsible government agency, will address the relevant requirements of this Performance Standard. The client may need to include (i) the plan, implementation, and documentation of the process of ICP and engagement and FPIC where relevant; (ii) a description of the government-provided entitlements of affected Indigenous Peoples; (iii) the measures proposed to bridge any gaps between such entitlements, and the requirements of this Performance Standard; and (iv) the financial and implementation responsibilities of the government agency and/or the client.

[14] Where control of resources, assets, and decision making are predominantly collective in nature, efforts will be made to ensure that, where possible, benefits and compensation are collective, and take account of intergenerational differences and needs.

Performance Standard 8
Cultural Heritage

Introduction

1. Performance Standard 8 recognizes the importance of cultural heritage for current and future generations. Consistent with the Convention Concerning the Protection of the World Cultural and Natural Heritage, this Performance Standard aims to ensure that clients protect cultural heritage in the course of their project activities. In addition, the requirements of this Performance Standard on a project's use of cultural heritage are based in part on standards set by the Convention on Biological Diversity.

Objectives

- To protect cultural heritage from the adverse impacts of project activities and support its preservation.
- To promote the equitable sharing of benefits from the use of cultural heritage.

Scope of Application

2. The applicability of this Performance Standard is established during the environmental and social risks and impacts identification process. The implementation of the actions necessary to meet the requirements of this Performance Standard is managed through the client's Environmental and Social Management System (ESMS), the elements of which are outlined in Performance Standard 1. During the project life-cycle, the client will consider potential project impacts to cultural heritage and will apply the provisions of this Performance Standard.

3. For the purposes of this Performance Standard, cultural heritage refers to (i) tangible forms of cultural heritage, such as tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values; (ii) unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and (iii) certain instances of intangible forms of culture that are proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles.

4. Requirements with respect to tangible forms of cultural heritage are contained in paragraphs 6–16. For requirements with respect to specific instances of intangible forms of cultural heritage described in paragraph 3 (iii) see paragraph 16.

5. The requirements of this Performance Standard apply to cultural heritage regardless of whether or not it has been legally protected or previously disturbed. The requirements of this Performance Standard do not apply

to cultural heritage of Indigenous Peoples; Performance Standard 7 describes those requirements.

Requirements

Protection of Cultural Heritage in Project Design and Execution

6. In addition to complying with applicable law on the protection of cultural heritage, including national law implementing the host country's obligations under the Convention Concerning the Protection of the World Cultural and Natural Heritage, the client will identify and protect cultural heritage by ensuring that internationally recognized practices for the protection, field-based study, and documentation of cultural heritage are implemented.

7. Where the risk and identification process determines that there is a chance of impacts to cultural heritage, the client will retain competent professionals to assist in the identification and protection of cultural heritage. The removal of nonreplicable cultural heritage is subject to the additional requirements of paragraph 10 below. In the case of critical cultural heritage, the requirements of paragraphs 13–15 will apply.

Chance Find Procedures

8. The client is responsible for siting and designing a project to avoid significant adverse impacts to cultural heritage. The environmental and social risks and impacts identification process should determine whether the proposed location of a project is in areas where cultural heritage is expected to be found, either during construction or operations. In such cases, as part of the client's ESMS, the client will develop provisions for managing chance finds[1] through a chance find procedure[2] which will be applied in the event that cultural heritage is subsequently discovered. The client will not disturb any chance find further until an assessment by competent professionals is made and actions consistent with the requirements of this Performance Standard are identified.

Consultation

9. Where a project may affect cultural heritage, the client will consult with Affected Communities within the host country who use, or have used within living memory, the cultural heritage for long-standing cultural purposes. The client will consult with the Affected Communities to identify cultural heritage of importance, and to incorporate into the client's decision-making process the views of the Affected Communities on such cultural heritage. Consultation will also involve the relevant national or local regulatory agencies that are entrusted with the protection of cultural heritage.

Community Access

10. Where the client's project site contains cultural heritage or prevents access to previously accessible cultural heritage sites being used by, or that have been used by, Affected Communities within living memory for long-standing cultural purposes, the client will, based on consultations under paragraph 9, allow continued access to the cultural site or will provide an alternative access route, subject to overriding health, safety, and security considerations.

[1] Tangible cultural heritage encountered unexpectedly during project construction or operation.

[2] A chance find procedure is a project-specific procedure that outlines the actions to be taken if previously unknown cultural heritage is encountered.

Removal of Replicable Cultural Heritage

11. Where the client has encountered tangible cultural heritage that is replicable[3] and not critical, the client will apply mitigation measures that favor avoidance. Where avoidance is not feasible, the client will apply a mitigation hierarchy as follows:

- Minimize adverse impacts and implement restoration measures, in situ, that ensure maintenance of the value and functionality of the cultural heritage, including maintaining or restoring any ecosystem processes[4] needed to support it;
- Where restoration in situ is not possible, restore the functionality of the cultural heritage, in a different location, including the ecosystem processes needed to support it;
- The permanent removal of historical and archeological artifacts and structures is carried out according to the principles of paragraphs 6 and 7 above; and
- Only where minimization of adverse impacts and restoration to ensure maintenance of the value and functionality of the cultural heritage are demonstrably not feasible, and where the Affected Communities are using the tangible cultural heritage for long-standing cultural purposes, compensate for loss of that tangible cultural heritage.

Removal of Non-Replicable Cultural Heritage

12. Most cultural heritage is best protected by preservation in its place, since removal is likely to result in irreparable damage or destruction of the cultural heritage. The client will not remove any nonreplicable cultural heritage,[5] unless all of the following conditions are met:

- There are no technically or financially feasible alternatives to removal;
- The overall benefits of the project conclusively outweigh the anticipated cultural heritage loss from removal; and
- Any removal of cultural heritage is conducted using the best available technique.

Critical Cultural Heritage

13. Critical cultural heritage consists of one or both of the following types of cultural heritage: (i) the internationally recognized heritage of communities who use, or have used within living memory the cultural heritage for long-standing cultural purposes; or (ii) legally protected cultural heritage areas, including those proposed by host governments for such designation.

14. The client should not remove, significantly alter, or damage critical cultural heritage. In exceptional circumstances when impacts on critical cultural heritage are unavoidable, the client will use a process of Informed Consultation and Participation (ICP) of the Affected Communities as

[3] Replicable cultural heritage is defined as tangible forms of cultural heritage that can themselves be moved to another location or that can be replaced by a similar structure or natural features to which the cultural values can be transferred by appropriate measures. Archeological or historical sites may be considered replicable where the particular eras and cultural values they represent are well represented by other sites and/or structures.

[4] Consistent with requirements in Performance Standard 6 related to ecosystem services and conservation of biodiversity.

[5] Nonreplicable cultural heritage may relate to the social, economic, cultural, environmental, and climatic conditions of past peoples, their evolving ecologies, adaptive strategies, and early forms of environmental management, where the (i) cultural heritage is unique or relatively unique for the period it represents, or (ii) cultural heritage is unique or relatively unique in linking several periods in the same site.

described in Performance Standard 1 and which uses a good faith negotiation process that results in a documented outcome. The client will retain external experts to assist in the assessment and protection of critical cultural heritage.

15. Legally protected cultural heritage areas[6] are important for the protection and conservation of cultural heritage, and additional measures are needed for any projects that would be permitted under the applicable national law in these areas. In circumstances where a proposed project is located within a legally protected area or a legally defined buffer zone, the client, in addition to the requirements for critical cultural heritage cited in paragraph 14 above, will meet the following requirements:

- Comply with defined national or local cultural heritage regulations or the protected area management plans;
- Consult the protected area sponsors and managers, local communities and other key stakeholders on the proposed project; and
- Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area.

Project's Use of Cultural Heritage

16. Where a project proposes to use the cultural heritage, including knowledge, innovations, or practices of local communities for commercial purposes,[7] the client will inform these communities of (i) their rights under national law; (ii) the scope and nature of the proposed commercial development; and (iii) the potential consequences of such development. The client will not proceed with such commercialization unless it (i) enters into a process of ICP as described in Performance Standard 1 and which uses a good faith negotiation process that results in a documented outcome and (ii) provides for fair and equitable sharing of benefits from commercialization of such knowledge, innovation, or practice, consistent with their customs and traditions.

[6] Examples include world heritage sites and nationally protected areas.

[7] Examples include, but are not limited to, commercialization of traditional medicinal knowledge or other sacred or traditional technique for processing plants, fibers, or metals.

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Appendix 8B–

Meetings March 31 and April 2, 2014, notes and Attendance list

Meeting notes
March 31, 2014

MINUTE OF MEETING MONDAY MARCH 31, 2014

Project: **ACAJUTLA LNG TO POWER, TERMINAL DE GNL, THERMAL POWER PLANT 360 MW, EL SALVADOR – CENTRO AMERICA**

Date: March **31 2014**
Time: **10:00 a.m.**
Place: **Windsor III, Hilton Princess Hotel**

OBJETIVE: **PRESENTATION AND ORGANIZATIONAL STRUCTURE**

ATTENDANCE:

IFC	**SPT**
Rosa Orellana (Principal Environmental Specialist)	Hans Verswijer (Business Dev, small scale LNG)
Haran Sivan (Principal Investment Office)	Stephen Davisdson (Manager LNG)
José Zorrilla	**ECO Ingenieros**
DILLON	Rodolfo Montúfar (General Manager)
Jessica Wright (Project Coordinator)	María Teresa García (Technical Support)
Rob Turland, (Partner)	**WARTSILA**
QUANTUM	Seppo Tiensuu (Project Manager)
Alejandro Alle (General Manager	Orjan Krokvik (Sales support Engineer)
Esteban Papanicolau (Partner South Energy)	Piia Hannunksela (Plant Perfor. and Env. Mang.
Javier Mina (engineer)	Kari Leitoma (Site Manager, civil)
Mario Ayala, (Layer) Eduardo Zablah	Alejandro Bastardo (Senior Business Develompent manager)

ISSUES DISCUSED

1. **QUANTUM PRESENTATION**
2. **WARTSILLA PRESENTATION**
3. **H&S BRIEFING**
4. **DILLON PRESENTATION**
5. **WARTSILLA PRESENTATION (second part)**
6. **DILLON AND ECO PRESENTATION (second part)**
7. **MEETING WITH ETESAL**

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1. **QUANTUM PRESENTATION**

Agenda review by Alejandro Alle.
Presentation of the Project by Alejandro Alle:

Project overview, explains the location at Acajutla, inside the port and detailed: tanks, project layout, natural gas flow. AA explains about the procedure of the plant and the Power generation status in El Salvador, some graphics regarding the situation in El Salvador. There are 5 Contractors for energy power.
Bid results:
2 AES with 170 MC coal plant $135, LNG plant is better because the price and clean energy $119 MW/h.
Robert asked about the capacity of the plant. AB answer the permit will be required for 280 MW.
AA: Sponsors: Quantum Energy (20% Wartsila (10%)
New Investors: Maybe Promigas (70%)
Project Support: LNG (Brazil)
Conceptual design (Tractebel)

Contract: Energía del Pacífico SV, Wartsila, FSU Supplier.

2. WARTSILLA PRESENTATION

Mr. Seppo made an introduction about a similar Project: presentation

AA indicated is necessary to be ready for Jan 1st 2018, he explained the project timeline, there is no time to waste and the permits must be before 2015.

Mr Seppo
A guarantee of $34,7 mill is needed, for the cost of project: $850 mill
In June 2015 we must have the funding ended, there are several target dates, for the assurance if it's not done on time the warranty increases and after 6 months will be charged, if not explained the delay of the execution of the project.

Demand Growth Assumption: coal plants into marker. Mr. Seppo Explains the El Salvador 380.8 MW.
Amount of energy to dispatch and explains the companies that will help with the project.
Average monthly LNG consumption: The first years are the most intensives and a projection of the service is shown.

AA: explains about the Electrical interconnection in the country.
Role of IFC: 3 roles.

3. H&S BRIEFING

Jessica explains about the H&S: General recommendation about emergency exits, washrooms, H&S plan: printed information: hospitals, transportation, maps, passports information for port access, ID inside the port.
Javier will check the list of site visit attendance for tomorrow.
Tomorrow: instruction about the clothes, sunscreen, etc.
Rob: explains procedure in case of earthquake.

4. DILLON PRESENTATION

Rob: Explains about the project general points.
EDP is a new company, is necessary to consider the environmental side of the project.

Roles and Responsibilities:
Pre Construction EDP

Construction EDP, LNG, EPC Contract.
Operation: EDP, Fuel supply Contractor, O&M Contractor, ETESAL (T_line operations)
Separate agreements for the both supplier.

Environmental and Social management action.
Mr. AB ask for the plan in the long term, how it will be carried out?
Rosa Orellana, from IFC: Asks about the contact with stakeholders.
R/AA: The first contact will be directly with Acajutla's mayor office.

Robert: Explains everything that involves the resettlement plan: contracts and Action Plans, the typical list of things that you must have a plan.
The necessities of environment must be adapted to the situation and local norms.

Rosa Orellana: It will be requested to the subcontractors that they also follow the norms from IFC?
Rob: Yes the subcontractors shall assume the local needs and laws.
AB asks if the sponsor that must pays by resettlements.
Rob: Yes is part of the plan.
R Orellana: Warsilas' in general terms EIA, for example, some mitigation will be considered to take from EDP, but it is necessary to be taken additional measures for the affected people?

Rob: indicates he will explain later EIA contents, how they will be structured and the stakeholders conditions.

Short Tem Action: Develop EDP policies + tam and capabilities for managing preconstruction activities.
Focusing on social issues.

Mr. Sivam asks if it was analyzed to locate the plant in other places in the country.

AA. Quantum analyzed other options but there were no so much just Acajutla and La Unión, they choose Acajutla because the better commercialization situation, Duke energy location, closeness with San Salvador, technical location matters, it was highly recommended.
Later will be explained how was the place selection.

5. WARTSILA PRESENTATION (Second part):

AB: Introduction

SEPPO: Explains about Wartsila and the projects around the world. There are some other similar plant in latin America.
Increment of energy, 30 years of experience delivering projects. They have experience on site and they know the subcontractors.
Function concept.
Mr. Seppo explains the internal function of the plant, based on a similar Project in Dominican Republic and the planning and follow up: plant acceptance on 30.01.2009.
He shown the difference between to make the works on site: better quality and lower price, in a long term once the conditions are set the plant is installed.
Maximum plant's weight: 300 tons. Plant size: 33,000 m3.
They show a plant transportation video. Is better to unload directly from the ship to the plant. The facilities are built so that, when the plant only gets into a structure with concrete base and metal structure.

The plant is transported in a locally contracted suitable container; it is due to review that it passes through all the bridges and places of circulation. Most of the equipment they settle soon but they must have all the facilities already: cables, pipes, ducts.
Mr Seppo explains the Project team organization: There is a site team including a environmental manager.

Rob: Is there any plan type for this kind of projects, like model?
AB: Yes and there are other support areas: Quality, H&S, W Supply Management, Business Control.

Rob: Who is in charge of facilities protection?
A/ Wartsila has a security manager on site.
EDP is responsible for all subcontractors' security.
SEPPO: explains the site team graphic including other departments and complement.

LTI rate. Sobre los accidentes y otros que se tienen

The construction takes 2 ½ a 3 ½ years and includes the expenses schedule, tanks and equipment manufacture, jetty placement, etc. He talks about operation at the Quesqueya Project in Dominican Republic, almost the same size as Acajutla's.

In the plant it makes a cooling by means of water of the radiators of the machines, that in the case of El Salvador will be located in the roof.
Cooling towers are used for steam production. 330 m3/h consumption. For sewage water shall be a treatment plant.
IFC A/ Is possible to use sea water?
Rob: Yes is possible to use sea water but Wartsilla prefers to use water from a well located in the site becouse of the long term effects. Is necessary to evaluate the water quality.

Seppo: Some of the facilities are: central office, subcontractor's area, containers area, daily tanks area, customer's area.
There should be a gas emission control.
Mr. Seppo compares the Quisquisera plant size with Acajutla, and shown some pictures of the Project stages: excavation, earth leveling, tanks and plant installation, etc. Construction of the main buildings and facilities it was ended on December 2013.
1000 to 1200 jobs are generated.

Rob: asks if there would be workers camps.
A/ No workers' camps will be set but there shall be some buses routes.
Rodolfo: Most of the workers can come from Acajutla and Sonsonate or even from SS by public transportation.
Most of the works they are civil. They must evaluate all the necessities of the workers to determine the actions.
IFC: Depending of the number of workers there are some requirements to attend from the IFC.
Is necessary to talk about the noise levels and sources.

Mr. Seppo:
There is a steam turbin, and 8 to 10 engines for operation.
Site manhours 1,597,258.00.

Rob: There are some areas around the tanks where any equipment cannot be put because of international standards.

The location of the storage boat must will be 500 m of the CEPA's wharf, is a standard of separation, the location is restricted reason because of the around activities.
An investigation shall due to about the occupation in that site: settlers, fishermen, etc.

11:10 a.m.
Rob explains about the jetty location.
Rosa: Is necessary to set a safety area for fishermen.
One is due to speak with the port for the security of the boats and to establish the safety measures and to make an analysis of security.

A/ There will be limitations for fishing, but the main restriction is near jetty, can fish between jetty and the wharf depending on CEPA's requirements, at the present time 30 or 20 people fish in all the area. Jetty will be an attractiveness for the fishermen and must be controlled.

It must contacts to SECULTURA for inspection of some structures in the wharf route that have potentially value.
Wartsila: There are some limits already established for ships and jetty location.
Rob: We have a deadline to determinate the potential impacts. Asks how are designed the pipes that come from the ship to the plant.

Wartsilla A/: Tow pipes run in a single head: there are two expansion loops.

AA: Explains how the route line was selected.
AB: What is the main matter from today's meeting with ETESAL? It is because the route? Who is going to be responsible for this?

Wartsilla describes the hybrid project with the existing structures for 115 Kv to expand to 230 KV. Advantages will be obtained with not affectations of coffee plantations.
Is possible to increase the ROW.

More analysis is due to do on the location of the route near Acajutla. One first route was had that crosses Acajutla in the street media of 5 ms of wide, but has many stores and businesses.
IFC thinks that he is better to put an additional line outside Acajutla: exists a substation to the northeast of Sonsonate.

AFTERNOON.

6. DILLON AND ECO PRESENTATION (second part)

Jessica presents summary of EIA report structure.
After a discussion with MARN it was established 2 separated reports: One for power plant + jetty and the second for transmission line or if is required by IFC to put together.

ECO: Maria Teresa explained about the MARN process for environmental permit.

AB: Asks if MARN has not experience with Gas plants how they will emit the ToR?
Montufar: Is necessary to discuss the process and ToR with MARN directly
Jessica: That's why the table of contents will be submitted to them.

AB: Asks if there could be 3 different EIA.

Of the side of the IFC they think is a higher risk in the industry projects and it worries to them specially that it is the first project of this type in El Salvador, specially about the land acquisition.
Disclosure period: 60 days. Same as USA's requirement law, AA explains which is the intention with the 60 days period. They want to avoid the speculation if the information is given with too much anticipation.

Rob: Talks about:
Performance Standards.
Explains labor and working conditions.
Resource efficiency and pollution prevention.
Air Quality modeling to be completed.
No hay data of air quality, there is any reference data. They have to make the models: most conservative, Stack high
They can model both cases in order to determinate NOx and SOx and PM.

Rob explains the steps of the study based on IFC requirements:

PS4: There will be a discussion of what is needed for the Community Health Safety and Security. There are some similar projects.

PS5 Land acquisition and Involuntary Resettlement. No problems at the plant site but for T-line is necessary to get information for occupant. There is not a mechanism for forcing people to involuntary resettlement.

IFC: Express concern about fishermen conditions after jetty construction.
A/ actually is not avoid they enter on Acajutla port area and CEPA has authority to forbid the entrance to this section.

PS6: Biodiversity Conservation
About the site has been determinate by MARN there are two iguana species that have to be resettle if necessary. No coral riff in area.

PS7: Indigenous Peoples.
IFC: Jose: concern about indigenous people and ask for the local laws about that.
A/ There are no indigenous in plant site but some indigenous settlements will be identified depending of T_line rout.

PS8: Cultural Heritage:
Maria Teresa explains that accordingly to local law SECULTURA makes some investigations: Arqueology, Architecture and Paleontology on the route.

PROJECT SCHEDULE:
1. Overall Project Schedule: right now.
Project Schedule:
In order to submit the "formulario" is necessary to set the route, it has to be defined with ETESAL.
Field activities are the most critical.

Different investigations from flora and fauna will carried out in the site.

From mid April at the end of July the works will become of field. Infrastructure inventories, facilities, hydrological study, etc., public health consultancies.

Rosa: If there are some gaps between the lines of our study and the IFC requirements is necessary to discuss

Target: end of august submit EIA and get permit on september.
In two weeks the first consultations will become and it will inquire on the launching of the project by means of newspapers.
First Consultation: How it will be?

AB: after formularios' submission to MARN, the public announcement will be done.
Is necessary to have some space between the 2 public consultations.

IFC draft WILL BE THIS WEEK.

AB: About noise: A colony Obrero No. 2 actually is achieving 45 decibels. Accordingly to IFC is 45 dc at night or equal the existing conditions.
IFC: Is there a base line?
Rob: No, it has to be established based on existing noise level.
An adjustment can be made to change the situation of which it hits of the noise, if it is necessary

7. MEETING WITH ETESAL:

ATTENDANCE FROM ETESAL:
Mauricio Alberto Paz
Andres Mauricio Dreyfus
José Ernesto Gálvez Orellana (jefe)
Luis Enrique López Ávila
Carlos Mauricio Erroa Colato.

EDP Proposal: Connection of 230MV line and establish a GNL line.

ETESAL: The general law of electricity was modified in 2003 in which the responsibility occurred to expand the transmission law.

From 2004 to the date they have made projects of than 100 million financed more by the local bank, for being joint-stock company of variable capital the partner is the Executive Commission of the river Lempa. It has not been the possible to make works with the international bank, just local.

In the subject: In November expansion plan was put under the SIGET, of which it did not include the plant of 175 MV, because they did not have the required information reason why it was not taken into account, but for the interconnection of the system of power of El Salvador is due to do at some time. The SIGET ordered that any plan is not approved (just put under the contract with the companies suppliers, 20 December 2013)

Until 2 weeks ago was complete the requirements for the connection of the plant and is almost what EDP proposes. Works that are required of electrical connections in Ahuachapán and Acajutla, are more expensive to connect in Ahuachapán by the additional works which they are due to do, is not contemplated the economic proposal of the plant, required for the connection.

Within the expansion plan one is due to be more explicit, after Easter they will send to the operators the expansion plan having indicated the works required so that the power system operates to satisfaction and some commentaries will be done and it will be put under SIGET so that they make the corresponding decisions.
They suggest to optimize the investment of the plant and the one of the country of the expansion plan.
They are open to deepen in the subject and the intention is to facilitate the interconnection for benefit of the project.
Javier Mina: a joint presentation to the SIGET can be done.

ETESAL: It can have blackouts by impacts in the network, is wanted that the plant is beneficial in all sense, can have a diminution in the prices of electricity, the plans are reviewed by the regulating entity.

AB: Now is working in the EIA to establish risks of the project and to begin in 2015, is due to define the design.
Luis Reyes: Secretary of Executive of the National Council of the Energy arrived to the meeting

AB: This indicates that the IFC must review the aspects of responsibilities as far as the line, must collaborate so that it takes of the best possible way, have made advances in the obtaining of financing

MR. Reyes: he thanks for invitation to meeting like CNE, regulating entity of the power policy, they have accompanied the process from bidding until the selection of Quantum and exists a firm decision to accompany the process because it has relevance for ES and CA, they are working with the BID to integrate the natural gas in Central America. One of the positive aspects has been that already are on the way whit the project and will have governmental support and must identify an expansion plan of how the system of energy in El Salvador will be had.

This plant is due to integrate that is greatest as far as generation are due to deliver all the efforts to identify the technical and financial aspects, identified the resources necessary to give ETESAL for carries out the project which is a government decision, even the entrant.
It requests to see the technical alternatives including simulations and evaluations.

AB: Also the technical aspects are due to consider

Carlos Erroa: it makes the studies of the network.
ETESAL: Analysis interconnection to network transmission of the generating plant to natural gas of 355 MW in 2018.

From the point of view of ETESAL this forced by law to study the projects according to the demand and minimum cost of investment for the country, which is the project that in the long term implies minim investment of he himself type.
According to the generated studies they give the worse scene and they determine necessary works for the market and that problems do not happen.

Worse scene
1. To consider regional transferences of pass up to 300 MW, is simulated that in the lines of the SIEPAC and the one of ETESAL 300 MW circulate. It is not possible to be used if it is full.
2. Problems with the thermal energy that must dispatch all the thermal energy of El Salvador.

Ahuachapán connection is needed: to upgrade in power (change of conductor), the same lines, this stay is by the entrance of Quantum: engine power upgrade of line 115 KVe de Acajutla-Sonsonate (1 and 2 (Sonsonate-

Atheist, Ahuachapán-Sonsonate, 230 new line Kv Acajutla-Nejapa, Acajutla-El Pedregal, 115 kV pedregal Tecoluca-El. Engine power upgrade of the line 115kV. In the case of the pedregal is mandatory.

Interconection in Ahuachapán 230 KV.

The reinforcements are of the point of interconnection of Acajutla-Sonsonate, etc. Explanation of the plane of interconnections, lines according to ETESAL

The other possibility: Interconnection Acajutla 230/115 kV: One is due to look for works of greater saving for the country, according to this the scene this would be the optimal option: All the system of 115 kV then this no longer gives supply and is just as the previous one but for the connection of the plant in the 2018 the engine power upgrade of 115 is necessary lines kV Opico-Sonsonate and Nejapa-Opico or better, the construction of 230 line kV Acajutla-Nejapa that is a solution in the long term.
In the studies ETESAL of 230 kV is the best option. Is possible to install a Transforming in Acajutla so that the line of 230 is distributed in 115.

Other Considerations:
The analysis is becoming at the moment of Stability of Voltage, which at the moment is reflecting that, associate to the interconnection of the plant of 355 MW, Banks of Capacitors are not needed in Acajutla 46 kV nor in Nuevo Cuscatlán 23 kV but rather the following equipment accepts compensation of reactives.
1. Bank of capacitors of 80 MVAR at level of 115 kV (4 stages of 20 MVA each one) in substation San Matías.
2. Bank of capacitors of 80 MVAR at level of 115 kV (4 stages of 20 MVA each one) in substation San Martín

EDP: To see altogether in SIGET to decide.
ETESAL: To put under consideration to the suppliers reviewed plan of expansion and to present it in official form 1st week of May. This can serve to introduce the proposal and ETESAL can support technical to make interconnection to the RTR

EDP: In what degree is the line of 230 Acajutla-Pedregal?: there are 3 alternative routes

ECO: Asks on the line projected of 230 towards the Pedregal which has 110 kv, How much advanced is the selection of the line?, does not have topographical survey?.

ETESAL: EIA for this line is needed, determination of affectation of the sites of towers. There is no 100% of servitudes and one operates of this form.
They have begun the single construction with the presentation of the project to the MARN.

IFC: It is had already established the costs of crops, houses, etc? ,

ETESAL: When the outline becomes are avoided communities and to never pass through populations, that reduce impacts.

The MARN must indicate the compensations to do, without entering details, the permission is given with the obligatory of compensation of environmental measures, is not obligatory to do it before initiating the project. It can have low vegetation under the T_line but no constructions.

The pass by the side of Acajutla Is complicated due to the ANP, is better the one of el Pedregal. According to the sounding it is free.

AB: Why is required the one of 230 to the Pedregal?

Carlos ETESAL, 115 does not give enough supply, always is due to do the one of 230, the network must migrate to 230.

AA: What guarantees that they are going to make the line for the 1 of January of the 2018? That the investments will become. We will be adding a risk to the project.

ETESAL: This is born of bidding process promoted by the country and must be successful. The interconnection regulation had 90 working days for beginning of interconnection works. The procedures of acquisition of goods and services for this project are due to modify, they do not have disadvantage of pursuit for all the hiring and they are in all the disposition because it is a subject that must be handled of extraordinary way. There is one dates limit, SIGET must make all the necessary one to make the project.
LUIS REYES: Critical route: environmental permissions, have less impacts than a plant or substation for a line. With the union of the work with ETESAL it is possible to be looked for that it is Quantum that it contracts or if it is ETESAL is due to look for to speak with the MARN so that it makes agile the proceedings. Lina Phol new minister of the MARN, commits itself to make managements to promote.

Mr. Reyes says that it is easier for a private company that for ETESAL as far as promoting the purchase of lands.

It was agreed to make a meeting on Thursday, Superintendent will arrive the day Tuesday 1 of April.
Is due to think well like approaching him. It can have changes to the interior of the SIGET but the institution must respond with a work group that works with Quantum

AA: If there is some impossibility of the line of el Pedregal is possible to make a substitution of Acajutla-Sonsonate, Sonsonate-Ahuachapán?

ETESAL: Is possible to make route of 115 by the existing line to el Pedregal.
Carlos: propos that it is possible to make one above the existing one but this pass through the Mountain range of the Balsam that cannot be touched and by all the new sites of construction is very difficult to work there. If it arrives at Ahuachapán in any case is needed Acajutla-El Pedregal and in addition reinforcing to Nejapa reason why is not practical.

AA: worries to him that it had not before been mentioned the necessities that are being expressed and that ETESAL has problems, environmental, technical, etc and that do not give security of the project.

REYES: thinks that it is possible to be resolved on the basis of the technical equipment, is necessary to evaluate altogether.
Etesal indicates where they are due to reunite to make visits of field in Ahuachapán and Sonsonate.

Rob. Ask if is necessary to meet with ETESAL and to make an equipment of route establishment.

The route of the coast will be followed 2 people, blue line: a single car.
We must set the coverage of the needs of EDP and ETESAL.

The meeting finish.

Meeting Notes
April 2, 2014

MINUTE OF MEETING Wednesday April 2nd, 2014

Project: **ACAJUTLA LNG TO POWER, TERMINAL DE GNL, THERMAL POWER PLANT 360 MW, EL SALVADOR – CENTRO AMERICA**

Date: **April 02, 2014**
Time: **8:00 a.m.**
Place: **Windsor III, Hilton Princess Hotel**

OBJETIVE: **FOLLOW UP FOR PROJECT AND SITE VISIT**

ATTENDANCE:

IFC	**SPT**
Rosa Orellana (Principal Environmental Specialist)	Hans Verswijer (Business Dev, small scale LNG)
Haran Sivan (Principal Investment Office)	Stephen Davisdson (Manager LNG)
José Zorrilla	**ECO Ingenieros**
DILLON	Rodolfo Montúfar (General Manager)
Jessica Wright (Project Coordinator)	María Teresa García (Technical Support)
Rob Turland, (Partner)	Roxana de Castillo (Technical Support)
QUANTUM	**WARTSILA**
Alejandro Alle (General Manager	Seppo Tiensuu (Project Manager)
Esteban Papanicolau (Partner South Energy)	Orjan Krokvik (Sales support Engineer)
Javier Mina (engineer)	Piia Hannunksela (Plant Perfor. and Env. Mang.
Mario Ayala, (Lawyer) Eduardo Zablah	Kari Leitoma (Site Manager, civil)
Rafael Galeano (Grupo GM) Rafael E. Galeano (Grupo GM)	Alejandro Bastardo (Senior Business Develompent manager)

1. **WARTSILA (Piia Hannunksela) PRESENTATION:**

About gas emissions:

Background Emission Monitoring Challenges: properties of engine exhaust gas, ambient conditions, Maintenance, Cost, Increasing legislative demand for emission monitoring.

Conclusion: cost efficient and robust emission monitoring is needed.

PEMS vs CEMS:

Emission monitoring system:

CEMS Continuous emissions monitoring system, direct measurements with analyzer.

PEMS: Predictive emissions monitoring system, calculates emissions from measured process parameters using a process model, uses existing robust instrumentation. PEMS can be quality assured by reference measures.

PEMS Implementation steps

Record process and emission data, build statistical model, install model, validate model (if required) commissioning.

Wartsila PEMS testing activities – status

Demonstration in Power plant, prediction capability verification gas engine, Long term test.

2- MARN AND CNE EXPLANATION

9:00 MARN y CNE

Attendance:

Yid Zelada Quan (MARN)
José Alberto Fabián (MARN)
Julio Eduardo Sánchez (MARN)
Juan José Castillo (MARN)
Georgina de Flores (CNE)
Ignacio Handal (CNE)

MARN: They say that it is possible to be 1 or 2 studies, that that depend on us.

Rodolfo: It can be that ETESAL make the part of the route,

Luis Reyes from the Council of Energy suggested making this by another route to obtain a balance and to replace coastal and east of the country energy.

CNE: Plan was presented to ETESAL including 355 in Acajutla to be able to move energy from this sector like REINFORCEMENT to the FOMILENIO.

Wartsilla presentation:

Piia explains all about Wartsilla plant emission levels. There is a guarantee for top levels of the emission; they establish levels and the measurement process.
They provide the fuel gas data for plume dispersion calculation and many other data sheet included in the presentation.
Continuous emission monitoring for the project because of size. There are some actions to reduce the emission in case of high levels.
Who is going to provide the maintenance for the emission equipment?, Wartsilla will provide the maintenance plan but EDP is responsible of the results. Now is not clear but will be decided soon.
Seppo explains about the use of water at the plant and regasification process.

150,000 tank on ship and 50,000 on land tank.

No discrimination for work, following of general human rights.
HSE Management plan for Quisqueya project involves (as example) the work conditions for health and operation.
EDP will certificate the facilities and procedures.
Piia shows the information about water analysis, physicochemical conditions.
About the water consumption: preliminary calculation.
Total raw water in 332.6 m3/h,
Maintenance use 0.038 m3/h, service water: turbo washing, work shop, washing, canteen, toilets (0.28m3/h, Washing water (Boilers) 0.043 m3/h, Blow down cooling (0.5m3/h)
Boilers: 19 one for each engine.
Piia explains the Emission Monitoring presentation (ask for this)
For lubber disposal the supplier delivers the lubber and retire the waste produced after use.
PEMS can provide a date for 6 or 8 month and this information is send to the corresponding authorities for checking.

MARN: According to the schedule it says that is necessary to know clearly when the TOR will be emitted. When are you going to submit the formulario?. And if the study appears to be submitted in August, When will have the application of the terms of reference?

Answer: This was programmed to submit by march 15, but it was reschedule for april 15.
But vacations form april 11 to april 22.

Rodolfo: Wartsilla will provide training for MARN, ECO and DILLON about gas plants

MARN: They ask about risk analysis, but the general guides, the requirements of the country. If IFC norms are used.

What it is needed is to implement TdR although there exist some voids in the project, it will take to do the terms 22 days approximately, worries to the Ing. the terms of the project and require a permanent work table that can be virtual and/or in attendance and he thinks it is necessary to make the organization as soon as possible.

If there are 3 studies it is necessary to make 3 different consultations. The Client must decide how many they will be.

Roxana: Asked for with who the maps can be obtained.

MARN: For risk witch model is used?

Wartsilla is going to contract a sub contractor regarding risk analysis. First they will carry out a field inspection to determinate the conditions.
There are different levels of model.

MARN: they ask for sensibility distances.

Castillo: Location and Construction, permission for this, must to make conditions of adjustment for the operation stage. It must have a test certificate before the operation.

There shall have corrections for operation stage and closing stage.

CONCLUSIONS:

There are two moments for location and construction then protocol and audit for operation permission.

The plan of detailed work is necessary (Ing. Castillo) to follow up and the submission of the formulario.

The studies numbers is Client´s decision.

CNE: They say that when the bidding was made they wanted that the proceeding made by the Client.

The meeting finish.

Attendance List for Presentation Meeting

MEETING 020414

Nombre / Name	Company / Institución	Phone / E-mail / Teléfono / Correo
ROB TURLAND	DILLON CONSULTING	519-571-9833 RTurlan dillon
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6	**Consejo Nacional de Energía**	Ing. Carlos Najera	Director de Recursos Renovables		
7	**Consejo Nacional de Energía**	Inga. Georgina Barrientos de Flores	Director de Mercado Eléctrico		
8	**Cuerpo de Bomberos de El Salvador**	Capitan Salvador Lizando Albarenga	Director General del Cuerpo de Bomberos de El Salvador		
9	**MARN**	Silvia Larios	Directora General de Evaluación y cumplimiento ambiental		
10	**MARN**	Ing. Alberto Fabian	Tecnico		afabian@marn.gob.sv
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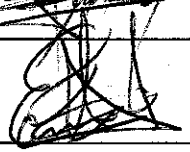
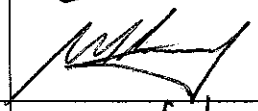
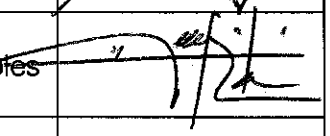
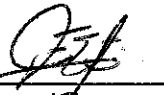
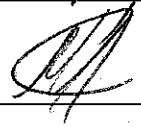
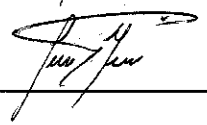
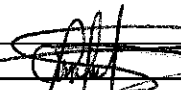
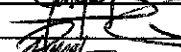
17	**Ministerio de Gobernacion**	LIC. JORGE ANTONIO MELÉNDEZ *	Director General de Proteccion Civil . Prevencion y Mitigacion de Desastres.		
18	**Ministerio de Obras Públicas, Transporte, Vivienda y Desarrollo Urbano**	Arq. Edna Valle	Director del desarrollo territorial urbanismo y construcción		
19	**Ministerio de Economía**	Lic. Eduardo Alexander Ramirez	Director de Hidrocarburos y minas		
20	Comité Interinstitucional para la Introducción de GN MINEC	Ing. Jorge Iraheta	DRHM		JIRAHETA@MINEC.GOB.SV / 2590-5222
21	Comité Interinstitucional para la Introducción de GN MINEC	Lic.Mario Chavarria	Dirección de Combustibles		Mchavarria@minec.gob.sv 2590 5222
22	Comité Interinstitucional para la Introducción de GN MINEC	Ing.Ricardo Andrade	Dirección de Combustibles		jandrade@minec.gob.sv 2590 -5211/09
23	Comité Interinstitucional para la Introducción de GN MINEC	Ing. Jamie Zelayandia	MINEC		JZelayandia@minec.gob.sv 2590-5211
24	Comité Interinstitucional para la Introducción de GN MINEC	Ing. Ana María Gonzalez	MINEC		
25	Comité Interinstitucional para la Introducción de GN CNE	Ing Mauricio Palacios	CNE		mpalacios@cne.gob.sv 22337927
26	Comité de Gas Natural (formado por varias instituciones)	Ing. Gilberto Cruz Olmedo*	Director de Electricidad		
27	SIGET	Ing. Oscar Leiva	Analista Electricidad		oscar.leiva@siget.gob.sv
28	MARN	Mauricio Alfaro	Coordinador Cambio Climatico		
29	SIGET	Ernesto Ticas Aguirre	Esp. Rec. Geotermico		jecastagre@siget.gob.sv 22574439
30	UCA	Ismael Sánchez	Catedrático		isanchez@uca.edu.sv 22106664
31	CNE	Ignacio Handal	Asistente Tecnico		
32	Grupo GHSA	Rafael Galeano	Director		rafael.galeano@grupoghm.com.sv

Appendix 8C–

Vice-President Visit Report

AUDIENZ

REPUTACIÓN & COMUNICACIÓN

REPORTE
VISITA DE VICEPRESIDENCIA

ENERGÍA DEL PACÍFICO
AGOSTO 2014

BOLETÍN DE PRENSA

355 MEGAVATIOS DE POTENCIA Y SU ENERGÍA ASOCIADA SERÁN SUMINISTRADOS A LA RED NACIONAL A PARTIR DEL AÑO 2018.

Energía del Pacífico, S.A. de C.V. (EDP), será la responsable de construir un proyecto de generación de energía eléctrica a partir de Gas Natural, a ser ubicado en la ciudad de Acajutla, Sonsonate.

Acajutla, Sonsonate, 20 de agosto de 2014. Una comisión técnica integrada por ejecutivos de Energía del Pacífico, S.A. de C.V. y una comisión gubernamental encabezada por el Señor Vicepresidente de la República, Licenciado Oscar Ortiz, realizaron una visita de campo al lugar donde, a partir del año 2018, operará la primera planta generadora de energía eléctrica que utilizará como combustible Gas Natural.

Energía del Pacífico, S.A. de C.V. es la empresa que desarrollará y operará un proyecto de generación de energía eléctrica a partir de Gas Natural en la ciudad de Acajutla, departamento de Sonsonate, con el cual se proyecta que durante 20 años se generen 355 megavatios de potencia y su energía asociada, lo cual corresponde a una tercera parte del total de la demanda de energía que posee El Salvador.

El presidente de EDP, Licenciado Eduardo Zablah Touché, explicó que dicha sociedad construirá una planta regasificadora que será la terminal receptora del Gas Natural en su estado líquido (gas natural licuado), para luego volver a convertirlo a su estado gaseoso (gas natural) y con él generar la potencia y energía asociada comprometida en el proyecto.

Asimismo, se construirán un tanque de almacenamiento flotante, otro tanque de almacenamiento en tierra, un muelle, una planta generadora de energía eléctrica y la Línea de Transmisión asociada. El montaje de la infraestructura del citado proyecto llevará alrededor de 3 años, durante los cuales se estima una inversión que oscila entre los 850 y 1,000 millones de dólares de los Estados Unidos de América, los cuales incluyen un aporte al desarrollo social y económico en el municipio de Acajutla.

El vicepresidente y comisionado para la inversión pública y privada, Óscar Ortiz, habló de la apuesta por la diversificación de la matriz energética. "Con la puesta en marcha de la planta de gas natural lograremos reducir los costos de generación de energía eléctrica en el país y se ofrecerá un servicio de mayor calidad, esto beneficia a la industria, la hace más competitiva, y a la población, con energía más barata", detalló el mandatario.

Energía del Pacífico, S.A. de C.V.

Como parte del reconocimiento del Gobierno de la República a favor de las inversiones que actualmente prometen desarrollo local y nacional, el señor Vicepresidente junto a la comisión gubernamental, visitó las inmediaciones de las oficinas de CEPA en Acajutla donde se ubicara el proyecto, para conocer los detalles de la operación de EDP que generará 355 megavatios de potencia.

De las principales ventajas de generar energía eléctrica a partir de Gas Natural se encuentran:

- La diversificación de la matriz energética actual, ya que con la generación de 355 megavatios de potencia y su energía asociada, se ampliará la oferta de energía eléctrica instalada en El Salvador;
- La introducción de una nueva opción de generación eléctrica que está siendo utilizada por muchos de los países más desarrollados en el mundo;
- El aumento de la disponibilidad de energía, garantizando la cobertura de la demanda en El Salvador;
- Ser una alternativa de energía con mejores oportunidades en términos económicos, la cual permite la posibilidad de reducción de las tarifas de energía eléctrica, pues se trata de un combustible fósil más limpio y menos costoso;
- El aumento en el rendimiento de la generación eléctrica respecto a otros combustibles;
- La reducción del impacto ambiental.

Por otra parte, dentro de la visión de EDP está convertirse en un promotor del desarrollo social y económico para el municipio de Acajutla, por lo que se está trabajando estrechamente con la municipalidad en los mecanismos para que la primera opción de contratación, en la fase de construcción del proyecto, favorezca a los habitantes de la zona.

La etapa de construcción tomará 3 años comprendidos entre el 2015 al 2018, durante la cual, en los momentos de mayor demanda, se estima generar hasta mil empleos en atención a las diferentes necesidades y perfiles requeridas por el proyecto.

Además, entre los compromisos de EDP derivados del proyecto y durante la duración del mismo, se destinará anualmente un monto aproximado de US$530,000 para la ejecución de proyectos de desarrollo social y económico, para lo cual se trabajará de la mano con la Alcaldía Municipal de Acajutla y el Fondo de Inversión Social para el Desarrollo Local (FISDL).

Edificio AVANTE, Nivel 7 Oficina 709 Calle llama del Bosque Poniente Urb. Madre Selva III Etapa Antiguo Cuscatlán.
La Libertad, El Salvador, Centro América.
Tel. 2133-0700
2

FACT SHEET

ENERGÍA DEL PACÍFICO, S.A. DE C.V. (EDP)
HOJA DE DATOS

Entidad propietaria del proyecto:	Energía del Pacífico, S.A. de C.V.
Tipo de proyecto:	Suministro de Potencia y su Energía Asociada, utilizando como combustible Gas Natural.
Potencia y Energía Asociada:	355 Megavatios
Fase de construcción del proyecto:	La construcción inicia en el año 2015 y finaliza en el año 2018.
Inversión:	900 millones de dólares de los Estados Unidos de América, aproximadamente.
Estimado de oportunidades de trabajo a generar:	Hasta 1,000 empleos (en la etapa de mayor demanda de la construcción), al margen de las oportunidades técnicas y administrativas en la fase de operación del proyecto.
Componentes del proyecto:	Planta Regasificadora del Gas Natural Licuado (GNL); Tanque de almacenamiento flotante; Tanque de almacenamiento en tierra; Muelle; Planta Generadora de Energía Eléctrica; y La línea de transmisión asociada.
Inversión social:	Aproximadamente US$530 mil anuales durante la vigencia del proyecto.

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Urb. Madre Selva III Etapa Antiguo Cuscatlán.
La Libertad, El Salvador, Centro América.
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MEDIOS ASISTENTES

MEDIO	PERIODISTA
La Prensa Gráfica	Rosa María Pastrán
Diario El Mundo	Vanessa Linares
Gentevé	Marielos Portillo

ENVIADO A:
El Diario de Hoy
Revista SUMMA
Central America Data
El Economista
Estrategia & Negocios
TCS

FOTOGRAFÍAS DE REGISTRO

FOTOGRAFÍAS DE REGISTRO

FOTOGRAFÍAS DE REGISTRO

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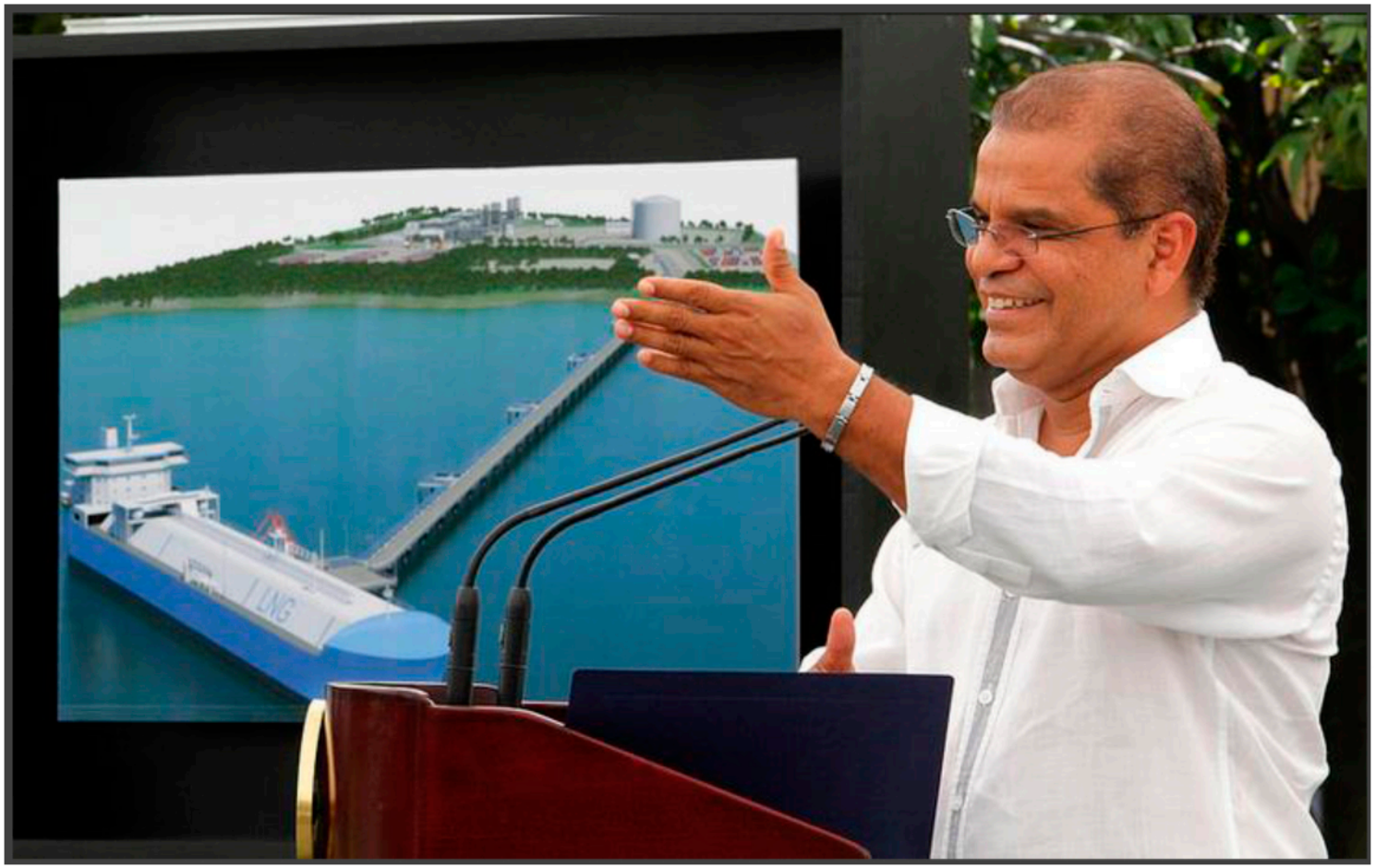
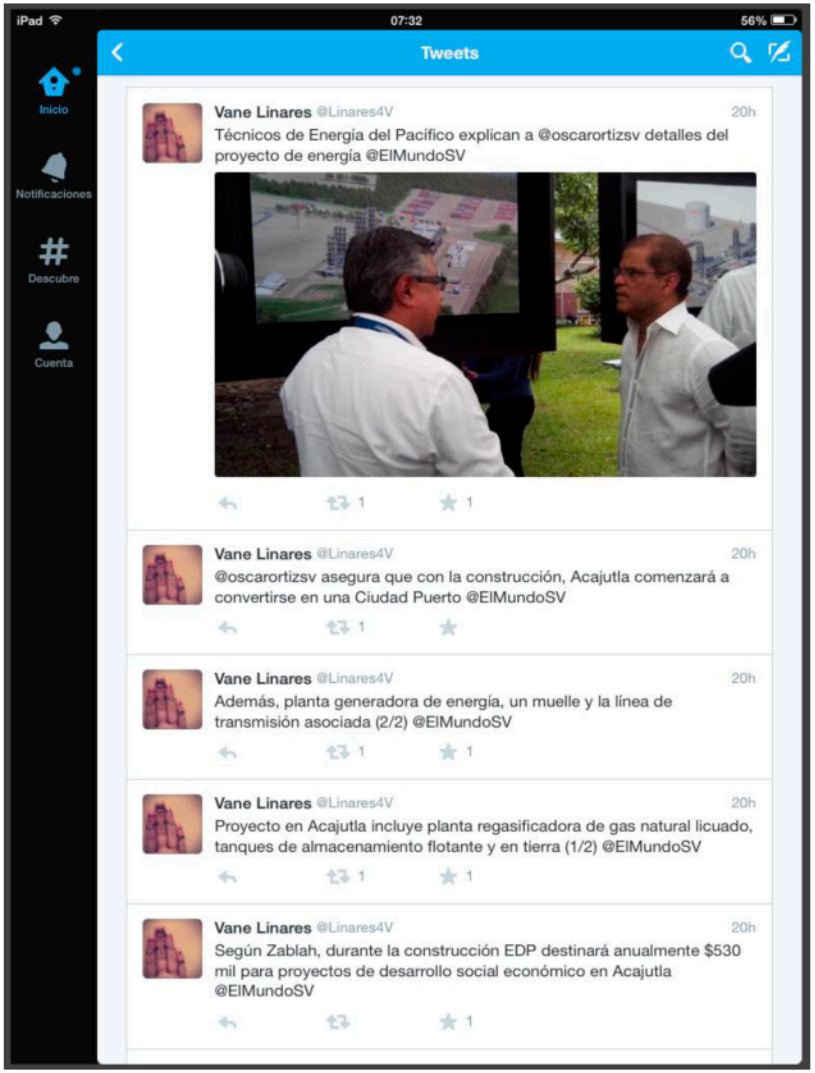
FOTOGRAFÍAS DE REGISTRO

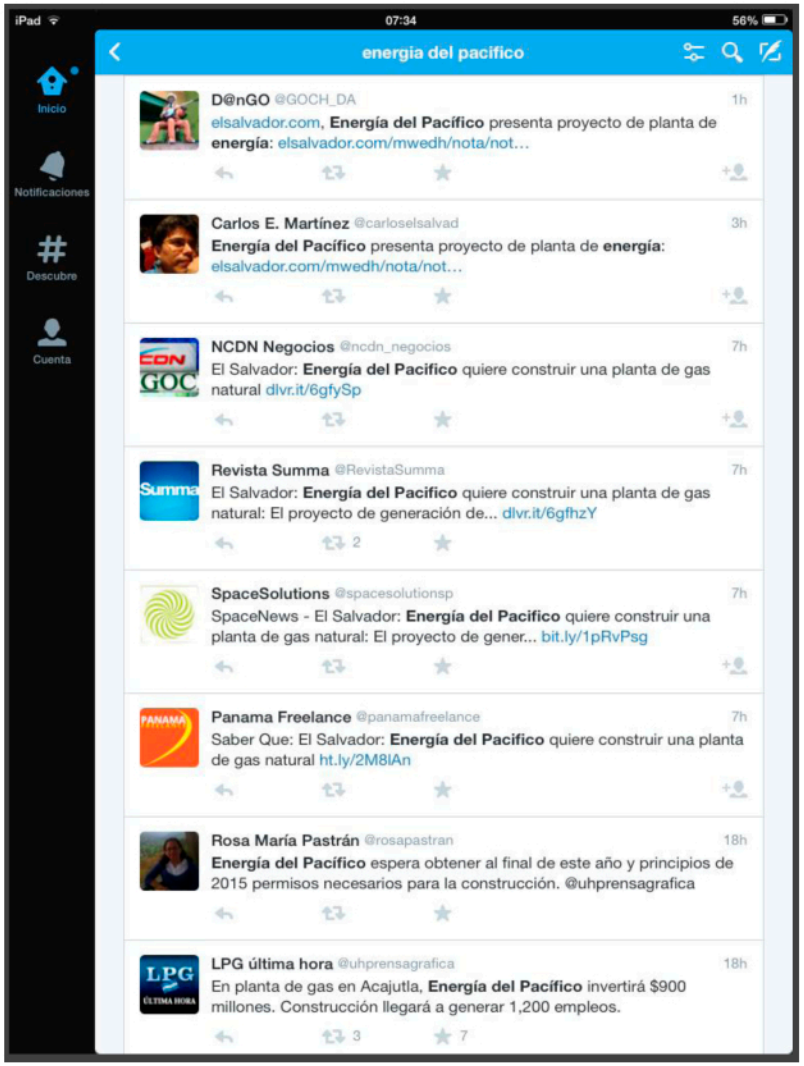


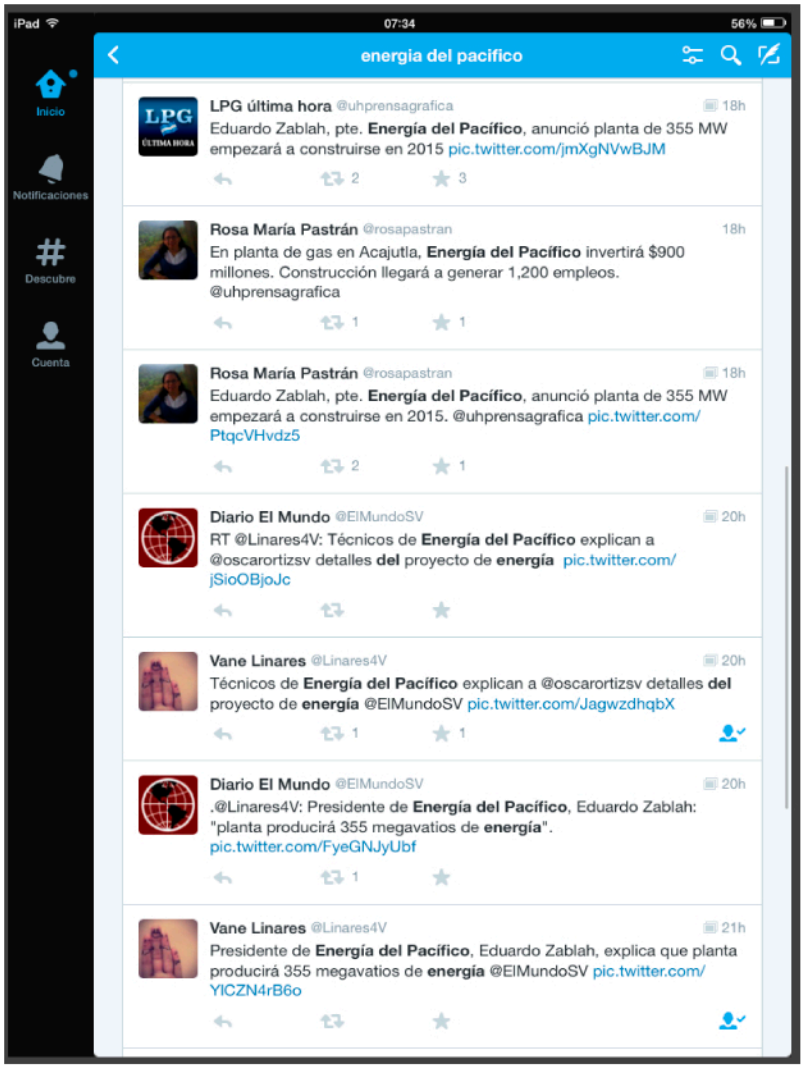
REDES SOCIALES



REDES SOCIALES

REDES SOCIALES





PUBLICACIONES - EDH

www.elsalvador.com • Jueves, 21 de agosto de 2014 El Diario de Hoy

Personeros del Gobierno y de la empresa, que construirá la planta energética, revisan el diseño del proyecto. FOTO EDH/ CORTESÍA

Energía del Pacífico presenta proyecto de planta de energía

- La planta de gas se edificará en Acajutla, tendrá una inversión de $1,000 Mlls. y creará 1,000 empleos

Representantes de la empresa Energía del Pacífico (EDP) mostraron ayer el diseño de lo que sería proyecto de generación de energía eléctrica a partir de gas natural, el cual tendrá como sede la ciudad de Acajutla, Sonsonate.

La empresa desarrollará y operará una planta de energía que generará 355 megavatios de potencia y su energía asociada, lo cual corresponde a una tercera parte del total de la demanda energética que posee El Salvador.

Eduardo Zablah Touché, presidente de EDP, explicó que dicha sociedad construirá una planta regasificadora que será la terminal receptora del gas natural en su estado líquido (gas natural licuado), para luego volver a convertirlo a su estado gaseoso (gas natural) y con él generar la potencia y energía asociada comprometida en el proyecto.

Además, se construirán un tanque de almacenamiento flotante, otro tanque de almacenamiento en tierra, un muelle, una planta generadora de energía eléctrica y la línea de transmisión asociada.

El montaje de la infraestructura llevará alrededor de tres años y se estima una inversión de entre $850 millones y $1,000 millones, los cuales incluyen un aporte al desarrollo social y económico en el municipio de Acajutla.

Ventajas del proyecto

Entre las principales ventajas de generar electricidad a partir de gas natural están la diversificación de la matriz energética actual, ya que con la generación de los 355 megavatios, se ampliará la oferta de eléctrica instalada en el país.

Además la introducción de una nueva opción de generación está siendo utilizada por muchos de los países más desarrollados en el mundo.

El aumento de la disponibilidad de energía garantizará la cobertura de la demanda en El Salvador y será una alternativa de energía con mejores oportunidades en términos económicos, la cual permite la posibilidad de reducción de las tarifas de energía, además de que se trata de un combustible fósil más limpio y menos costoso.

Los representantes de EDP, destacaron también el aumento en el rendimiento de la generación eléctrica respecto a otros combustibles y la reducción del impacto ambiental.

Por otra parte, dentro de la visión de la empresa EDP está convertirse en un promotor del desarrollo social y económico para el municipio de Acajutla, por lo que se está trabajando estrechamente con la municipalidad en mecanismos para que la primera opción de contratación, en la fase de construcción del proyecto, favorezca a los habitantes de la zona.

La etapa de construcción tomará 3 años comprendidos entre 2015 y 2018, durante la cual, en los momentos de mayor demanda, se estima generar hasta mil empleos en atención a las diferentes necesidades y perfiles requeridos por la obra.

EDP también destinará anualmente un monto aproximado de $530,000 para la ejecución de proyectos de desarrollo social y económico.

Novedoso sistema en el país

- Ningún país de Centroamérica, a excepción de Panamá, tiene por hoy una planta como la que se espera construir en la ciudad portuaria. La licitación fue un proceso de selección que duró tres años. En la primera licitación el proyecto fue declarado desierto y luego tuvo los usuales contratiempos de toda licitación.

PUBLICACIONES - LPG

Nación : @ulprensagrafica

Construcción de planta de gas natural costará $900 millones

Las obras para montar la infraestructura tomarán alrededor de tres años, según Energía del Pacífico. La empresa anunció que generará 1,200 empleos con los trabajos en Acajutla.

ROSA MARÍA PANTEÓN

La empresa Energía del Pacífico (EDP) informó que la construcción y el montaje de la planta generadora de energía a base de gas natural, que se ubicará en los terrenos de CEPA en Acajutla, requerirá de una inversión de unos $900 millones.

Eduardo Zablah, presidente de EDP, aseveró que la planta contribuirá a diversificar la matriz energética del país "con un combustible fósil casi limpio y con economía".

Zablah dijo que esperan concluir con el trámite de permisos y la preparación de estudios a finales de 2014 y principios de 2015, de modo que la construcción pudiera iniciar a mediados del próximo año. "Mantenemos el compromiso de suministrar energía a partir de esta planta en 2018".

EDP espera que la planta esté terminada en el tercer año para hacer pruebas.

"Estamos cumpliendo con el proceso medioambiental, ya tenemos montada una oficina aquí en Acajutla para consultas. Creemos que estamos a tiempo para las de año con el permiso", añadió Zablah. Entre las estafas que se elaborar están una batimetría, un estudio geotécnico del suelo y otro en el mar, para instalar el muelle.

En lo que corresponde al financiamiento, Zablah informó que la Corporación Financiera Internacional (IFC, por su siglo en inglés) está estructurando la propuesta. "La IFC pone parte de fondos propios, trabaja con algunos bancos asociados que podrían estar también con las fuentes multilaterales que quieren quieren participar. La agencia de exportaciones de Filandia financia parte, el resto se obtiene con bancos", detalló.

Del monto a invertir, los socios locales de EDP, socios estratégicos del extranjero y aportantes millones de su capital y ahora se corresponderá vía financiamiento con bancos extranjeros y organismos multilaterales.

Aunque el contrato fija una generación de 355 megavatios (MW), la planta es potencialmente calada de 380 MW. EDP estima que las obras permitirán la creación de 1,200 empleos directos "en el momento pico de la construcción". Cuando la planta esté en operación necesitará entre 30 y 50 trabajadores.

Zablah anticipó "una considerable baja de la energía desde el momento en que la empresa sea la que esté energizando" porque dijo que sus costos estarán son los más bajos de todas las térmicas.

"La que va a entrar a despachar primero en la matriz, hasta de contratos, lo que le llaman el 'spot'. La única que va a poder entrar en un momento en la matriz porque los costos de las demás son bastante más altos y eso es a hacer que todo el sistema tenga costos más bajos", explicó Zablah.

Ayer, el vicepresidente de la República y comisionado para la inversión, Óscar Ortiz, dio su respaldo al proyecto. "Es un proyecto de alcance nacional, este es un proyecto de país que lo tiene que abrazar el país", dijo Ortiz.

"Es un anuncio al país de que el proyecto va cumpliendo con los plazos establecidos. Es una muestra clara de compromiso de parte del Gobierno de tratar de hacer todo lo posible para que el proyecto logre a ser una realidad", indicó Zablah sobre el acto.

En septiembre se abre licitación del puerto de La Unión

El vicepresidente y comisionado de inversión confirmó que concurso será lanzado la primera semana del mes próximo

ROSA MARÍA PANTEÓN

El Ejecutivo preparará para la primera semana de septiembre abrir la licitación del puerto de La Unión Centroamericana, según confirmó ayer el vicepresidente de la República y comisionado de inversión, Óscar Ortiz.

"En la primera semana de septiembre vamos a lanzar el puerto de La Unión Centroamericana, entonces y el 4 de septiembre, en este lanzamiento, ratificará el Embajador en la presentación del proyecto de construcción de la planta de energía a base de gas natural de Energía del Pacífico, en Acajutla.

De acuerdo con el último cronograma de la Comisión Ejecutiva Portuaria Autónoma (CEPA), una vez abierto el concurso internacional se darán 105 días de tiempo a los empresas participantes para presentar sus ofertas, y la evaluación de las mismas se hará en 90 días aproximadamente.

Una vez se adjudique se tiene que dar un periodo para declarar firme la adjudicación, según el CAFTA-DR, luego, la empresa ganadora debe constituir una sociedad en el país. Posteriormente se firmará el contrato, el cual deberá recibir un aval técnico y legal de la Autoridad Marítima Portuaria (AMP).

La Asamblea Legislativa también tiene que dar su visto bueno. Te paralelo, la CEPA debe trabajar para reducir el nodos del canal y dejarlo en niveles adecuados para que la empresa ganadora construya a operar. Este trabajo requiere de seis millones para iniciarse.

En tanto, CEPA dijo un proceso de precalificación en el que participaron cuatro firmas: Isaza Puertos S. A., de Chile; Grupo Marítimo TCB, de España; International Container Terminal Services (incorporated, de Filipinas; y Bolloré Port and Logistics, de Francia, según cita fuente oficial.

PUBLICACIONES - DEM

Beneficiarán a emprendedores.

GOBIERNO Crearán fondo especial

Lanzan nueva política para Mype

Buscan apoyar a los pequeños empresarios.

REDACCIÓN ECONOMÍA
DIARIO EL MUNDO

El presidente de la República, Salvador Sánchez Cerén, lanzó oficialmente ayer la Política Nacional de Emprendimiento en apoyo a la Micro y Pequeña Empresa (Mype), que permitirá favorecer a los pequeños empresarios del país.

Según detallaron las autoridades, la política plantea instrumentos como la creación de un fondo que financie las distintas etapas de proyectos emprendedores; así como la articulación de los servicios de apoyo a los procesos de creación y formalización de las empresas.

"Buscamos reducir el déficit que existe en la capacidad de emprender. También es necesario desarrollar una cultura emprendedora con enfoque de innovación y creatividad", aseguró el mandatario en su discurso.

Según Sánchez Cerén, la política también implica un compromiso del gobierno de fomentar una cultura de emprendimiento, una mejor articulación de los servicios de apoyo en los procesos de emprendimiento y atención a los diferentes segmentos de este tipo.

El presidente calificó el lanzamiento de la política como un "paso muy importante en el despegue de la economía popular y solidaria".

Sánchez Cerén indicó que en el marco de los primeros 100 días de su gobierno ya se han puesto en marcha otras iniciativas para el apoyo de las micros y pequeñas empresas, como el relanzamiento del portal COMPRASAL para mejorar el acceso de éstas a las compras públicas; y la aprobación de $100 millones del Banco Interamericano de Desarrollo (BID), para otorgar créditos a los mypes a través de la banca estatal.

Asimismo, destacó que estas iniciativas se suman a otras impulsadas durante el pasado gobierno, como la Ley de Fomento de la Producción, la Ley de Bienes Muebles, la Política de Desarrollo de la Micro y Pequeña Empresa y la Ley de Fomento, Protección y Desarrollo de la Micro y Pequeña Empresa, aseguró.

> **Buscamos reducir el déficit que existe en la capacidad de emprender. También es necesario desarrollar una cultura emprendedora con enfoque de innovación y de creatividad"**
>
> SALVADOR SÁNCHEZ C.
> PDTE. DE LA REPÚBLICA

INVERSIÓN Proyecto implica inversión aproximada de $900 millones

Planta de gas natural iniciará construcción a mediados de 2015

Las obras se desarrollarán en el puerto de Acajutla, Sonsonate. Prevén generar 355 megavatios de energía a partir de gas natural licuado.

VANESSA LINARES
DIARIO EL MUNDO

La primera planta generadora de energía eléctrica a partir de Gas Natural Licuado (GNL) en la región comenzará a construirse en el puerto de Acajutla, Sonsonate, hasta mediados de 2015 cuando estén listos los permisos medioambientales y consolidado el financiamiento, según indicó ayer el presidente de Energía del Pacífico, Eduardo Zablah.

"Para el primero y segundo trimestre de 2015 tiene que estar terminado el estudio medioambiental (...) y el cierre financiero. Una vez logrado eso, caminamos", aseguró el representante de la sociedad compuesta por el asocio Quantum-GLI.

Zablah detalló que en lo que resta del año e inicios del próximo, se trabajará en los estudios geotécnicos del suelo, el marino, el estudio de batimetría y el ambiental de la línea de transmisión.

El montaje de la infraestructura tomará alrededor de tres años, tiempo en el que estiman una inversión aproximada de $900 millones, de los cuales $300 millones son de capital de la sociedad y los $600 millones restantes provenientes de la Corporación Financiera Internacional del Banco Mundial (BM).

La empresa Energía del Pacífico, que desarrollará y operará el proyecto de generación de energía eléctrica a partir de GNL, estima distribuir una potencia y energía asociada de 355 megavatios, por un período de 20 años a partir de enero de 2018.

Las autoridades señalaron que la cantidad de energía que proyecta inyectar esta planta corresponde a una tercera parte del total de la demanda de energía del país.

La planta de gas natural licuado debe proveer energía desde enero del 2018.

El vicepresidente de la República, Óscar Ortiz, externó su respaldo a la empresa Energía del Pacífico.

> **Esta inversión va a cambiar la matriz energética de todo El Salvador. Buscamos que el país pueda contar con energía más accesible, competitiva y que impulse y respalde a la industria"**
>
> ÓSCAR ORTIZ, VICEPRESIDENTE DE LA REPÚBLICA

> **Para el primero y segundo trimestre de 2015 tiene que estar terminado el estudio medioambiental (...) y el cierre financiero. Una vez logrado eso, caminamos"**
>
> EDUARDO ZABLAH, PRESIDENTE DE ENERGÍA DEL PACÍFICO

Las obras se harán en un terreno de 18 manzanas arrendadas a Enegría del Pacífico por la Comisión Ejecutiva Portuaria Autónoma (CEPA) por un período de 24 años y que generará hasta 1,200 empleos directos e incluirán un tanque de almacenamiento flotante, un tanque de almacenamiento en tierra, un muelle, la planta generadora de energía eléctrica y la línea de transmisión asociada.

Zablah explicó que la sociedad también construirá una planta regasificadora que será la terminal receptora del GNL (en su estado líquido) para luego volver a convertirlo en un estado gaseoso y con él generar la potencia y energía asociada comprometida en el contrato que firmó en diciembre con las distribuidoras. El representante no dio detalles de dónde provendrá la materia prima.

El vicepresidente y comisionado para la inversión pública y privada, Óscar Ortiz, calificó el proyecto como "necesario" para el país, debido a la diversificación de la matriz energética que significará.

"Esta inversión va a cambiar la matriz energética de todo El Salvador", apuntó.

PUBLICACIONES - SUMMA

iPad 07:33 56%

El Salvador: Energía del Pacifico quiere construir...
www.revistasumma.com/negocios/50862-el-salv..._medium=twitter&utm_campaign=revistasumma

REVISTA Summa

Jueves 21 de agosto de 2014

Activar código

Summa 20 años

El Salvador: Energía del Pacifico quiere construir una planta de gas natural

Ju 21/Ago/2014 00:02
Revista Summa

El proyecto de generación de eléctrica de 355 megavatios de potencia a partir de Gas Natural estará ubicado en la ciudad de Acajutla, departamento de Sonsonate.

Una comisión técnica integrada por ejecutivos de Energía del Pacifico, S.A. de C.V. y una comisión gubernamental encabezada por el Vicepresidente de la República, Oscar Ortiz, realizaron una visita de campo al lugar donde, a partir del año 2018, operará la primera planta generadora de energía eléctrica que utilizará como combustible Gas Natural.

Energía del Pacífico, S.A. de C.V. es la empresa que desarrollará y operará un proyecto de generación de energía eléctrica a partir de Gas Natural en la ciudad de Acajutla, en Sonsonate, con el cual se proyecta que durante 20 años se generen 355 megavatios de potencia y su energía asociada, lo cual corresponde a una tercera parte del total de la demanda de energía que posee El Salvador.

El presidente de EDP, Eduardo Zablah Touché, explicó que dicha sociedad construirá una planta regasificadora que será la terminal receptora del Gas Natural en su estado líquido (gas natural licuado), para luego volver a convertirlo a su estado gaseoso (gas natural) y con él generar la potencia y energía asociada comprometida en el proyecto.

Asimismo, se construirán un tanque de almacenamiento flotante, otro tanque de almacenamiento en tierra, un muelle, una planta generadora de energía eléctrica y la Línea de Transmisión asociada. El montaje de la infraestructura del citado proyecto llevará alrededor de 3 años, durante los cuales se estima una inversión que oscila entre los US$850 millones y US$1.000 millones de los Estados Unidos de América, los cuales incluyen un aporte al desarrollo social y económico en el municipio de Acajutla.

El Vicepresidente y Comisionado para la Inversión Pública y Privada, Óscar Ortiz, habló de la apuesta por la diversificación de la matriz energética. "Con la puesta en marcha de la planta de gas natural lograremos reducir los costos de generación de energía eléctrica en el país y se ofrecerá un servicio de mayor calidad, esto beneficia a la industria, la hace más competitiva, y a la población, con energía más barata", detalló el mandatario.

Noticias relacionadas

AES abre planta de energía a partir de gas metano en El Salvador e invierte US$58 millones

Inauguran laboratorio de biocombustibles en El Salvador

Licitación de energía de Guatemala atrae a 58 generadores

Appendix 8D–
LNG Workshop, Agenda and Attendance List

LNG Workshop Agenda

1 SEMINARIO GAS NATURAL: "AGENDA DE LAS PONENCIAS"

1.1 FECHA

Miércoles 16 de Julio de 2014.

1.2 LUGAR

Hotel Hilton Princess, Salón Britania de 8am a 6pm.

1.3 POR LA MAÑANA

Distribución de ponencias en horario de 8:00 am a 10:30 am:

HORARIOS		TEMA	PRESENTADOR
8:30 – 9:00 am	**1.**	Importancia del proyecto a nivel nacional. Programa del proyecto, fechas importantes.	Alejandro Alle
9:00 – 9:30 am	**2.**	Introducción al mundo de la generación de energía con gas natural	Javier Mina
9:30 – 10:00 am	**3.**	Bondades de la generación con gas, reservas de gas natural en el mundo.	Javier Mina
10:00 – 10:30 am	**4.**	Ubicación del proyecto y sus elementos	Leonora Ferrer

COFFEE BREAK 10:30 AM – 11:00 AM

Distribución de ponencias en horario de 11:00am a 12:30pm:

HORARIOS		TEMA	PRESENTADOR
11:00 – 11:30 am	**1.**	Explicación sobre cómo funcionará la central de generación a instalar, principio de funcionamiento, principales operaciones.	Alejandro Bastardo
11:30 – 12:00 am	**2.**	Breve explicación de características del GNL / GN.	Leonora Ferrer
12:00 – 12:30 am	**3.**	Preguntas y Respuestas	

ALMUERZO 12:30 PM – 1:45 PM

1.4 TARDE

Distribución de ponencias en horario de 1:45pm a 3:30pm:

HORARIOS		TEMA	PRESENTADOR
1:45 – 2:15 pm	**1.**	Mayor detalle sobre cómo funcionará la central de generación a instalar	Alejandro Bastardo
2:15 – 2:45 pm	**2.**	Explicar balance térmico	Alejandro Bastardo
2:45 – 3:30 pm	**3.**	Explicar balance hídrico	Alejandro Bastardo

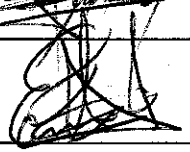
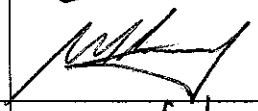
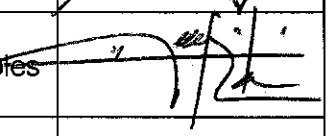
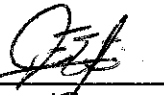
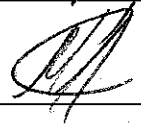
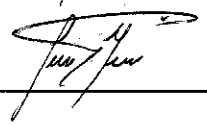
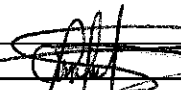
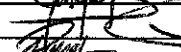
COFFEE BREAK 2: 3:30 PM – 4:00 PM

Distribución de ponencias en horario de 4:00pm a 6:00pm:

HORARIOS		TEMA	PRESENTADOR
4:00 – 4:30 pm	**1.**	Emisiones atmosféricas esperadas	Alejandro Bastardo
4:30 – 5:00 pm	**2.**	Generación de desechos y residuos	Alejandro Bastardo
5:00 – 5:30 pm	**3.**	ECO INGENIEROS: Estructura de trabajo, equipo y responsables. Y principales aspectos del medio Físico, biológico y socio económico ambientales que se analizarán como parte del Estudio de Impacto Ambiental.	Leonora Ferrer
5:30 – 6:00 pm	**4.**	Preguntas y Respuestas	

Attendance List

No.	Institucion	NOMBRE	CARGO	Firma	CORREO / Teléfono
1	**ANDA**	Inga. Cecibel de Mayorga	Jefe de la Unidad de Diseños Electromecánicos y Eficiencia Energética de ANDA		ana.garcia@anda.gob.sv
2	**ANDA**	Lic. Dagoberto Arevalo	Jefe de la Unidad de Investigación e Hidrogeología de ANDA		
3	**Autoridad Maritima Portuaria**	Ing. Ramón Herrera Coello	Gerente Portuario		2519027 rherrera@amp.gob.sv
4	**Consejo Nacional de Energía**	Ing. Edwin Alvarado	Director de Combustibles		2233-7934 ealvarado@one.gob.sv
5	**Consejo Nacional de Energía**	Licda. Rocio Aquino Campos	Director de Combustibles		
6	**Consejo Nacional de Energía**	Ing. Carlos Najera	Director de Recursos Renovables		
7	**Consejo Nacional de Energía**	Inga. Georgina Barrientos de Flores	Director de Mercado Eléctrico		
8	**Cuerpo de Bomberos de El Salvador**	Capitan Salvador Lizando Albarenga	Director General del Cuerpo de Bomberos de El Salvador		
9	**MARN**	Silvia Larios	Directora General de Evaluación y cumplimiento ambiental		
10	**MARN**	Ing. Alberto Fabian	Tecnico		afabian@marn.gob.sv
11	**MARN**	~~Ana~~ Luisa Cañas	Tecnico		lcanas@marn.gob.sv 21329370
12	**MARN**	Albert Salmeron	Tecnico		asalmeron@marn.gob.sv
13	**MARN**	Diana Celeste Meléndez	Tecnico		dmelendez@marn.gob.sv
14	**MARN**	Nestor Herrera*	Director General de Ecosistemas y Vida Silvestre		
15	**MARN**	Licda. Vilma Celina Garcia/ Arq. Mejia*	Director General de Atención Ciudadana y Municipal		

16	**MARN**	Karla tobar	Abogado del departamento		Ktobar@marn.gob.sv
17	**Ministerio de Gobernacion**	LIC. JORGE ANTONIO MELÉNDEZ *	Director General de Proteccion Civil . Prevencion y Mitigacion de Desastres.		
18	**Ministerio de Obras Públicas, Transporte, Vivienda y Desarrollo Urbano**	Arq. Edna Valle	Director del desarrollo territorial urbanismo y construcción		
19	**Ministerio de Economía**	Lic. Eduardo Alexander Ramirez	Director de Hidrocarburos y minas		
20	Comité Interinstitucional para la Introducción de GN MINEC	Ing. Jorge Iraheta	DRHM		JIRAHETA@MINEC.GOB.SV / 2590-5222
21	Comité Interinstitucional para la Introducción de GN MINEC	Lic.Mario Chavarria	Dirección de Combustibles		Mchavarria@minec.gob.sv 2590 5222
22	Comité Interinstitucional para la Introducción de GN MINEC	Ing.Ricardo Andrade	Dirección de Combustibles		jandrade@minec.gob.sv 2590 -5211/09
23	Comité Interinstitucional para la Introducción de GN MINEC	Ing. Jamie Zelayandia	MINEC		JZelayandia@minec.gob.sv 2590-5211
24	Comité Interinstitucional para la Introducción de GN MINEC	Ing. Ana María Gonzalez	MINEC		
25	Comité Interinstitucional para la Introducción de GN CNE	Ing Mauricio Palacios	CNE		mpalacios@cne.gob.sv 22337927
26	Comité de Gas Natural (formado por varias instituciones)	Ing. Gilberto Cruz Olmedo*	Director de Electricidad		
27	SIGET	Ing. Oscar Leiva	Analista Electricidad		oscar.leiva@siget.gob.sv
28	MARN	Mauricio Alfaro	Coordinador Cambio Climatico		
29	SIGET	Ernesto Ticas Aguirre	Esp. Rec. Geotermico		jecastagre@siget.gob.sv 22574439
30	UCA	Ismael Sánchez	Catedrático		isanchez@uca.edu.sv 22106664
31	CNE	Ignacio Handal	Asistente Tecnico		
32	Grupo GHSA	Rafael Galeano	Director		rafael.galeano@grupoghm.com.sv

Appendix 8E–

Material Prepared for 2014 Stackeholder Engagement

Published Notices

ENERGÍA DEL PACÍFICO

"LNG to Power Project"

Aviso de inicio del Estudio de Impacto Ambiental

Antecedentes

Energía del Pacífico es la empresa formada por los miembros del Asocio que resultó vencedor de la licitación internacional coordinada por DELSUR en 2013, para el suministro de nueva capacidad eléctrica para entregar a siete empresas distribuidoras en el país. Para cumplir este requerimiento, Energía del Pacífico instalará una planta de 380 MW de capacidad en el puerto de Acajutla, Sonsonate, que utilizará gas natural, el combustible más limpio disponible para la generación de electricidad en plantas térmicas. Este emprendimiento brinda la oportunidad de introducir el gas natural, un combustible limpio, abundante y económico, en la matriz energética de El Salvador.

Se ha programado el inicio de la construcción del proyecto para el segundo trimestre de 2015, una vez que se hayan obtenido todos los permisos necesarios. Y el inicio de la operación comercial del mismo para el primer trimestre de 2018.

El emprendimiento Energía del Pacífico instalará en el puerto de Acajutla que consta de:

- Una terminal para la recepción de Gas Natural Licuado (GNL), adecuadamente dimensionada para la recepción de buques tanques y almacenamiento del producto. Los principales componentes de la terminal son:
- Una unidad de almacenamiento flotante (buque tanque) que permanecerá anclada a un nuevo muelle a construir para el proyecto, cerca del actual muelle del puerto de Acajutla.
- Un tanque de almacenamiento de GNL en tierra, para complementar el almacenamiento del GNL.
- Una tubería para transportar el GNL de la unidad flotante a la unidad en tierra, y
- Una planta de regasificación, para convertir el gas natural licuado a gas natural.
- Una planta de generación eléctrica de una potencia de 380 MW que operará con gas natural como combustible.

Para interconectar el proyecto a la red eléctrica nacional se requerirá de la construcción de una línea de transmisión de alto voltaje (230 kV). Esta línea de transmisión está siendo desarrollada en otro proceso de evaluación, pero interrelacionado con este proyecto.

Estudio de Impacto Ambiental

Energía del Pacífico ha iniciado la evaluación de los posibles impactos ambientales, sociales y de salud que pudiesen producirse por el proyecto, mediante la presentación del Formulario Ambiental al Ministerio de Medio Ambiente y Recursos Naturales (MARN). A través de este proceso de evaluación de impactos ambientales se identificarán los impactos y se propondrán las medidas ambientales para minimizar los efectos negativos y potenciar los impactos positivos del proyecto. El proceso de evaluación ambiental dará como resultado un documento que cumplirá con los requerimientos de la legislación y regulaciones en El Salvador. Adicionalmente, el documento cumplirá con las políticas ambientales, sociales y estándares del Banco Mundial. Se espera tener terminado el estudio de impacto ambiental (EIA) a finales de este año.

Actividades de consulta ciudadana

Energía del Pacífico está comprometida a consultar con las partes interesadas durante todo el proceso del EIA. Un plan de participación de las partes interesadas está en elaboración y el mismo incorporará actividades de consulta con el público, las comunidades, la sociedad civil y las agencias gubernamentales.

Energía del Pacífico va a abrir una oficina de consulta en la ciudad de Acajutla dentro de 30 días, donde información sobre el proyecto, incluyendo el plan de participación pública, estará disponible para revisión de los interesados. Los detalles de la ubicación de la oficina y las horas de atención se darán a conocer posteriormente por este mismo medio.

Para obtener más información, pueden ponerse en contacto con el departamento de comunicación del proyecto, de la empresa Energía del Pacífico de la siguiente forma:

Atención: Departamento de Comunicación del Proyecto
Energía del Pacífico, proyecto LNG to Power Project
Teléfono: 7840-9635. Dirección de correo electrónico: info@edp.com.sv

ENERGÍA DEL PACÍFICO
"LNG to Power Project"
Aviso de inicio del Estudio de Impacto Ambiental

ANTECEDENTES

Energía del Pacífico es la empresa formada por los miembros del Asocio que resultó vencedor de la licitación internacional coordinada por DELSUR en 2013, para el suministro de nueva capacidad eléctrica para entrega a siete empresas distribuidoras en el país. Para cumplir este requerimiento, **Energía del Pacífico** instalará una planta de 380 MW de capacidad en el puerto de Acajutla, Sonsonate, que utilizará gas natural, el combustible más limpio disponible para la generación de electricidad en plantas térmicas. Este emprendimiento brinda la oportunidad de introducir el gas natural, un combustible limpio, abundante y económico, en la matriz energética de El Salvador.

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  - Un tanque de almacenamiento de GNL en tierra, para complementar el almacenamiento del GNL.
  - Una tubería para transportar el GNL de la unidad flotante a la unidad en tierra, y
  - Una planta de regasificación, para convertir el gas natural licuado a gas natural.
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Para interconectar el proyecto a la red eléctrica nacional se requerirá de la construcción de una línea de transmisión de alto voltaje (230 kV). Esta línea de transmisión está siendo desarrollada en otro proceso de evaluación, pero interrelacionado con este proyecto.

ESTUDIO DE IMPACTO AMBIENTAL

Energía del Pacífico ha iniciado la evaluación de los posibles impactos ambientales, sociales y de salud que pudiesen producirse por el proyecto, mediante la presentación del Formulario Ambiental al Ministerio de Medio Ambiente y Recursos Naturales (MARN). A través de este proceso de evaluación de impactos ambientales se identificarán los impactos y se propondrán las medidas ambientales para minimizar los efectos negativos y potenciar los impactos positivos del proyecto. El proceso de evaluación ambiental dará como resultado un documento que cumplirá con los requerimientos de la legislación y regulaciones en El Salvador. Adicionalmente, el documento cumplirá con las políticas ambientales, sociales y estándares del Banco Mundial. Se espera tener terminado el estudio de impacto ambiental (EIA) a finales de este año.

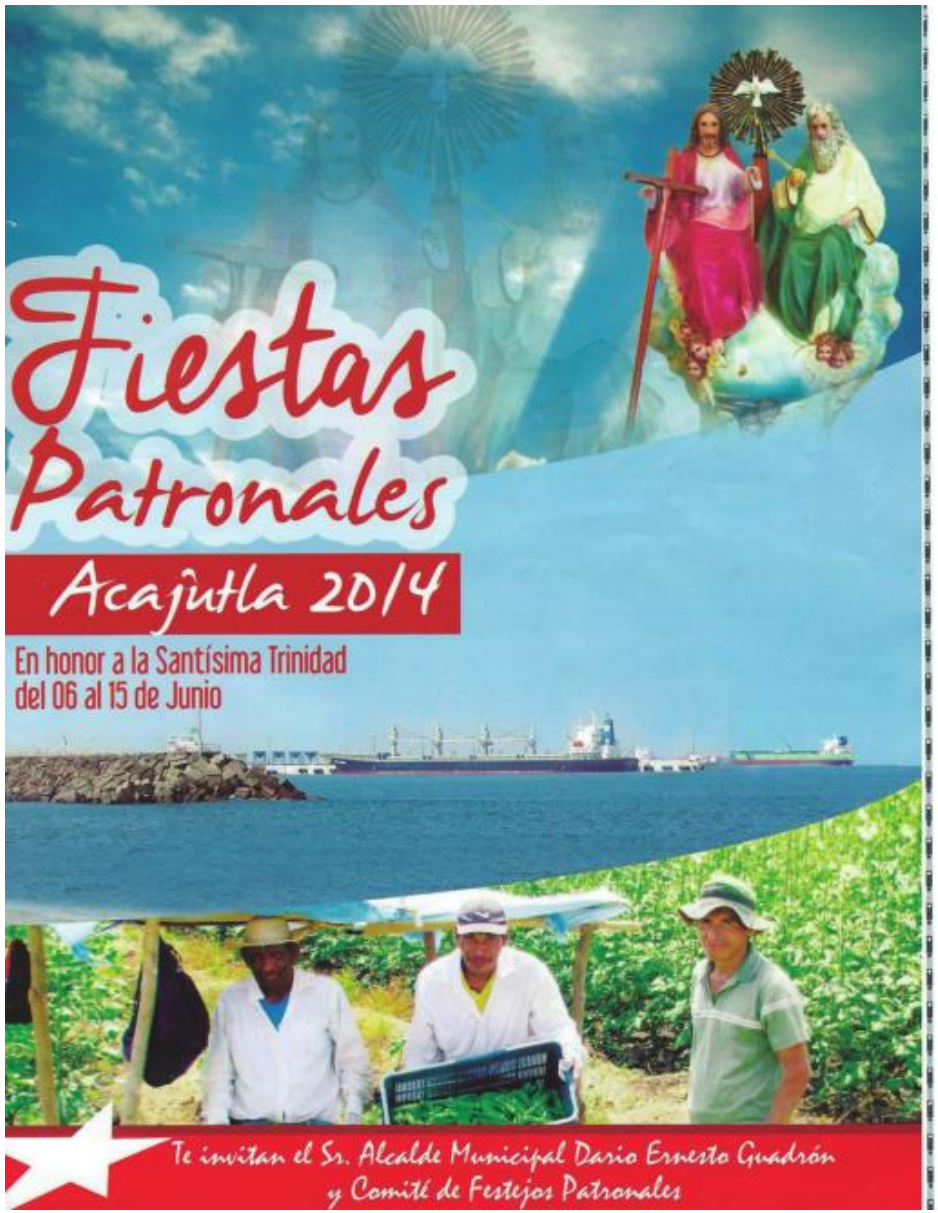
ACTIVIDADES DE CONSULTA CIUDADANA

Energía del Pacífico está comprometida a consultar con las partes interesadas durante todo el proceso del EIA. Un plan de participación de las partes interesadas está en elaboración y el mismo incorporará actividades de consulta con el público, las comunidades, la sociedad civil y las agencias gubernamentales.

Energía del Pacífico va a abrir una oficina de consulta en la ciudad de Acajutla dentro de 30 días, donde información sobre el proyecto, incluyendo el plan de participación pública, estará disponible para revisión de los interesados. Los detalles de la ubicación de la oficina y las horas de atención se darán a conocer posteriormente por este mismo medio.

Para obtener más información, pueden ponerse en contacto con el departamento de comunicación del proyecto, de la empresa Energía del Pacífico de la siguiente forma:

Atención: Departamento de Comunicación del Proyecto
Energía del Pacífico, proyecto LNG to Power Project
Teléfono: 7840-9635
Dirección de correo electrónico: info@edp.com.sv



Energía del Pacífico "PROYECTO DE GENERACIÓN DE ENERGÍA ELÉCTRICA"
Aviso de inicio del Estudio de Impacto Ambiental

ANTECEDENTES

Energía del Pacífico es la empresa formada por los miembros del Asocio que resultó adjudicado en la licitación internacional coordinada por DELSUR en 2013, para el suministro de nueva capacidad eléctrica a ser entregada a siete empresas distribuidoras en el país. Para cumplir este requerimiento, Energía del Pacífico instalará una planta de 380 MW de capacidad en el puerto de Acajutla, departamento de Sonsonate, que utilizará gas natural, el combustible más limpio disponible para la generación de electricidad en plantas térmicas. Este emprendimiento brinda la oportunidad de introducir el gas natural, un combustible limpio, abundante y económico, en la matriz energética de El Salvador.

El inicio de la construcción del proyecto se ha programado para el segundo trimestre de 2015, una vez que se hayan obtenido todos los permisos necesarios; y para la operación comercial del mismo, el primer trimestre de 2018.

El emprendimiento que **Energía del Pacífico** instalará en el puerto de Acajutla consta de:

- Una terminal para la recepción de Gas Natural Licuado (GNL), adecuadamente dimensionada para la recepción de buques tanques y almacenamiento del producto. Los principales componentes de la terminal son:
  - ◊ Una unidad de almacenamiento flotante (buque tanque) que permanecerá anclada a un nuevo muelle a construir para el proyecto, cerca del actual muelle del puerto de Acajutla.
  - ◊ Un tanque de almacenamiento de GNL en tierra, para complementar el almacenamiento del GNL.
  - ◊ Una tubería para transportar el GNL de la unidad flotante a la unidad en tierra, y
  - ◊ Una planta de regasificación, para convertir el gas natural licuado a gas natural.
- Una planta de generación eléctrica de una potencia de 380 MW que operará con gas natural como combustible.

Para interconectar el proyecto a la red eléctrica nacional se requerirá de la construcción de una línea de transmisión de alto voltaje (230 kV), la cual está siendo desarrollada en otro proceso de evaluación que a su vez se encuentra interrelacionado con este proyecto.

ESTUDIO DE IMPACTO AMBIENTAL

Energía del Pacífico ha iniciado la evaluación de los posibles impactos ambientales, sociales y de salud que pudiesen producirse por el proyecto, mediante la presentación del Formulario Ambiental al Ministerio de Medio Ambiente y Recursos Naturales (MARN). A través de este proceso de evaluación de impactos ambientales se identificarán los impactos y se propondrán las medidas ambientales para minimizar los efectos negativos y potenciar los impactos positivos del proyecto. El proceso de evaluación ambiental dará como resultado un documento que cumplirá con los requerimientos de la legislación ede El Salvador. Adicionalmente, el documento cumplirá con las políticas ambientales, sociales y estándares del Banco Mundial. Se espera tener terminado el estudio de impacto ambiental (EIA) a finales de este año.

ACTIVIDADES DE CONSULTA CIUDADANA

Energía del Pacífico está comprometida a realizar las consultas pertinentes con las partes interesadas durante todo el proceso del EIA. Un plan de participación de las partes interesadas está en elaboración y el mismo incorporará actividades de consulta con el público, las comunidades, la sociedad civil y las agencias gubernamentales.

Energía del Pacífico instalara, dentro de 30 días, una oficina de consulta en la ciudad de Acajutla en la cual se brindará información sobre el proyecto, incluyendo el plan de participación pública que estará disponible para revisión de los interesados. Los detalles de la ubicación de la oficina y las horas de atención se darán a conocer posteriormente por este mismo medio.

Para obtener más información, pueden ponerse en contacto con el Departamento de Comunicación de Energía del Pacífico, de la siguiente forma:

Atención: Departamento de Comunicaciones de Energía del Pacífico S.A. de C.V.

Teléfono: 7840-9635 - **Dirección de correo electrónico**: info@edp.com.sv

ENERGÍA DEL PACÍFICO, S.A. DE C.V.

PROYECTO DE GENERACIÓN DE ENERGÍA ELÉCTRICA

Aviso de apertura de oficina de información del Proyecto

Energía del Pacífico, S.A. de C.V., sociedad mercantil constituida por el Asocio ganador de la "Licitación Pública Internacional No. DELSUR-CLP-001-2012" convocada por DELSUR para el suministro de 355 MW de energía eléctrica a partir del 1 de enero de 2018, ha iniciado la evaluación de los posibles impactos ambientales, sociales y de salud que podrían derivarse del Proyecto de Generación de Energía Eléctrica a partir de Gas Natural Licuado (uno de los combustibles más limpios en la actualidad), el cual estará ubicado en el Puerto de Acajutla, departamento de Sonsonate.

En ese sentido, se llevará a cabo un "Programa de participación" que permita identificar los problemas, preocupaciones y oportunidades relacionados con las personas directamente afectadas por el Proyecto, así como con los actores locales involucrados en su desarrollo; por lo tanto y en aras de facilitar los canales de comunicación pertinentes, Energía del Pacífico, S.A. de C.V. ha abierto una Oficina de Información con el propósito que cualquier persona interesada en el tema pueda acercarse a la misma y conocer más acerca del citado Proyecto, así como de los beneficios que éste traerá al país.

Los datos de la oficina de información son los siguientes:
Dirección: Colonia RASA 1, casa #44, en la intersección de Calle Circunvalación y Pasaje Tres, ciudad de Acajutla, departamento de Sonsonate.
Horarios de Atención: De lunes a viernes, de 7:30am a 12m y de 1 a 5pm.

Asimismo, las personas interesadas pueden comunicarse a través de:
Teléfono: (503) 2452-6313.
Correo electrónico: blovato@edp.com.sv

Brochure

PROCESO DE EVALUACIÓN DE IMPACTO AMBIENTAL :

El estudio de Impacto Ambiental en elaboración incluye la evaluación de los efectos potenciales del proyecto sobre el medio en el área de influencia del mismo, e identificará las medidas de mitigación y acciones de manejo que pueden ser implementadas para limitar los efectos negativos y aumentar los beneficios. Se están analizando:

ASPECTOS FISICOS

- Calidad del aire.
- Ruido y vibraciones.
- Riesgos geológicos (sismicidad, incluyendo el riesgo de tsunami).
- Suelos.
- Aguas superficiales y subterráneas, incluida la calidad del agua marina.
- Transporte de sedimentos costeros.

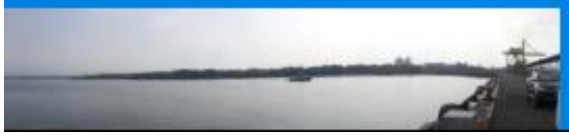
ASPECTOS BIOLOGICOS

- Ecosistemas, áreas protegidas y sensibles.
- Flora y fauna terrestre.
- Flora y fauna marina.
- Vectores de enfermedades

ASPECTOS SOCIOECONOMICOS

- Uso existente y planificado de la tierra.
- Demografía y población
- Actividades económicas, como la pesca.
- Salud y seguridad de la comunidad.
- Cultural: recursos arqueológicos, ceremoniales e históricos.
- Salud y seguridad de los trabajadores.

Se desarrollará un sistema de gestión ambiental y social, a implementar durante la construcción y operación del Proyecto.



PARTICIPACIÓN CIUDADANA :

Las actividades de participación de las partes interesadas se han diseñado para ayudar a EDP a conocer sobre las preocupaciones que particulares u organizaciones pudieran tener, para recopilar información de antecedentes y obtener conocimiento sobre los efectos potenciales y las medidas de gestión propuestas.

Las principales actividades de participación que se llevarán a cabo son:

- Publicación de anuncios sobre el proyecto, incluida la notificación de la disponibilidad de los documentos y las oportunidades para hacer aportes al Estudio de Impacto Ambiental (EIA)
- Reuniones de consulta con agencias gubernamentales y organizaciones no gubernamentales.
- Apertura de un Centro de Información Pública en Acajutla, donde los interesados puedan obtener información sobre el proyecto y proporcionar comentarios y aportaciones.
- Entrevistas y reuniones de consulta con el público en general para presentar el proyecto y las conclusiones del proceso de evaluación de impacto ambiental.

EDP dará un seguimiento a los comentarios e inquietudes, y se contará con un mecanismo para hacer frente a cualquier consulta especifica que pueda presentarse.

Para obtener mas información, pueden ponerse en contacto con:

Departamento de comunicaciones de Energía del Pacífico S.A. de C.V.
Col. RASA 1, calle circunvalación casa #44, ACAJUTLA, Sonsonate.
Teléfono: 2452-6313
E-mail: blovato@edp.com.sv

PROYECTO
GENERACIÓN DE ENERGÍA ELÉCTRICA
LNG TO POWER

"UNA NUEVA ENERGÍA PARA EL SALVADOR"

UBICACIÓN:

El proyecto se ubicará dentro de terrenos de la COMISIÓN EJECUTIVA PORTUARIA AUTÓNOMA, en el PUERTO DE ACAJUTLA , rodeado de terrenos de uso industrial.

Este emprendimiento brinda la oportunidad de introducir gas natural, un combustible limpio, abundante y económico, en la matriz energética de El Salvador.

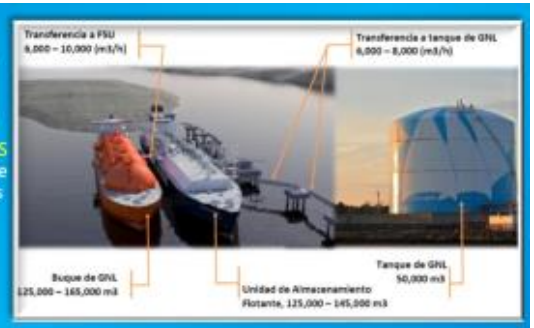
CONSTRUCCIÓN Y OPERACIÓN PROGRAMACIÓN Y FUERZA DE TRABAJO:

Se espera contar con aproximadamente 60 empleados permanentes para las operaciones, y la fuerza laboral a emplear para la construcción será de 1000 empleados aproximadamente. La construcción iniciara en 2015 y tomará alrededor de 3 años.

Con el mantenimiento adecuado y reparaciones, la planta será capaz de funcionar durante varias décadas.

"El Gas Natural es un combustible más limpió, seguro y económico que otros combustibles fósiles"

EL PROYECTO QUE SE INSTALARÁ EN EL PUERTO DE ACAJUTLA CONSTA DE:



Una TERMINAL PARA LA RECEPCIÓN DE GAS NATURAL LICUADO (GNL), adecuadamente dimensionada para la recepción de buques tanques y almacenamiento del producto.

Lo principales componentes de la terminal son:

- Una unidad de almacenamiento flotante (buque tanque) que permanecerá anclada a un nuevo muelle a construir para el proyecto, cerca del actual muelle del puerto de Acajutla.
- Un tanque de almacenamiento de GNL en tierra, para complementar el almacenamiento del GNL.
- Una tubería para transportar el GNL de la unidad flotante a la unidad en tierra.
- Una planta de regasificación, para convertir el gas natural licuado a gas natural.

Una PLANTA DE GENERACIÓN ELÉCTRICA de ciclo combinado con una potencia de 380 MW que operará con gas natural como combustible.

Posters

PROYECTO

CENTRAL TÉRMICA

LNG TO POWER

CENTRAL TÉRMICA

El Gas Natural se utilizará como combustible para una nueva Planta de Ciclo Combinado de alta eficiencia.

"La Central Térmica" consistirá en una casa de máquinas con 19 unidades motor generador de 18.50MW, totalizando 351.50 MW + una caldera de 28.50 MW, para tener 380 MW de capacidad.

Las emisiones de chimeneas de la central térmica serán bajas en comparación con emisiones típicas de centrales térmicas operando a carbón o con combustibles fósiles.

El sistema de enfriamiento de motores y caldera será de ciclo cerrado de aire enfriado con radiadores, que tienen un consumo mínimo de agua. Se utilizará agua subterránea como la fuente de agua para la planta.

PROYECTO
CENTRAL TÉRMICA
LNG TO POWER

PROCESO DE EVALUACIÓN DE IMPACTO AMBIENTAL

El estudio de impacto ambiental que se desarrollará incluye una evaluación de los efectos potenciales del proyecto sobre el medio natural, social y de la salud en el área de influencia del Proyecto, e identifica las medidas de mitigación y acciones de manejo que pueden ser implementadas para limitar efectos negativos y aumentar los beneficios.

Se analizarán los siguientes temas, abordando todas las fases del proyecto:

ASPECTOS FÍSICOS

- Calidad de aire.
- Ruido.
- Riesgos geológicos (sismicidad, incluyendo el riesgo de tsunami).
- Suelos.
- Aguas superficiales y subterráneas, incluida la calidad del agua marina.
- Transporte de sedimentos costeros.

ASPECTOS BIOLÓGICOS

- Ecosistemas, áreas protegidas y sensibles.
- Flora y fauna terrestre.
- Flora y fauna marina.
- Vectores de enfermedades.

ASPECTOS SOCIOECONÓMICOS

- Uso existente y planificado de la tierra.
- Demografía y población.
- Actividades económicas como la pesca.
- Salud y seguridad de la comunidad.
- Salud y seguridad de los trabajadores.
- Cultural ,tales como recursos arqueológicos, ceremoniales e históricos.
- Paisaje.

Como parte de la evaluación del impacto ambiental, se desarrollará un sistema de gestión ambiental y social. Esto incluirá los planes de gestión durante la construcción y operación del Proyecto.

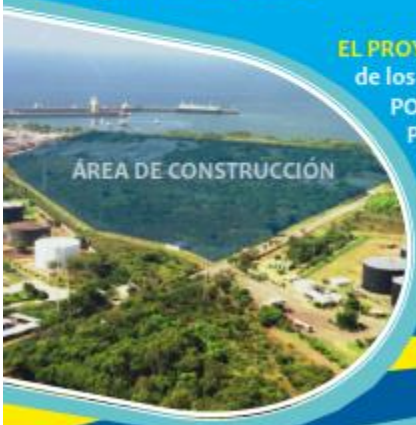
PROYECTO
CENTRAL TÉRMICA
LNG TO POWER

UBICACIÓN DEL PROYECTO

ENERGÍA DEL PACÍFICO instalará una planta de 380MW de capacidad, en el puerto de Acajutla,Sonsonate; que utilizará gas natural.

Este último es el combustible más limpio disponible para la generación de electricidad en plantas térmicas.

Este emprendimiento brinda la oportunidad de introducir el gas natural (un combustible limpio, abundante y económico) en la matriz energética de El Salvador.



EL PROYECTO se encuentra ubicado dentro de los terrenos de la **COMISIÓN EJECUTIVA PORTUARIA AUTÓNOMA (CEPA)**, en el Puerto de Acajutla, rodeado también de otros terrenos de uso industrial.

PROYECTO
CENTRAL TÉRMICA
LNG TO POWER

CONSTRUCCIÓN Y OPERACIÓN

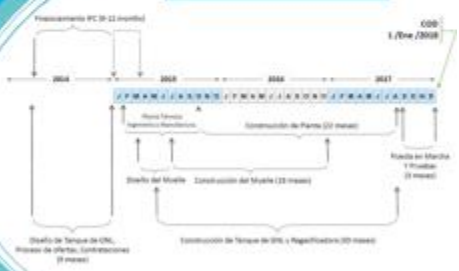
PROGRAMACIÓN Y FUERZA DE TRABAJO

La construcción iniciará en el 2015 y tomará aproximadamente 3 años. Con el mantenimiento y reparaciones adecuadas, la planta será capaz de funcionar durante varias décadas.

Se espera contar con aproximadamente 60 empleados permanentes requeridos para las operaciones. de la central térmica.

La fuerza laboral a emplear para la construcción del proyecto, será de 1, 000 empleados aproximadamente, durante el pico de las actividades.

PROGRAMA DE TRABAJO



PROYECTO
CENTRAL TÉRMICA
LNG TO POWER

CONSULTA PÚBLICA

Un programa de participación de los interesados se llevará a cabo para identificar los problemas, preocupaciones y oportunidades de las personas directamente afectadas por el proyecto, así como las comunidades, las ONG's (Organizaciones No Gubernamentales), las agencias, las empresas, las instituciones locales y otras organizaciones o individuos que pueden tener un interés en el proyecto.

Las principales actividades de participación que se llevarán a cabo son:

- Publicación de anuncios sobre el proyecto, incluida la notificación de disponibilidad de los documentos y las oportunidades para hacer aportes al EIA.
- Reuniones con representantes electos, agencias gubernamentales, organizaciones no gubernamentales, y otros.
- Apertura de un Centro de Información Pública en Acajutla, donde los interesados pueden obtener información sobre el proyecto.
- Entrevistas de interés para recolectar datos y opiniones.

INFORMACION DE CONTACTO
Dirección: Colonia RASA 1, Calle Circunvalación, casa #44, Acajutla, Sonsonate.
Horarios de Atención: lunes a Viernes de 8:00am a 12:00pm y de 2:00pm a 4:00pm
Teléfono: (503) 2452-6313; Correo Electrónico: blovato@edp.com.sv

Pro ect Brief

1.0 Project Background

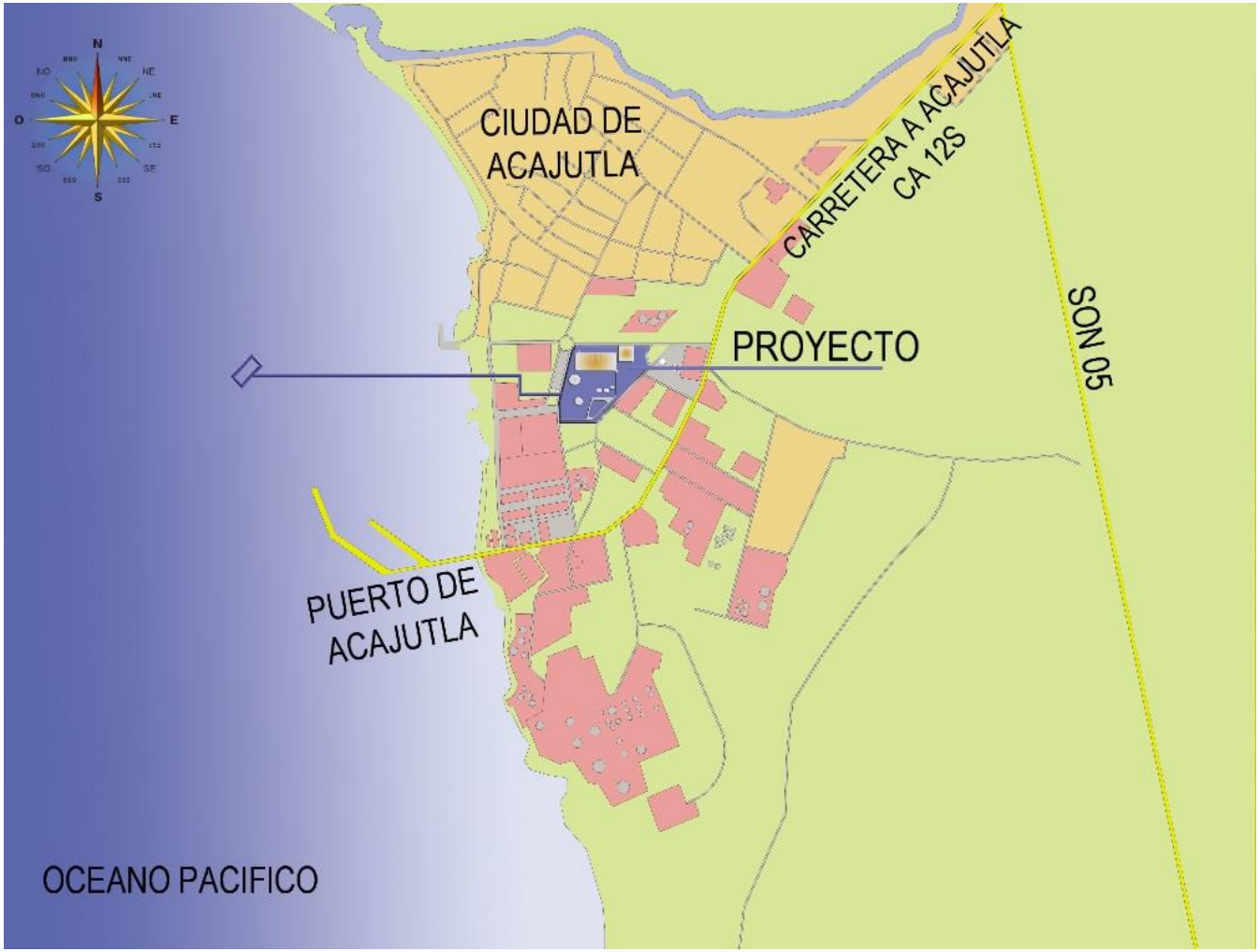
In December 2012 Distribuidora de Electricidad del Sur, SA de CV (DELSUR) initiated a tender for the long-term (20 year) supply of up to 350 MW of electrical power. To diversify the production of electricity in El Salvador the tender specified that only natural gas, coal and renewable energy power plants would be allowed to participate.

In response to the DELSUR, tender Energía del Pacifico S.A. de C.V. (EDP) proposed a natural gas fired power plant to be located at the port of Acajutla. On [DATE] DELSUR announced that EDP's tender was the selected option for new power generation in El Salvador. EDP, the sponsor of the Project, is a company owned by Quantum Energy S.A. de C.V., and Generadora La Unión, a subsidiary of Finland-based Wärtsilä.

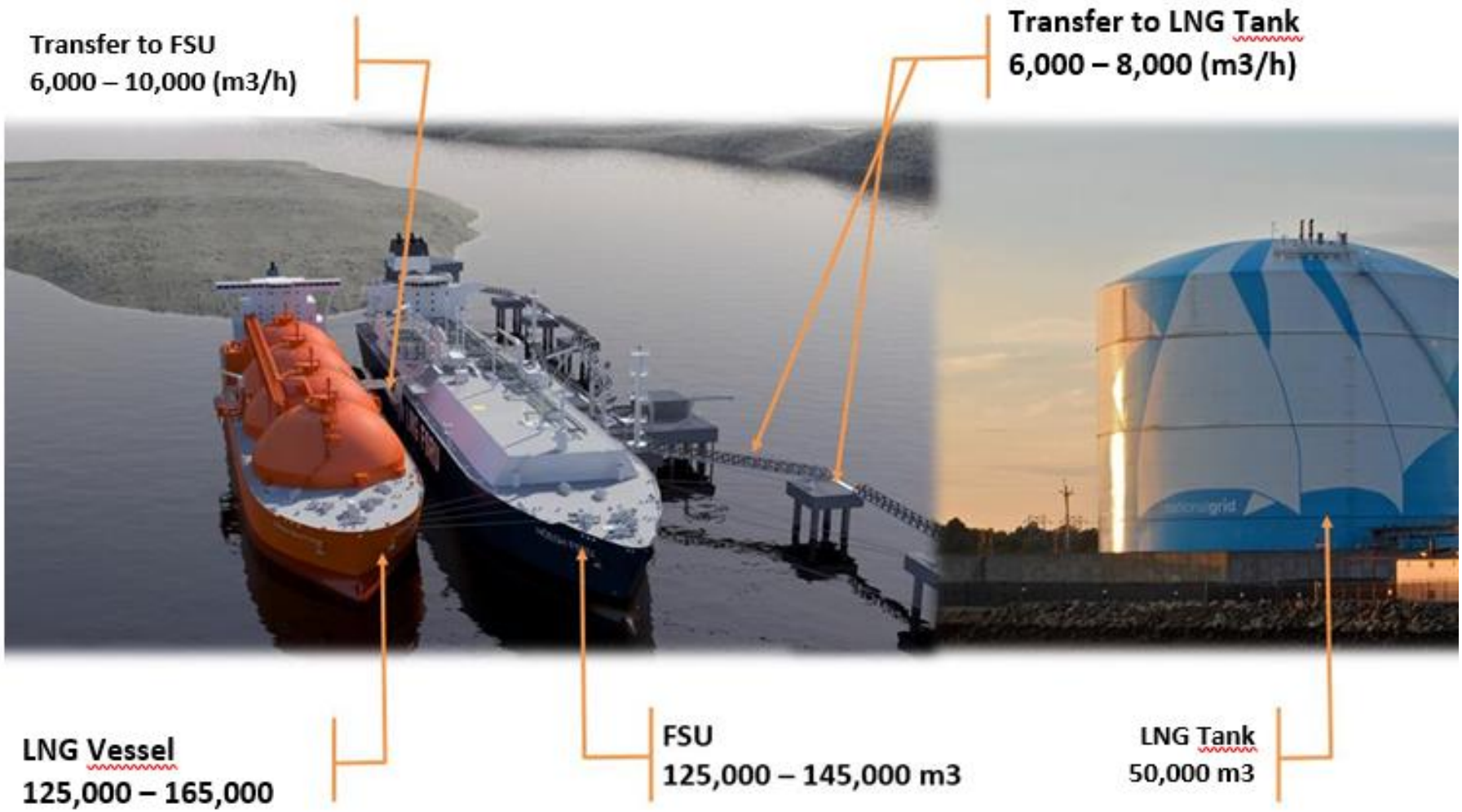
2.0 Description of the LNG to Power Project

The LNG to Power Project is located in the existing industrial area of the Port of Acajutla. Figure 1 on the following page shows the general project location.

Figure 1 – General Location of the LNG to Power Project



Revised Figure 2 – Example of an LNG Tanker and a Floating Storage Unit



2.1 Jetty and LNG Storage

Fuel for the project will be delivered as Liquified Natural Gas (LNG) using ocean going tankers. There will be about 6 to 7 deliveries needed per year. LNG from the tankers will be transferred and stored in a floating storage unit (FSU) moored at the end of a new, purpose-built 1.25 km long jetty located close to the power plant site. A land-based LNG storage tank will be constructed to provide additional storage. A LNG-pipeline will connect the FSU and the on-shore LNG storage tank. Figure 2 provides an example of an LNG tanker and a FSU. Figure 3 shows the proposed location of the Jetty and the route of the LNG-pipeline.

Figure 3 - Location of the Jetty and the Route of the LNG-pipeline

2.2 Regassification

Near the on-shore LNG storage tank a regasification facility will be developed that will convert LNG to natural gas (NG). The regasification facility will run on an on-demand basis to supply the natural gas fuel needs of the power plant. It will use waste heat from the power plant for the regasification process.

2.3 Power Plant

The NG from the regasification facility will be used as the fuel for a new, high-efficiency, combined-cycle power plant. The power plant will consist of a power-house containing 19 reciprocating engine generator sets, each of which is capable of generating about 18.8 MW of power. Pollutants in the stack emissions from the power plant will be low compared to typical emissions from an oil or coal fired power plant. The efficiency of the plant will be enhanced by using steam-heat from the engine exhaust to generate an additional 22.8 MW of power in a steam turbine. The peak capacity of the plant when running in combined cycle is 380 MW.

Plant cooling will be a combination of closed-cycle air cooled radiators for engine cooling that have a minimal water consumption, and an evaporative water cooling tower for the steam cycle. Groundwater will be used as the source of water for the water cooling tower.

The location of the power house, cooling equipment, exhaust stacks, and other equipment can be seen in Figure 4.

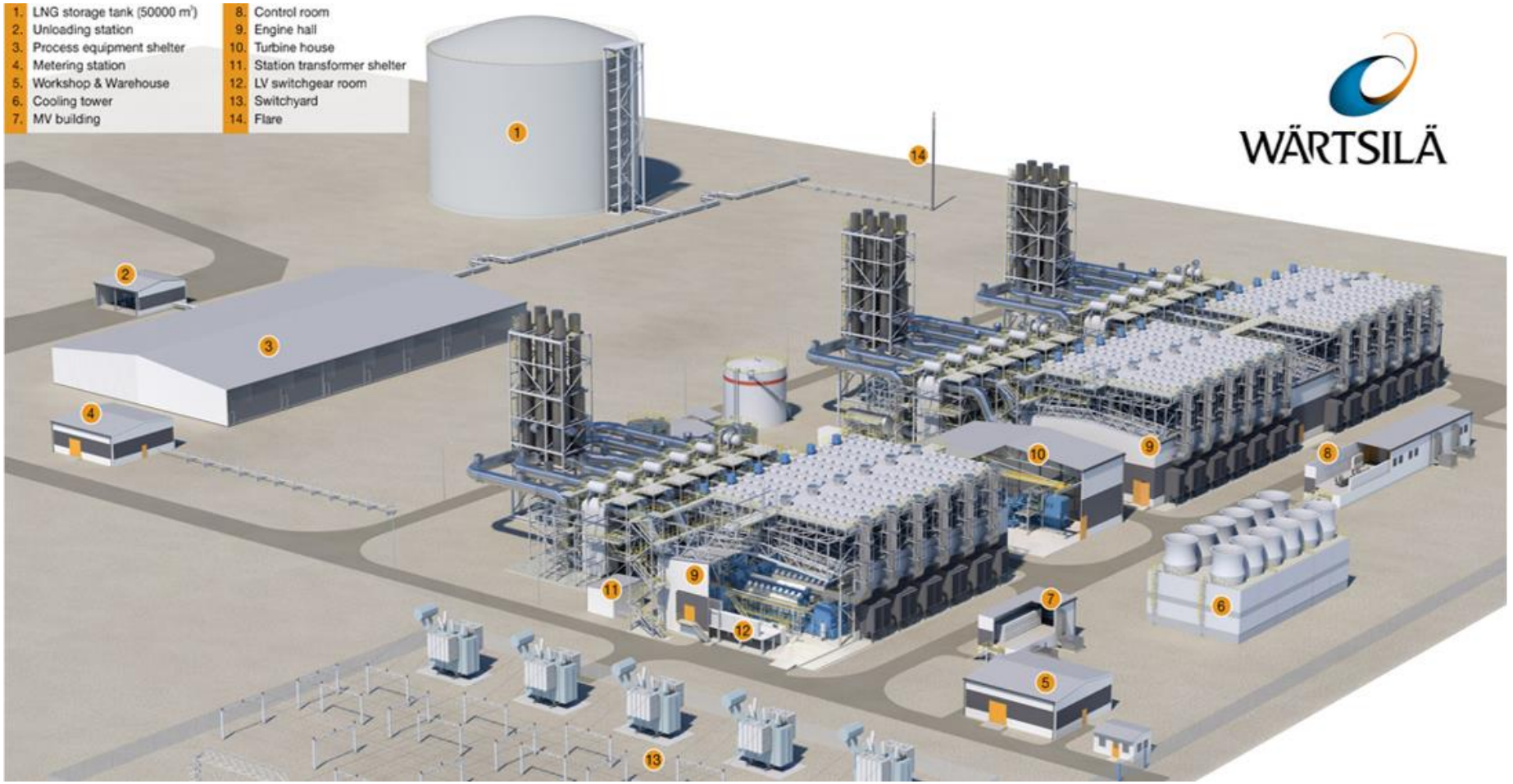
2.4 Associated Facilities

The separate but closely related Acajutla-Pedregal Transmission Line Project will be developed to transmit the electrical power from the power plant to the national grid. The Transmission Line project will be subject to a separate Environmental Impact Assessment.

2.5 Construction and Operation Schedule and Work Force

Construction is expected to begin in 2015 and take approximately 3 years. With ongoing maintenance and repairs the plant will be able to operate for several decades. It is expected that there will be approximately xx permanent employees required for operations. The number of short-term employees needed for construction will vary according to the construction activities - at the peak of activities the number of workers is expected to be about 1,000 persons.

Figure 4 – Power Plant Features



3.0 Environmental Impact Assessment Process

Government regulations require that EDP obtain an environmental impact assessment approval from the Ministerio de Medio Ambiente y Recursos Naturales (MARN) prior to implementing the project. The EIA involves an assessment of the potential effects of the project on the natural, social and health environments within the Project's area of influence, and identifies the mitigation measures and management actions that can be implemented to limit negative effects and enhance benefits.

On April 10, 2014 Energía del Pacifico initiated the formal EIA process with submission of the formulario ambientale for the Project to MARN. With this submission, MARN will identify and assign a terms of reference for the EIA (known as a Términos de Referencia (TDR)). The EIA will be completed in accordance with the TDR. The EIA will also address the environmental and social Performance Standards of the International Finance Corporation (IFC). IFC is a potential project financier and member of the World Bank Group (WBG).

The following issues are expected to be included in the TDR, addressing all phases of the project:

- Physical
    - Air quality
    - Noise
    - Geologic risks (seismicity, including the risk of tsunami)
    - Soils
    - Surface and ground water quality and quantity, including marine water quality
    - Coastal sediment transport
- Biological
    - Ecosystems, Protected and Sensitive Areas
    - Land Flora and Fauna
    - Marine Flora and Fauna
    - Disease Vectors
- Socio-Economic
    - Existing and planned land use
    - Demographics and population
    - Economic activities, including fishing
    - Community health and safety
    - Cultural, Archeological, Ceremonial and Historic Resources
    - Worker health and safety

As part of the EIA a comprehensive environmental and social management system will be developed. This will include management plans for the construction and operation periods.

4.0 Stakeholder Engagement Activities

A stakeholder engagement program has been initiated to inform stakeholders of the Project and identify issues, concerns and opportunities from those directly affected by the Project, as well as host communities, non-governmental organizations (NGOs), agencies, businesses, local institutions and other organization or individuals who may have an interest in the Project. The stakeholder engagement activities are designed to help EDP learn about concerns individuals or organizations might have, to gather background information, and to gain insight on potential effects and proposed management measures.

The main engagement activities to be carried out are:

- Publication of public notices (e.g., newspaper notices) about the project including notification of the availability of EIA documents and opportunities to provide input
- Consultation meetings with elected representatives, government agencies, and NGOs
- Opening of a Public Information Centre in Acajutla where stakeholders can obtain information about the project and provide comments and inputs
- Stakeholder interviews to collect input on the project components and the EIA study
- Consultation meetings with the general public to present the project and the findings of the draft EIA
- Project website that will be available for people to gather information and provide input throughout the EIA

EDP will track comments and concerns and have a mechanism to deal with any specific grievances that may be submitted.

5.0 EIA and Project Schedule

The EIA is expected to be ready for submission to MARN in 3rd quarter of 2014. MARN will then review the EIA and provide their decision on whether the assessment meets MARNs requirements, and whether a public meeting is needed. It is anticipated to receive a decision from MARN in the 4th quarter of 2014. Should MARN decide that the assessment meets their requirements, construction of the Project would begin mid 2015. Based on this schedule, operations would begin in 2018.

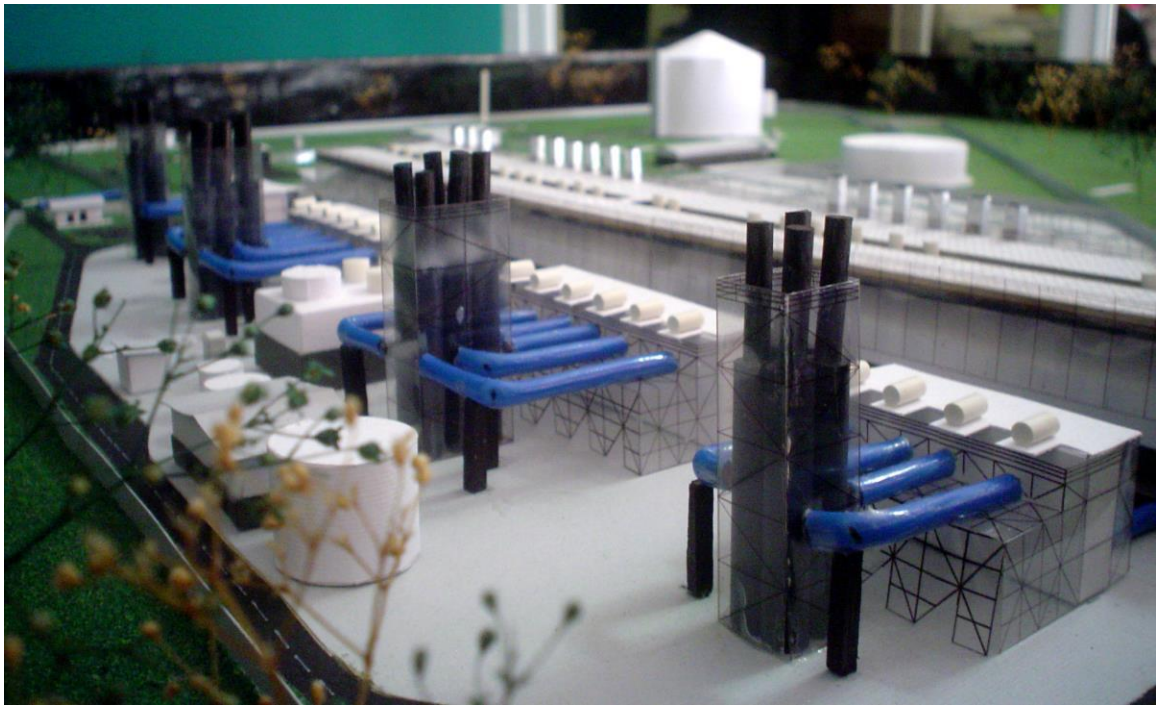
Project Scale Model

PROJECT MODEL PICTURES

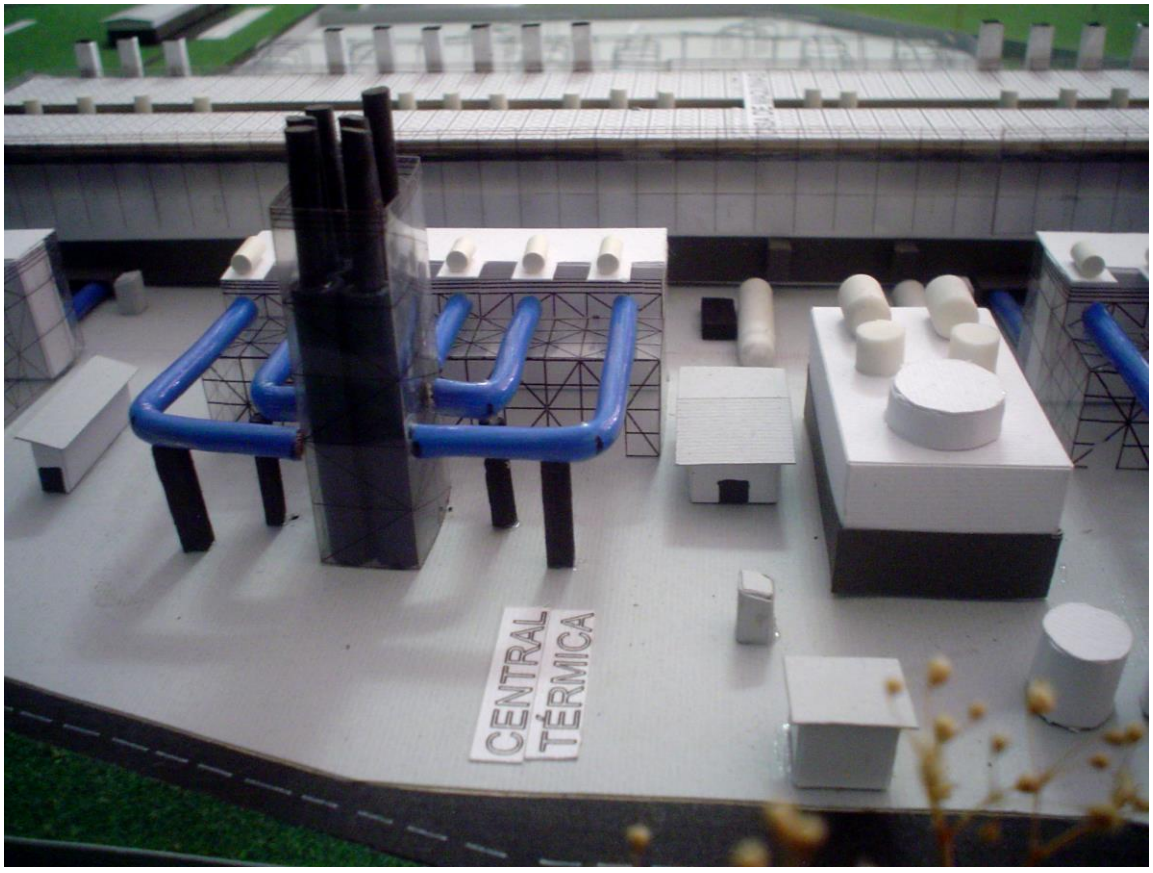
Set Model Views

Set Model Views

Model View with Plant Details



Model View with Plant Details



Appendix 8F–
Attendance List at the Acajutla office 2014

Energía del Pacifico LNG to Power Project - Stakeholder Tracking Sheet

Fecha recibido	Grupo	Organización o comunidad	Nombre	Dirección	Teléfono	Email	Como se recibió el comentario	Anotado por	Comentario (si hay una minuta de la reunión o notas anotar el nombre del archivo digital)	Se requiere respuesta?	Respuesta hecha?	Fecha de respuesta	Respuesta dada por:	Respuesta brindada	Notas + siguiente paso
Date Recieved	Stakeholder Group	Organization or comunity	Name	Address	Phone	Email	How Comments Received	Recorded By	Comments (if meeting notes or minutes are available insert the name of the document to go to)	Reponse Required?	Reponse Made?	Response Date	Response Provided by	Response Provided	Notes + Next Steps
5/12/2014	Business	Diario el Mundo	Fatima Kiste	San Salvador	7982-3378	fam0990@gmail.com	phone	Brenda Lovato	Requested an interview about the project	si	No				
5/13/2014	Business	PERFOTEC	Rafael Zimmerman	San Salvador	2556-1248	r_zimmerman6@hotmail.com	e-mail	Brenda Lovato	Ofering services of well construction	No	No				
5/13/2014	Business	JANTE Constructores	Ing. Jose Antonio Espinoza	San Salvador	7603-2273	jante_osorio@hotmail.com	phone	Brenda Lovato	Ofering construction services	No	No				
5/13/2014	Business	CONARISA SA DE CV	Lic. Mauricio Escamilla	San Salvador	2118-0818	mauricio.escamilla@conarisa.com	e-mail	Brenda Lovato	Ofering insurance services	No	No				
5/16/2014	Individual		Jose Rivas	Acajutla	7130-5893	danelli77@hotmail.com	phone	Brenda Lovato	Asking for job opportunity	No	No				
7/1/2014	Individual	Comunidad Kilo 5	Brenda de los Angeles de Cea	Acajutla	74073555		phone	Brenda Lovato	Asking for job opportunity	No	No				
01/07/2014	Individual	Comunidad San Julian /Acajutla	David Amaya	Acajutla	70054703	davidernesto1923@hotmail.com	phone	Brenda Lovato	Asking for job opportunity	No	No				
7/1/2014	Business	Diario El Mundo	Fatima Kiste	San Salvador	7982-3378	fam0990@gmail.com	phone	Brenda Lovato	Solicita informacion sobre el reporte trimestral que EDP debe presentar a la Siget, su interes es saber si este, existe y si puede tener acceso al contenido.	Yes	Yes	01/07/2014	Brenda Lovato	Indique a la Srita kiste , que los unicos autorizados para brindar esa Informacion son el Ing. Alejandro Alle y el Sr Eduardo Zablah y que puede solicitar una cita con ellos por medio de nuestra oficina de Informacion.	
7/10/2014	Individual		Max Palencia	san salvador	22526503	max_palencia@hotmail.com	e-mail	Brenda Lovato	Asking for job opportunity(Ingeniero Electrico)	No					
7/10/2014	Business	Diario el Mundo	Fatima Kiste	San Salvador	7982-3378	fam0990@gmail.com	e-mail	Brenda Lovato	Consulto a que correo podria solicitar una entrevista ,paraobtener informacion del proyecto	Yes	Yes	10/07/2014	Brenda Lovato	Le proporcione mi direccion de correo para que solicite la cita para poderle dar seguimiento	Informar a Ing Alle , sobre esta solicitud para que el indique si se otorga o no la entrevista
7/10/2014	Business	Remasur	Milton Guillen	Acajutla	2452-4792	mguillen@remasur.net	e-mail	Brenda Lovato	Ofrece servicios de Representaciones y superviciones Maritimas	No	No				
7/10/2014	Business	POSCRET EL SALVADOR	Regina Catillo	San Salvador	2218-7700	atencionalcliente@poscretelsalvador.com	e-mail	Brenda Lovato	Ofrece suministro de Postes de Concreto Pretensados Centrifugados	No	No				
7/11/2014	Individual	Ciudadela CEPA	Nelson Jose Chichilla	Acajutla	71757019	nelchicnchilla05@gmail.com	office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/11/2014	Individual	Ciudadela CEPA	Jose Roberto Rivas	Acajutla	78892698		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/11/2014	Individual	Ciudadela CEPA	Claudia Jeaneth Fraco	Acajutla			office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/14/2014	Individual	Ciudadela CEPA	Eduardo Enrrique Galvez	Acajutla	63055781		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/14/2014	Individual	Ciudadela CEPA	Wilfredo Chavez Carias	Acajutla	77661469		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/14/2014	Individual	Ciudadela CEPA	Alfredo Antonio Arevalo	Acajutla	70264804		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
15/07/2014	Individual	Ciudadela CEPA	Oscar Mauricio Rivas Claros	Acajutla	79793021		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
15/07/2014	Individual	Colonia Los Laureles	Favio MAyen Molina	Acajutla	71078875	mayenmolina@gmail.com	office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
15/07/2014	Individual	Ciudadela CEPA	David Eliseo Linares	Acajutla	71207907		office visit	Brenda Lovato	Asking for job opportunity(experiencia en centrales termicas)						
15/07/2014	Business	SAN SALVADOR	FAPROES	SAN SALVADOR	61021030		office visit	Brenda Lovato	Ofering services (mantenimientos)						
15/07/2014	Individual	SAN SALVADOR	Juan Pablo Campos Zepeda	SAN SALVADOR	78923550		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
15/07/2014	Individual	Ciudadela CEPA	Rosa Elena Guevara Torres	Acajutla	61107403		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
15/07/2014	Individual	Ciudadela CEPA	Melina Margarita Rivas Claros	Acajutla	78313361		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
15/07/2014	Individual	Nueva Acajutla	Celia Ruth Castellanos Argumedo	Acajutla	74711033		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
15/07/2014	Individual	Ciudadela CEPA	Antonio Morales Ramos	Acajutla	61300422		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
15/07/2014	Individual	Ciudadela CEPA	Rene Orlando Rodriguez	Acajutla	78124363		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
15/07/2014	Individual	Ciudadela CEPA	Eliseo Arturo Figueroa	Acajutla	76015009		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
15/07/2014	Individual	Acaxual 3	Jorge Alberto Canacas	Acajutla	73985313		office visit	Brenda Lovato	Asking for job opportunity(Tripulacion de barco)						
15/07/2014	Individual	Ciudadela CEPA	Samuel de Jesus Martinez	Acajutla	2417-6717		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Ciudadela CEPA	Rene Oswaldo Perez Gallardo	Acajutla	7046-7108		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Colonia Los Laureles	Geremias Daniel Garcia	Acajutla	7046-7108		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Sonsonate	Hugo Americo Anzoez	Sonsonate	70351810		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Ciudadela CEPA	Dagoberto Antonio Ramirez Reyes	Acajutla	74497860		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Barrio El Campamento	Edgardo Jonas Cavera	Acajutla	70387754		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	San Pedro	Francisco Sanchez Herrera	Acajutla	70332261		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	San Pedro	Julio Alberto Sanchez H.	Acajutla	73564742		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	El Zunza	Rafael Santa Maria Maldinero	Acajuyla	61226864		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	El Zunza	Juan Jose Perez	Acajutla	79505435		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Ciudadela CEPA	Oscar Armando Rodriguez	Acajutla			office visit	Brenda Lovato	Asking for job opportunity(buceo)						
7/16/2014	Individual	Colonia Acaxual 4	Obed Isai Alas Mejia	Acajutla	7638-0997		office visit	Brenda Lovato	Asking for job opportunity(Electricista)						
7/16/2014	Individual	Colonia Acaxual 4	Julio Alberto Alas Rivas	Acajutla	24525083		office visit	Brenda Lovato	Asking for job opportunity(Electricista)						
7/16/2014	Individual	Ciudadela CEPA	Jose Javier Gomez Claros	Acajutla	71979437		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Ciudadela CEPA	Fernando Martinez	Acajutla	70336957		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Colonia Obrera	Mauricio Guandique	Acajutla	74665237		office visit	Brenda Lovato	Asking for job opportunity(Soldador)						
7/16/2014	Individual	Barrio las Atarrayas	Karla Maria Dominguez Cortez	Acajutla	74208622		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Bendicion de Dios	Mauricio Alexander Jovel	Acajutla	70684429		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Ciudadela CEPA	Milagro Claros	Acajutla	76450591		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Ciudadela CEPA	Juan Jose Ramirez	Acajutla	74084144		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Colonia Obrera	Roger Antonio Berrios	Acajutla	70586384		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Metalio	Fernando Eliseo Martinez Perez	Acajutla	77564757		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/16/2014	Individual	Colonia Jardines	Jonathan Garrido	Acajutla	77451019		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/17/2014	Individual	Colonia Acaxual 1	Marco Tulio Urrutia	Acajutla	77450446		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/17/2014	Individual	San Pedro Belen	Elias Artiga Acevedo	Acajutla			office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/17/2014	Business	FAPROES	Moises Campos	SAN SALVADOR	61632118	moisescampos2004@yahoo.com	office visit	Brenda Lovato	Ofering services (mantenimientos)						
7/18/2014	Individual	Barrio las Atarrayas	Miguel Angel Ramirez H	Acajutla	23236716		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						
7/18/2014	Individual	Barrio las Atarrayas	Victor Manuel Molina	Acajutla	76502450		office visit	Brenda Lovato	Asking for job opportunity(Construccion)						

7/18/2014	Individual	Col. Linda Vista	Victor Anibla Sanchez	Acajutla	77629392		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/18/2014	Individual	Col. Magdalena	Jose Antonio Perdomo	Acajutla	74121091		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/18/2014	Individual	Bariio los Coquitos	Miguel Angel Polanco Peraza	Acajutla	79920855		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/18/2014	Individual	El Zunsa	Cirilo Lozano Calderon	Acajutla	71058445		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/18/2014	Individual	Col. Linda Vista	Elias Armando Calderon	Acajutla	73381366		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/18/2014	Individual	Cooperativa rederos	Jose Cordero	Acajutla	74430906		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Colonia Los Laureles	Salvador Enrrique Aguilar	Acajutla	73863256		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Colonia San Julian	Douglas Adrian Morales	Acajutla	70106087		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Los Cobanos , Canton San Julian	Carlos Alberto Zelidon	Acajutla	73998377		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Colonia Acaxual 4	Alfredo Alvarez	Acajutla	70264804		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Acajutla	Joselito Garcia Hernandez	Acajutla	76639850		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Col. San Julian	Jose Vitelio Pineda	Acajutla	70189745		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Canton el Sunzita	Carlos Vladimir Osorio Garcia	Acajutla	70189745		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Acajutla	Guillermo Antonio Ceron	Acajutla	70411565		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Barrio El Campamento	Juan Jose Rosales	Acajutla	70817030		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	La coquera	Julio Cesar Garcia	Acajutla	73049170		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Los Birtientes	Jeremias Valdizon	Acajutla			office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Canton EL Sunza	Arturo Daniel Alvarado	Acajutla			office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Canton el Zuncita	Wilfredo Alexander Perez Lazo	Acajutla	73504712		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Acajutla	Roberto Calzadilla Tadeo	Acajutla	74206291		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Acajutla	William Gilberto Reyes Garcia	Acajutla	76970713		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Individual	Nueva Acajutla	Jose Mario Hernandez	Acajutla	24524067		office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/21/2014	Business	Acajutla	Victor Orellana	Acajutla	24523762		office visit	Brenda Lovato	Ofrece servicios de recoleccion de desechos , y servicios de mantenimiento .							
7/22/2014	Individual	Barrio Los Coquitos	Moris Antonio Batres	Acajutla			office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/22/2014	Individual	Comunidad La Coquera	Miguel Angel Rodriguez	Acajutla			office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/22/2014	Individual	Comunidad La Coquera	Josue Antonio Rodriguez	Acajutla			office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/22/2014	Individual	Acajutla	Jose Elmer Orellana	Acajutla			office visit	Brenda Lovato	Asking for job opportunity(Construccion)							
7/22/2014	Individual	Barrio Las Peñas	Adan Antoni Jimenez	Acajutla			office visit	Brenda Lovato	Asking for job opportunity(Construccion)							

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VISITANTES

N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	21-07-2014	Salvador Enrique Aguilar.	Col. Los laureles. / Empleo	73863256	—	
	21-07-2014	Douglas Adrian Morales Rivera	Canton. San Julian / Empleo (2 bonos)	70106087	—	
	21-07-2014	Carlos Alberto Zelidón Acuña	Canton San Julian, Empleo casa el Venado (2 bonos)	73998377	—	
	21-07-2014	ALFREDO A. RAMIREZ ALVAREZ	colonia ACAJUAL #4 Acajutla	70-26 48-04	—	
	21-07-2014	Samuel Antonio Argumedo.	Col. El puerto Block 1	7370-05-32.	—	
	21-07-2014	Jostlito garcia Hernandez	acajutla	76639850	—	
	21-07-2014	José Vitelio Pineda Romero	Col San Julian	79627011	—	
	21-07-2014	Carlos Vladimir Osorio Garcia	Canton Elsunzita, casrio Los Ramos	70189745	—	
	21-07-2014	Guillermo Antonio Cerón H	Acajutla	70-41-15-65	—	
	21-07-2014	Juan José Rosales	Acajutla B° el campamento	70817080	—	
	21-07-2014	Julio cesar Garcia	Acajutla la cozuera	73049720	—	
	21-07-2014	Jeremias Valdizon	Acajutla los vistientes		—	
	21-07-2014	Alvaro Daniel Alvarado	Cantón el sunza	— — — —	—	
	21-07-2014	Wilfredo Alexander Perez Lazo	Cantón El Suncita.	7350-4712	—	
	21-07-2014	Roberto Caballa Tadeo	Acajutla	74206291	CV. (23/07/14)	
	21-07-2014	William gilberto Reyes Garcia	acajutla	76970713	Colonia San julian	
	21-7-2014	J. MARIO T. HERNANDEZ	NUEVA ACAJUTLA	24524067	—	
	21-7-2014	Victor Orellana.	Samerofes	2452-3762	Ofrece Servicio de mantenimiento	
					—	
					—	
					—	

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VISITANTES

N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
1	12-Sep-2014	Joaquin Alfonso Martinez Ramos	Sonsonate Persona Particular	24147119/78178485	Joamar_27@yahoo.es	
2	12-Sep-2014	Noe Israel Majia Tesorero	Sonsonate Persona Particular	24016031/79966448	israeltesorero@hotmail.com	
3	12-Sep-2014	Samuel Ernesto Anaya	Res. Salinitas #2	7439-1336 2420-5084	samersamery@hotmail.com	
4	16/09/2014	Johanna maria Arias Arias	B. las peñas	—	—	
5	16/09/2014	Maria Felicita Lara Escobar	C. San Julian paj 6 casa 16		—	
6	16/09/2014	Valentin Chavarria Dura	Col. El milagro.	63048343	—	
7	16-9-2014	Juan A. Hdez	cdLA CEPA. ACAJ	24164300	JHERNANDEZ2412@HOTMEL.COM	
8	16-09-14	William Alexander Araujo	Col. Nva. Acajutla	77133669	araujom.usa@hotmail.com	
9	16-09-14	Jhonatan Brayan Burgos Ramirez	Col. Alvarado	76388089	Jhonatan_bryann@hotmail.com	
10	16-09-14	Gerson Salvador Hernan	Col. Alvarado	74879092	—	
11	16-09-14	Bryan Alberto Rivas C.	Col. Alvarado	77010982	kastrfleyser-floanar@hot.	
12	16-09-14	Nestor Alexander Martinez	Canton Calla vieja	71840585		
13	16-09-14	Arsanio Calderón Amaya	Sonsonate.	7841-5673	Arsanio.Calderon@Yahoo.com	
14	16-SEPT.14	JOSE ROBERTO CONRADO	RASA	7114-9157 2429-8259	jose.conradochavez@pangeneny.com roberconsv@hotmail.com	
15	16-Sept 14	Hector Reynaldo Mejia Castro	Calle Vieja	70-05-4057		
	17-09-14	Williams Argenis Cedeno	Col. El Milagro	7083-8464.	—	
	17-09-14	FERNANDO RAFAEL PADILLA VELA	COL. BRISAS DE ACAJUTLA	73639165	fernandopvela@yahoo.com	
	18/09/2,014	Edelmir Ernesto Aquillon	Urb. Brisas de Acajutla #2	7088-2791	edelmir.ernesto24@gmail.com	
	19/09/2014	Jose Armando Hz morcin	Inspecciones sub.	74235169		
20	19/09/2014	Jose Antonio Figueroa Arqueta	Col. El Barquito	76423508 70844494	Jose_Arqueta21@Hotmail.com	
	22/09/2014	Joaquin Monroy Duarte	CMSC	78597497	joaquinmonroy72@yahoo.com	

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OFICINA DE INFORMACION

VISITANTES

N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	08/09/14	Moises Alberto Contreras	B. el Campamento	7611-9380	Beto21e@gmail.com	
	08/09/14	Belarmino García Mendez	Sonsonate	70801754	garciamendez201284@gmail.com	
	08/09/14	Karla Estela Morales Calderón	Campana.	7541-3994	karla.morales88@hotmail.com	
	08/09/14	Wendy Estefanie Morales	Lot. San Luis Campana	7725-4916	Wendiestef@hotmail.com	
	08/09/14	Rafael Alberto Martenez	B. el campamento	7006-2499		Rafael. A. Calderon
	08/09/14	Ona Alfredo Hernandez	Kelo #5	77580248	Llamada en Oficina	
	08/09/14	Jaquelin Magdalena Sanchez	El Milagro.		Empleo.	
	08-09-14	Carlos Valladares	Col. San Julián	76422559		
	08-09-14	Nelson Steve Alonso Bonilla	Col. Acaxual #1	7041-5536	steven-alonso20@yahoo.es	
	08-09-14	Emerson Isaac Pérez Garay	Col. San Julián	70933783	Isaacperezgaray@yahoo.es	
	8-9-14	fe nelson dominguez	8a el campamento	7958-2888		
	8-09-14.	Luis Alonso Cancos.	Ing. la Cabaña	7092-6509	Llamada.	
	8-09-14.	Salvador Enrique Aguilar.	Col. El Caracol.	2452-5689	-	
	8-09-14.	Anastidos Edenelson Fuentes	Col. El Caracol.	7244-8462	-	
	8-09-14	Denso Neftaly Esquivel	Sonsonate/Sn Ant.	7966-7374.	Empleo.	
	8-09-14	Jaquelin Esmeralda Hernandez	sonsonate/Acajutla	76020817	-	
	8-09-14	Sandra Elizabeth Abarca	sonsonate/Acajutla	2452-5247	-	
	8-09-14	Miguel Angel Acosta Silva	Bo las Atarrayas.	7644-2797	Empleo.	
	09-09-14	Juan Antonio Aguilar Guzman	El Milagro.	7177-8198	Empleo.	
	09-09-14	Natalia Jacqueline Rivera	zonzacate.	7635-1416	Empleo.	

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VISITANTES

N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	2-09-14	Willian Balmore Flores Gaitán	Cant. San Julian Cas. Kilo 5	71327674		
	2-09-14	Josué Armando Rivera Salazar	L.T. Los Virtientes Tanque	63075413	Garrobito 503 @ Facebook.com	
	2-09-14	Henrry Vladimir García	Lot. Los Victientes	7643-4763		
	03-09-14	Jaime Martinez Cuevas	Col. Nueva Acajutla	7370-4351	Empleo	
	03-09-2014	Roberto Carlos R. Zamora	Col. Linda vista K.2	61242897		
	3-09-2014	Ramiro Arias Gonzalez	Sonsonate / San Antonio	74-368899	Empleo	AGA
		Pablo CARRANZA	El Campanero	77667-8866	Empleo	
	3-09-2014	Saulo Ezequiel Gutierrez Flores	Col. Los Laureles Acajutla	7011-6945	sauloezequiel@yahoo.com	
	03-09-2014	Nidia Maribel Alvarado	Col. San Julian	71834491		
	03-09-2014	Omar Esau De la O Barahona	Col. Los Morritos	7098-2856		
	03-04-2014	Jose Antonio Leiva.	Barrio El Campanero	70513739.		
	03-04-2014.	Mauricio Antonio Arevalo.	Col. Tuc.	77233622	Empleo	
	04-09-2014	Noé Tomas Escobar Sosa	Barrio La playa	7806-4093	Noeescobar-sosa19@Hotmail.es	
	5-9-2014	José Danilo Lainez	Sonsonate	72240793		
	5-9-2014	Juan Carlos Lainez	sonsonate	77-373298		
	5-9-2014	José Alberto Villalta	Sonsonate	61113694		
	5-9 2014	Ulises Alfonso Ventura	Sonsonate	70994803		
	05-09-2014	Noé Alexander Estrada	San Antonio del Monte	74-80-88-44	—	
	05-09-2014	Luis Alexander Valencia	Acajutla	63073660		
	05-09-2014	Atilano de Jesus Ramirez Sanchez	Cda Tonala Caserio Barra		Ciega / Sonsonate 7541-5499	

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N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	1-9-14	Walter Tadeo Osellana	Sonzacate.	63060718	Walter.23@Hotmail.ca	
	1-9-14	Erick Alexander Flores	Acajutla	2415-4388		
	1-9-14	Manuel Edgardo Rosales	Acajutla	2415-4388		
	1-9-14	Moises Gustavo Mora R.	Cuscatlan/Santa Ana	Menendez.	73322515 / Empleo	
	2-9-14	Brenda de los Angeles Serrano	Kilo 5	70846465		
	2-9-14	Maki Salatiel Duarte	Metalio	7848-0030	Empleo	
	2-9-14	Dimas Alfredo Tobar martinez	San pedro	7632-8441		
	2-9-14	Angel Eugenio Aguilar	CAMPANA.	71792386	Empleo	
	02-09-14	Edwin Gilberto Cruz Serpas	Acajutla - Kilo 5	7051-51-53	Cajrigenio-1990@hotmail.com Empleo	
	02-09-14	Guillermo Zetino Perez	Nahuizalco	70529554	gzetinoperez@yahoo.com	
	02-09-14	Edwin Alexis Ramirez Guerra	Col. Santa marta	78687810	Garrobo-7@hotmail.com	
	02-09-14	Edgar Adalberto Ramirez Guz	col. Santa marta	7233.3628	Edgar.Ramirez-7@hotmail.com	
	2-09-14	Osca Baltazar Escoto L.	Sonsonate/Balsamo	7668-7057	Empleo -	
	2-09-2014	Jose Fernando Guerrero.	Sonsonate/Balsamo	7632-1455	Empleo	
	2-09-2014	Anilcar Navarro H.	Acajutla	74528263		
	2-05-214	Jeison Heriberto	Acajutla	74057685		
	2-05-2014	Cesar Diaz	Acajutla	70967529		

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N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
1	28/08/2014.	Roberto Garcia	Metalco / El Peñon	7504-0308.	Empleo - Albanil.	x
2	28/08/2014	Adalberto Antonio Santos	Sonsonate / Los Delicias	7092-9390	Edalsantos86@hotmail.com	
3	28/08/2014	Carlos Giovanni Soriano	Sonsonate / Acajutla	76613764	G.ovanny4gomez1992@g.	
4	28/08/2014	Alexander Mauricio Avelar Rivera	Sonsonate / Acajutla	7425-9027	Avelar-alexander@yahoo.com	
5	28/08/2014	Oswaldo Ernesto Ochoa Masin	San Antonio del Monte Sonsonate	7060-0376	valdito_69@hotmail.com	
6	28/08/2014	CARLOS ARTURO SANCHEZ RAMIREZ	San Antonio del Monte Sonsonate	7754-2729	Kal_sanchez@hotmail.com	
7	28/08/2014	Joaquin Masin	Col. Brisas del Monte Sonsonate Acajutla	6110-5107 7967-8009	alexmasn@yahoo.com	
8	28/8/2014	David A. Soriano Francia.	Acajutla	61-26-0731	—	
9	28/8/2014	Jose Ernesto Hernandez	acajutla	77 82 9496	—	
10	28/08/2014	Hector Armando Sanchez Rivera	Acajutla	7663-3203	hsarivera@yahoo.com	
11	28/08/2014	William Alexis Medrano Lemos	Acajutla	6309-8387	williamalexis.cf@gmail.com	
12	28/08/2014	Jose Vidal Aguela Aragon.	Col. San Julian	2452-6180	Empleo -	
13	28/08/2014	Jorge Enrique Rojas	Col. LVU acajutla	2452-3650	—	
14	28/08/2014	Melvin Anilcar Ayala Posada	col San Julian	7088 1275	melvinagaroz@gmail.com	
15	29/08/2014	Luis Enrrique Cordova R.	Nueva Acajutla.	7631-8362.	Empleo.	x
16	29/08/14	Walter Rafael Rodriguez	Ciudadela CEPA	7009-6741	Empleo.	x
17	29/08/14	Jose Antonio Pardono	Col. Magdalena.	74121091	Empleo.	x
18	1/09/14	Jose Domingo Melgar.	El Jobo / Sonsonate	78845134	Empleo.	x
19	1/09/14.	Denis Balmore Sorano.	El Jobo / Sonsonate	78845134	Empleo	
20	1/09/14.	Pedro Elias Guevara	El Jobo / Sonsonate	78845939	Empleo.	x
21	1/09/14	Luis Manuel Aragon	Caracol / Acajutla	7751 6206	Empleo.	

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N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	22/08/2014	Miguel Angel Coa.	Bolsas Atarrayas.	60107926	Empleo.	x.
	22/08/2014	Josue Rolando Coronado	Col. Jardines Sonsonate. Sonsonate	70152194	Josuecoronado1587@hotmail.com	
	22/08/2014	Jorge Antonio Rodezno	Col. Zedan Sonzacate	76325317	antony_sacred@hotmail.com	
	25/08/2014	Jesus Antonio Alvarado	Acaxual #2.	76683402 2452-3802	Empleo - Experiencia COA/Ba	
	25/08/2014	Julio Salazar -	Col. Rosa #9.	-	Empleo -	
	25/08/2014	Erazmo Aguila Hernandez.	Almendro-Sonzacate.	76196983	CV./Empleo.	
	25/8/2014	Jose David Romeroz.	Almendro-Sonzacate.	74519292.	Empleo.	No firma
	25/8/2014	Miguel Angel. Mendez.	San Pedro Bola.	7223-3862.	Empleo- CV.	x
	25/8/2014	Jesus Isaias Sorano.	Canton El Sincuta.	7874-7534	CV. Empleo.	x
	25/8/2014.	Jose Angel Abrego.	Bo componento.	63098149	Empleo.	x JAAP
	25/8/2014.	Manuel Alexander Gutierrez	Bo componento.	70804124	Empleo.	x MAG
	25/8/2014	Julio Cesar Portella Lopez	Col. Corales.	7317-7382	CV./Hoy	
	25/8/2014.	Nelson Pena Trigueros	Magdalena	63118556	Empleo.	x
	25/8/14	Luis David Romeroz	Magdalena	77735265.	Empleo.	x
	25/8/14	Nestor Ivan Rodriguez Coronado	Col. los laureles CV	7030-8132	hiei13@hotmail.com	
	25/08/2014	José Carlos Rodriguez Coronado	Col. Los laureles CV	7087-3318	j-csilver@hotmail.com	
	26/08/2014	Guillermo Peñate	#32 - Acajutla Col nivo C252	76186706	Empleo -	
	26/08/2014	Elvin Abelino Rivas	canton El Sunza	24834170	Empleo.	
	26/08/2014	Elmer E. Colocho	Acajutla	7989-8910	Empleo	
	26/08/2014	José G. Rivas M.	Acajutla	77436602	rivasgerardo@live.com	
	26/08/2014	Luis Antonio Garcia	Judyua - Sonsonate	77635632	Empleo -	

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N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	12/8/2014.	Julio Cesar Jovel Miron	Col. Luz 3 Pj6.	76006596	Empleo - Comco.	[illegible]
	12/8/2014	Jorge Alberto Magaña	Nacolas K-5.	7440-4962.	Empleo-	[illegible]
	12/8/2014.	Douglas Bladimir Espinoza	Nacolas K-5	-	Empleo.	[illegible]
	13/8/2014	Tomas Rolando Mejia Miranda.	Bº La Playa	2452-4202	Empleo	[illegible]
	13/8/2014	Dionisio Hernandez Hernandez.	San Antonio	—	Empleo	[illegible]
	15/8/2014	fco nelson Dominguez	Bº el campamento	7958-2888	Empleo	
	15/8/2014	Dionisio Antonio Aguilar.	Sonzacate/sonsonate	7432-3434	Empleo	[illegible]
	15/08/2014	Rafael Alfonso Arrué	OXGASA DE C.V	2451-0665/7859-1103	rafael.arrue@oxgasa.com	[illegible]
	15/08/2014	Raul Antonio Orellana Aguilar	Sonsonate/San Anto.	70073701	- Empleo.	[illegible]
	15/08/2014	Leonel Exaú Hernandez Luo.	Sonsonate/San Antonio	78059371	Empleo.	[illegible]
	15/08/2014	Iris Arcenia Lima de Zúniga	Cantón San Julian Kilo 2 Acajutla	7149-9047 7693-5867	gisellima@yahoo.com.mx arceni-lima@hotmail.com	[illegible]
	15/8/2014.	Juan Miguel Hércules	Col. San Julian Acajutla	7988-6244	mhercules@outlook.com	[illegible]
	18/08/2014	MIGUEL ERNESTO DERAS	COL. CAMPRESTRE, SONZACATE	7657-7494	DERASRAMOS2013@HOTMAIL.COM	[illegible]
	19/08/2014	Alma Beatriz Velasco de V.	col. Acaxual #3	7665-8840		[illegible]
	19/08/2014	Nancy Besai Diaz O.	Col. los laureles	7865-3181	nanbediaz_93@hotmail.com	[illegible]
	19/8/2014.	Franklin Alberto Cortez.	Ciudadela Copa.	70297376.	Empleo.	[illegible]
	19/8/2014	Jorge Alberto Sandoval.	Col. linda Vista	7616-4804	Empleo	[illegible]
	19/8/2014	Hector Lopez Valdizon	col. Acaxul 4	70544858	Empleo	[illegible]
	19/8/2014	Salvador Nolasco	Milagro-	70249753	Empleo	[illegible]
	19/8/2014	Hugo Alexander Guerrero	bulebar metalio	77611744	empleo	[illegible]
	19/08/2,014	Mauricio Ernesto Avila	Col. El Barquito Bº las peñas.	79875404	Empleo	[illegible]

Fecha	Nombre	Colonia / Institución	Teléfono	Firma	
11/08/14	Alexander A. Polunto	Cton. El Almendro - Sonzacate	7571112		alexander.flores26@hotmail.com
11/08/14	Armando Ernesto Paiz Flores	Cton. el Almendro. Sonzacate	7410-2073		floresernesto04@yahoo.es
11/08/14	Roberto Antonio Pedrumto carranza	Cton Sabana Sn jean Abajo			70505753
11/08/2014	Gerardo Alfredo Barahona	Brisas del Mar Sonsonate	7532-4902		bgerardoalfredo@yahoo.com
11/08/2014	Joaquin Bissondri Masm Flores	Brisas del Mar sonda 5 Segotla sur # 7 A"	24514857 7967-8009		alexmosm@yahoo.com
11/08/2014	Willian Antonio Angel Rodríguez	Col. IVU. Acajutla.	78237727		
18/2014.	Sandra Carolena Umaña.	/ Acaxual	73930360	-	
18/2014	Marta Guarrero.	/ Acaxual.	—	-	
18/2014.	Rufino	Tahuri Mazanogo / El Milagro.	705132228		
18/14	Juan Antonio Elias Romero	/ Alvarado	78919837		
1/8/014	MARCO T. Urrutia	/ Col ACAXUAL.	77415044 6		

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N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
41	16/07/2014	MAURICIO GUANDIQUE	col. OBRERA/empleo	74665237	mauricio-guandique@Hotmail.com	
42	16/07/2014	Karla María Domínguez Cortez	Barrio las Atarrayas	74208622		
43	16/07/2014	Mauricio Alexander Joval R.	Bend. Dios / Emp.	7068-4429	—	
44	16/07/2014	Milagro. Claros	Ciudadela / Emp.	76450591	-	M.C
45	16/07/2014	Ciudadela cepa. Juan José Ramírez.	ciudadela cepa.	74-08-42-44		
46	16/07/14	Roger Antonio Berrios	Col. Obrera / Empleo	70586354	marsi595@hotmail.com	
47	16/07/14	Fernando Eliseo Martínez perez	Metalio	77.564757	—	
48	16-07-14	Jonatan Garrido	Jardines #2	77451014	jtgarrydo69@gmail.com	
49	17-07-014	MARCO TULIO URRUTIA P.	COL ACAXUAL #2	77450446		
50	17.07.014	Elías Ortiga Acevedo	San pedro Ulen			
51	17072014	MOISES CAMPOS.	FAPROES	61632118 61393834	moisescampos2004@yahoo.com	
52	18/07/14	miguel Angel Ramirez H	B. las atarrallas	93236716	—	
53	18/07/14	victor manuel molinas H	B. las Atarrallas	76509450	—	V.M.M.H.
54	18/07/14	VICTOR Anibal Sánchez	COL Lindavista	77-62-93-92	—	
55	18/07/14	JOSE ANTONIO Perdomo	col mandalena	74121091	— —	
56	18/07/14	Miguel A. Polanco Paraza	Bª los coquitos	7992-0855 / 2452-3555		
57	18/07/14	Cerelo Lorano Caldera.	Zunzu	71058445	—	Cirilo
58	18/07/14	Elías Armando Calderón	Col. Lindavista (Acajutla)	73381366		
59	18/07/14.	José Antonio Cordero	Cooperativa Tivar Reyes	74430906		

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N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
20	15/7/2014	Cecilia Ruth Castellanos Argumedo	Empleo	7471-1033		
21	15/7/14.	Antonio Morales Ramos.	Empleo.	61300422	—	
22	15/7/14.	Reyve Orlando Rodriguez	Empleo/Ciudad	78124363		
23	15/7/14.	Elmer Arturo. Figueroa	Ciudadela/Empleo.	76015009	—	
24	15/7/14	JORGE ALBERTO CANACAS.	IVU/Empleo	73980313	Soldadores/Mecanicos	
25	15/07/14	Oscar Alberto Velasco Gaitán	IVU/Empleo	63011693	Soldadores/Mecanicos	
26	16/07/14	Samuel de Jesús Martínez	Ciudadela cepa/Empleo	2417-6717		
27	16/07/14	René Oswaldo Pérez Gallardo	Ciudadela cepa/Empleo	7979-1969		
28	16/07/14	Geremías Daniel García	Col los Laureles/empleo	7046-7108		
29	16/07/14	Hugo Emerio Ramírez	Sonsonate - Empleo	7035-1810		
30	16/07/14	Dagoberto Antonio Ramirez Lopez	Ciudadela/Empleo	74497860		
31	16/07/14	Edgardo Jonas Cabrera	Campanero/Empleo	70387754		CC
32	16/07/14	Francisco Sanchez Herrera	San Pedro/Em.	70332261		
33	16/07/14	Julio Alberto Sanchez II	San Pedro/Empleo	73564742	—	
34	16/07/14	Rafael Santa Marcos Maldonado Zunza/Empleo.		61226864/	61226087	
35	16/07/14	Juan José Pérez	Zunza/Empleo.	79505435/	71444470.	
36	16/7/14	Oscar Armando Rodriguez	BUZO	01653378-8	— — —	
37	16/07/14	Obed Isai Alas Mejia	Col. Acaxual 4/electricista	7638-0997	Obed.alas011@gmail.com	
38	16/07/14	Julio Adalberto Alas Rivas	Col. Acaxual II 4 Arenjola	24525083	Tramojo200442@yahoo.com	
39	16/07/14	Josa Javier Gomez Cases	Cd. ciudadela cepa	71979437	gomezjosejavier@yahoo.com	Buzo
40	16/7/14	Fernando Martinez C	Ciudadela Cepa.	70336957		

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N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
1	10/07/14	Jose Antonio Cruz Escobar	BMR/EMPLEO	74243666	—	
2	10/07/14	Guillermo Antonio	empleo	77456363	GS/Acajutla —	
3	10/07/14	Ricardo Valladares	EMPLEO	70033013	RICKARDO_VARELA @hotmail.es	
—	—	—	—	—		
4	10/07/14	Jose Marcelino Balloso	Empleo.	61685561.	—	
5	11/07/14	Nelson José Chinchilla	Empleo	71757019	nelchinchillas05@gmail.com	
6	11/07/2014	José Roberto Rivas Moreno	Empleo	78892698		
7	11-07-2014	Claudia Jeaneth Franco	Empleo	—	—	
8	14-07/14	Eduardo Enrique Galvez	Empleo	63055781		
9	14-07/14	Wolfredo Chavez Carias	Empleo.	77861469.	—	W.C.C.
10	14-07/14	Alfredo Antonio Arevalo	Empleo	7026-4804	—	
11	15/07/14	Oscar Mauricio Rivas Claros	Empleo	29793021		
12	15/07/14	FABIO MAYEN MOLINA	EMPLEO	71078875	MAYENMOLINA@G.MAIL.COM	
13	15/07/14.	David Eliseo Linares	Empleo.	71207907	—	
14		EAPROES - montaje de motores y TURBINAS y Equipos				
15	15-07-2014	y ESTRUTURA - Jose Roberto Campos		61021630		
16	15-07-2014	Jose Roberto Campos	mismo nombre campos			
17	15-07-2014	Juan Pablo Campos Zepeda	Empleo	7892 3550		
18	15-07-2014	Rosa Elena Guevara Torres	Empleo	61107413		
19	15-07-2014	Melina Margarita Rivas Claros	Empleo	78313361		

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N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	30/07/14	johnson Manfredy Machuca	C. Col. Los Laureles	78410749	jomanfred_21@yahoo.com	
	30/07/14	Geisol stefanni Linares	Col. Magdalena	7092-6302	stefanny82@gmail.com	
	30/07/14	Carlos Antonio Lopez.	Cd. Peñas	71499565	CV. -	
	30/07/14	Luis Arturo Menendez	B. Las Peñas	78543029	—	
	30/07/14	Juan Carlos Estrada	Los morretos	2452-3646	—	
	31/07/14	Santos Méndez Martínez	ciudadela	76-45-05-91		
						V.M.F
	1/08/14	Victor Manuel Escobar.	Obrero/E	2452-4632	—	
	1/08/14	Mauricio Orellana	Las Laureles/E	77456637	doumaury71@hotm.	Orellana
	1/08/14	Rodolfo Ant. Hernandez Es.	Morretos/E	2452-3646.	—	RAHE
	1/8/14	Marlyn Geovany contreras	Coquera/E	7310-0799	—	MGJ
	—	Carlos Fernando Gonzalez Gonzalez	Sonsonate/San An.	7359-7850		
	1/8/14	Lidia Marina Narvaez	Col. acaxual H1	76282000		
	1/8/14	Hugo Ernesto Ruiz Guzmán	Barrio las peñas	71101404	hugosept01@gmail.com	H. Guzmán G
	11/8/14	Angel Abrego.	Campamento.	—	Empleo - Dijo que venía de recom. sindicato	+ algo salgo F.
	11/8/14	Alvaro Orellana	Campamento	—	" "	
	11/8/14	Erick Cecilio Ortiz	Col. Los Laureles	7852-1050	erci1809@gmail.com	
	11/8/14	Carlos Giovany Gallardo	Ciudadela.	73565627.	Empleo.	
	11/8/14.	Miguel Angel García	Sonzacate.	6167-8296	Curreculum	

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N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	28/07/2014	Oscar Daniel Cuellar	Col. Atalay. 2 K.5 AC.	7459-6725	1987@HotMail.com Oscar Daniel Torres	
	28/07/2014	Carlos Alberto Aguilar Martin.	Cd. Altos del Rio, Sonsonate	2451-4770	carlosaguilar_ines@yahoo.com	
	29/07/2014	Miguel Angel Garcia	Zonsacate, Sonsonate	61678296		
	29/07/2014	Reina Xiomara Cuellar	Bº el Campamento	6200-7001	reina2086@gmail.com	
	29/07/14	Silvia Margarita Molina	Bº el campamento	7113-2265	silviamolina23@hotmail	
	29/07/14	MAURA TERESA RIVERA	CIUDADELA CEPA	2452-45-54	MAUTER-29@HOTMAIL	
	29/07/14	Luis Alejandro Sánchez Montano	Col San Julian BIV Sonsonate	2452-4037	Lassanchez@gmail.com	
	29/07/14	Eli Adalberto Cruz Henriquez	C.y.H Constructores	7845-8442	adalberto27cruz@yahoo.com	
	29/07/2014	MARCO T. Urrutia. P	Acaxual #1	77450446		
	29-07-2014	Mario Ernesto Flores	Barrio las Peñas	77455850		
	29-07-2014	Juan José Ramirez	ciudadela cepa	77772917	juanjoseramirez@YaHoo.com.MX	
	30-07-2014	Juan Gilberto Martinez	Kilos	78196255		
	30-07-2014	Rolando Alberto morales Sorto	Sonsonate	71368044		
	30-07-2014	José Daniel Chávez Esc.	Sonsonate / El Bosque	7370-7865	jd_chavez@hotmail.es	
	30-07-2014	Alejandro Antonio Peñate Peñate	Sonsonate/Col. 14	7196-7719	alejandro_270591@hotmail.es	
	30-07-2014	Erick Omar Vicente Carcia	Acajutla	7991-4286		
	30-07-2014	Miguel Angel Melendez Perez	Acajutla	7183-0565	Melendezbombazo3@gmail.com	
	30-7-2014	CARLOS QUIJADA	ACAJUTLA	76844416	— C.Y.	
	30-07-2014	Katia Abigail Garcia	Acajutla	7359-5486		
	30-07-2014	Ernesto antonio trujillo	Acajutla	76257115	—	
	30-07-2014	Salvador Elº Ayala Bonilla	Acajutla	7000-8720		

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VISITANTES

N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	25/07/2014	Carlos Melvin Quyadco.	Campamento/Empleo.	2452-3159	—	
	= = =	VICENTE LOPEZ LEMUS	cd. Lue	7365-8567	—	
	24/07/14	Carlos Antonio Lopez	Las Peñas/Emp.	7145-9565	—	
	25/07/14	Brian Rossell	COLONIA IVU	70630818	Full Inglés	
	25/07/14	Jose Leonidas Quintanella	San Pedro Bolen/Acj	75171103		
	25/07/14	Roberto Orlando Rivera	Col. El Inicio/Acj	77904236.		
	28/07/14	Manuel Angel De paz	Col. San julian	7083-8903		
	28/07/14	Jose Alfonso Ramos.	Marro Grande.	7059-8511	—	
	28/07/14	Noe Escalante Ramos.	La coquera/Acj.	73581960	—	
	28/07/14.	Marvin Alexander Roque Abrego.	Col. Acaxeal 2.	79654332.		
	28/07/14	Luis Hernán Herrera	Col. Los laureles	71735877	C.V.	
	28/07/14	Jose Mario Dubon.	Cd. El Inicio	(7978) 70670006	-	
	28/07/14	Julio Alberto Sanchez Herrera	San Pedro Bda.	73564742		
	28/07/14	Kevin Salvador Vigil	Barrio el Centro	76016605		
*	28/07/14	Angel de Jesus Perez Rivera.	Cdp. Sandoval.	78987205	Ofrece servicios Lancha.	
	28/07/14	Elias Artiga Acevedo.	San Pedro Bolen.	243-1835.	C.V.	
	28/07/14	Jorge Alonso Santos	col. la coquera	78000277	Por Empleo	
	28/07/14	Jhonatan Brayan Burgos	Col. Alvarado	7638-8089	Jhonatan_bryann@hotmail.com	
	28/07/14	Douglas Isaias Moreno Hernandez	Col. Alvarado.	7511-1710	douglasmh13@hotmail.com	
	28/07/214	Hernán Garcia	CANT. MORRO GRANDE CESERCOFA 10%	74230908		
	28/07/2014	Nelson Eduardo Castellon Collar	Col. Atalaya #2	74596726	—	

LNG TO POWER

OFICINA DE INFORMACION

VISITANTES

N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	24/07/2014	Cesar Cristobal Castillo Figueroa	Colonia Alvarado	62050072		
	24/07/2014	Juan Manuel Cordoba	Colonia Alvarado	72633114		
	24-07-14	Rolando Gregorio Martinez	colonia Alvarado	7460-4313	Rolando_Lissy@hotmail.com	
	24-07-14	Mariano de Jesus Barrientos	Acajutla / Bº Las Pe	70292499.		
	24-07-14	Jose Aquiles Hernandez	Nahuizalco / Sonsonate	61533242		
	24-07-14.	Douglas Antonio Henriquez L.	Zonzacate / Sonsonate	76448088		
	24-07-14.	Ismael Paiz	San Genaro / Sonsonate	7102-5121		
	24-07-14	Ing. Jose Roberto Ramos Siguenza	Thomas Jefferson / Sonsonate	7057-5777	shove_dj@hotmail.com	
	24-07-14.	Rafael Santos Ramirez	Santa Catarina Masahuat / Cantón Ulupaco Izalco	7993-2584		
	24-7-14.	Cesar Benjamin Santos	La Tejera	74681588 72802919		
	24-7-14	Jose Natanael Campos Perez	Caserio Agua escondida Canton los tablas	71273681		
	24-7-14	Wilfredo Baños Hernandez	Tuo / Acajutla	Mov. 71519	631-7548-7703	
	24-7-14	JOSÉ NAPOLEON AVALOS GUZMAN	Ciudad de la Acajutla	79-64-28-39		
	24-7-14	Pedro Samuel Candelario	Col. Ciudadela Acajutla	71547266	Pedrosamuelcandelario@yahoo.com	
	24-7-14	Josué Alexander Martinez	Col. Ciudadela Acajutla	79888010	Turron503@gmail.com	
	25/07/14	Jose Angel Mejia G.	Ciudadela.	73031168.	—	J.A.M.G.
	25/07/14	Victor Manuel Perez	San Julian	7868-8369.	-	
	25/07/14	Luis Enrique Mejia G.	Ciudadela.	76902143		LNM
	25/07/14	Luis Angel Catalan Rodriguez	Bº La Playa	7060-4531.		
	25/07/14	David Enrique Guerrero	Saravia / San Emilio	77-784490.	Empleado / Buzo.	DEGS
	25/07/14	Ricardo Obdulio Escalante	El Barquito / Emp.	2452-5960.	Buzo.	

LNG TO POWER

OFICINA DE INFORMACION

VISITANTES

N°	FECHA	NOMBRE	INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
	22/7/14	MOISES ANTONIO BATRES	Barrio Los Cojutes.	76-68-0301.		
	22/7/14	Miguel Angel Rodriguez	Comunidad la Coquera	61676601		
	22/7/14	Josue Antonio Rodriguez	Comunidad la Coquera	70215716		
	22/7/14	Jose Elmer Orellano	Comenidad Acajutla	70-273154	Empleo / RASA.	
	22/07/14	Adan Antonio Serment	Bº Las Peñas	70502324	sermenoadan@gmail.com	
	22/07/14	Salvador Ernesto H. caballero	Barrio el com.	7001-0366	78492461	
	22/07/14.	Cesar Natividad Cruz Luc	c/rio Las cruces.	78130090	cesar luc natividad-@hotmail.com.	
	22/07/14	Daniel de jasus zapata Arana	Col. los Agaves San Antonio, sonsonate	61056318 24348494		
	22/07/14	Edwin Antonio Valiente Garcia	S.antonio del monte. Sonsonate	7113-5127	EdwinValiente91@hotmail.com	
	22/07/14	Jonathan Alexander Calderon	Bº Las Atarrayas	7968-4784	Jonathanalex7993@hotm.com	
	23/07/14	Teofilo de Jesus Perez.	Bº Las Atarrayas.	7306-6940.	—	
	23/07/14	Cesar Eduardo Hernandez	Barrio Camp.	7062-0068	Cesarpato-01@hotmail.com	
	23/07/14	Osmin Bernardo Sanchez.	El Almendro / Sonsonate	73687686	Albañiles	
	23/07/14	Erazmo Aguilar Hernandez	Los Rios / Sonsonate	76196983	Albañil.	
	23/07/14.	Ernesto Elicio Medina	Col. Sanzolian.	74038244	Mantenimiento	
	24/07/14.	Miguel Angel Sanchez.	El Almendro / Sonsonate	78170769.	Auxiliar construcciones	
	24/07/14	Moises Ernesto Garcia	el Almendro / Sonsonate	7426-7772	bachiller electrico	
	24/07/14	Josué Nehemias Sanchez	el Almendro / Sonsonate	7066-8266	Auxiliar construccion	
	24/07/14	Moises Ernesto cerna	el Almendro / sonsonate	7623-2139	Auxiliar construcción	
*	24-JUL-14.	RAMON ANTONIO CHAVEZ QUINTANILLA	COL. ACAJUTLA #3 - ACAJUTLA.	7106-6072	VER DSIERISCOS	
*	24-JUL-14	HECTOR VLADIMIR CHAVEZ QUINTANILLA	COL. ACAJUTLA #3 - ACAJUTLA.	7667-1844.	VER DSIERISCOS	

Appendix 8G–
Stakeholders Invited to the Activities 2014

APPENDIX 8G:

STACKEHOLDERS INVITED TO THE ACTIVITIES

N°	TIPO DE ACTOR		PERSONA ENTREVISTADA	CARGO	CONTACTO
COMUNIDADES- JUNTAS DIRECTIVAS					
1	**Barrio La Playa**		Marlene Canjura	Presidenta	7032-6943
2			Celia Hernández		7668-6416
3			Víctor Hernán Quijada		2452-5653
4	**ADESCOMAR integrada por :**	**ACAXUAL**	María de Jesús Gáleas	Presidenta Vice-presidente	2452-4613 7710-7354
5		**Los Morritos**	Ana Cecilia Guillén de Molina		7041-7576
6		**La Reyna**	Omar Esaú De la O		7098-2856
7	**Comunidad Zona Industrial**		Nelson David Alvarado Rivera	Presidente	6200-3547 7458-6993
8	**Comunidad El Barquito**		Silvia Estela Henríquez	Presidenta	6100-2630
9	**Barrio Las Peñas**		David Bautista	Presidente	7747-9058
10	**Ciudadela CEPA**		Guillermo Cordero	Presidente & Líderes	7999-4405 7043-9307
11			Will Antonio Navarro		7815-3773
12			Romeo Alonso Argueta		7714-1924
13	**Comunidad La Obrera**		Dora Alicia Ramírez	Presidenta	7450-2577
14	**Lotificación Alvarado**		Noé Mauricio Guevara	Presidente	7744-9164
15			Lorena Antonia Flores de Lara		7653-5978
16	**Comunidad Bendición de Dios**		Francisco Velásquez	Presidente & Lideresas	7125-1306
17			Jessica Elizabeth Marroquín		7042-0862
18			Blanca Lilian López Asencio		6143-5937

19	**Comunidad La Raza N°1**	Karla Mejía de Estrada	Presidenta & Líderes	2452-3934
20		Susana Beatriz de Martínez		7668-9806
21		Yolanda Isabel Ávalos		7742-1959
22		Juan Carlos Mejía		7039-0337
23	**Comunidad La Raza N°2**	Milton Guillén	Presidente Vice-presidente	---------
24		Francisco Calzadilla		
25	**Colonia Brisas de Acajutla 1**	Evelyn Carolina Rodríguez de Mendoza	Presidenta Líderes	7762-0034
26		Carolina de Mendoza		7762-0034
27		Susana Jeannette Ruíz		7437-0326
28	**Colonia Brisas de Acajutla 2**	Margot Soriano	Presidenta	7748-3244
29	**Comunidad Obelisco**	Maura Guevara	Presidenta & Lideresas	2411-8276 6309-6040
30		Yaneth Saraí Portillo		7696-0731
31		María Julia Cerna		2416-6841
32		Yesenia Carolina Zelaya		7327-7839
33	**Comunidad San Roque**	Reina Rodríguez	Presidenta & Lideresa	7764-3841
34		Ana Ruth Flores de R.		------
ALCALDIA MUNICIPAL DE ACAJUTLA				
35	**Alcaldía municipal**	Darío Guardón	Alcalde Municipal	
36	**Área de Turismo**	Dany Bautista	Responsable de la unidad	2429-7324 7470-9058
37	**Área de Proyección social**	Moisés Bonilla	Responsable de la unidad	7749-1920
38	**Área de Medio ambiente**	Walter Montoya	Responsable de la unidad	2429-7328 7303-2729

INSTITUCIONES DE SALUD DE ACAJUTLA				
39	**Unidad de salud**	Carlos Javier Villa Fuerte	Director de la institución	2452-3082 7160-6621
40		Edgar Leonel Guzmán	Coordinador Saneamiento Amb.	7746-7107
41	**Seguro Social**	Walter Martínez	Director de la institución	2452-3340
42	**AGAPE Acajutla**	Dra. Marta Morales	Director de la institución	7170-1173
43		Dr. Pérez	Coordinador de Promotores	2429-8753
44	**Cruz Roja de Acajutla**	Rafael Martínez	Responsable de promotores locales	7860-4213
INSTITUCIONES DE SEGURIDAD				
45	**Fuerza Naval**	Oscar Mauricio Bonilla	Capitán del Puerto de Acajutla	------
46	**PNC DEL PUERTO**	Sub Inspector Gustavo Neftalí Pérez	Jefe de la Delegación	-------
47	**Bomberos de Sonsonate**	Damián Villacorta	Teniente	7070-3269
48		Luis Arturo Diego	Cabo	2451-2222
COOPERATIVA DE PESCADORES DE ACAJUTLA				
49	**ACOOPPAC** (Asociación Cooperativa de Producción Pesquera del Puerto de Acajutla)	Ricardo Napoleón Jovel	Presidente de la cooperativa	7102-9766
50	**ACPPRA** (Asociación Cooperativa de Producción Pesquera Rederos de Acajutla)	José Antonio Cordero	Presidente de la cooperativa	7443-0906
CENTROS ESCOLARES				
51	**Centro Escolar Comunidad Alvarado**	Israel Enríquez Tapas	Director de la institución	
52	**Colegio Católico de Acajutla**	María Elvira Saravia Morales	Directora de la institución	
IGLESIAS				
53	**Iglesia Evangélica: Iglesia Santuario del Dios de Elías**	Félix Aguirre	Pastor de la iglesia	
54	**Iglesia Católica "San Francisco de Asís"**	Napoleón García	Sacerdote de iglesia	

ORGANIZACIONES DE MUJERES				
55	**Red de Mujeres de Acajutla**	Maritza Elizabeth Hernández	Miembro activo	7697-0741
56		Vilma Noemy Santos	Encargada de la unidad de género	7806-1025
57		María Maura Castro	Miembro activo	7299-6525
58		Daysi Beatriz Espinoza	Miembro activo	7953-9499
59		Delsy Noemi Ramírez	Miembro activo	7087-1624

Appendix 8H–
Meetings Report 2014

Invitations to the Preliminary Assembly

Preliminary invitations were sent to different institutions to request assistance an assembly for information on the project with the following list of guests:

- Dr. Carlos Javier villafuerte, Health Unit Director of Acajutla
- Dr. Walter Martínez, Director Unidad de Seguro Social Acajutla
- Mr. Oscar Mauricio Bonilla, Captain of the Port of Acajutla
- Mr. Ricardo Napoleón Jovel, Cooperativa de Pescadores de Acajutla ACOPPAC
- Mr. José Antonio Cordero, Cooperative of rederos and langosterios of Acajulta
- Pastor Peter, Catholic Church
- Pastor Mario Alas, Assemblies of God Church
- Pastor Napoleon, Catholic Church
- Lic. Dany Bautista, Head of Tourism Unit, Municipal Acajutla
- Lic. Moises Bonilla, Head of the Social Projection Unit, Mayor's Office Municipal of Acajutla
-Lic. Walter Montoya, Head of the Environmental Unit, Municipal Acajutla.

The following is an example of the letter sent to the guests to the meeting:

Sonsonate, Acajutla, June 3, 2014

Lic. Walter Montoya
Responsible for the Environmental
Unit City Hall of Acajutla
Present

Receive a cordial greeting from the company **Energía Del Pacifico S.A de C.V.** Responsible for the execution of the project: **"Power Generation"** to be located in the Port of Acajutla, in this municipality.

On this occasion we turn to you as a Local Institution to invite you in the most cordial way to an assembly whose main objective is to inform the population and local institutions about the components of the project; Likewise, we are interested in knowing the perception of the institution, regarding the implementation of the Energy Generation Plant, to later incorporate this information into the respective studies.

It is worth mentioning that the company **Energía Del Pacifico** believes that the communities and other local actors should be involved in this process, with the aim of obtaining positive results for the inhabitants of the area.

The activity will be carried out in the following way:

Day: Thursday, June 5, 2014

Time: 1:30 a.m. to 3:00 p.m.

Location: Restaurant & Hotel Kilo 2, Acajutla Sonsonate km 8

Without further ado at the moment and waiting for your assistance, I bid you cordially

Energía Del Pacifico S.A de C.V.

Notes for the Meetings with Goverment Authorities

MEMORIAL MEETING ALCALDÍA MEETING

MAY 19, 2014

1 ASSISTANTS

Javier Mina
Brenda Lovato
Roberto Robles
Roly Padilla
Leonora Ferrer

Ulises Cruz, City Manager
Staff of the Mayor's office, area heads, will send a list later with telephones and mails.

2 POINTS

First was the presentation of the project by the Engineer Javier Mina, who spoke of the structure of the project

Subsequently the presentation of ECO engineers, on the part of the Architect Leonora Ferrer, in what concerns to the environmental area.

After the exhibitions, the Mayor asked the following questions:

1. The number of jobs that will be generated in the construction phase, with people from the municipality
   It was explained that priority will be given to people from the Municipality. Javier explained that there would be about 1,200 employees. It was clarified that in about 1.5 years of construction.
2. The number of jobs that will be generated, already in the stage of operation, with people of the municipality.
   Equally it was explained that priority will be given to the people of the municipality. The General Manager Of the Mayor suggested training for people in the municipality so that they had a better chance of being hired.
3. They asked for the amount of Co2 that will be produced by the project.
   It was explained that the calculations are being made, but that they are smaller in comparison to those of using coal or fuel oil, as said in the presentation.
4. They generate noise and vibration produced by the equipment, which affects the inhabitants
   It was explained that these impacts are being evaluated.
5. *If the allowed distances with respect to the project are met towards the ocean It was explained that an analysis of alternatives has been carried out and that international regulations for such plants will be complied with.*

6. What is or is the natural gas

   It is explained that it is basically methane gas.

7. There will be affectation to the security mechanisms (civil protection)

   It was explained that the security management of the project will be reviewed as part of the evaluation.

8. What will be the benefits that the community will receive with this project

   It was explained that projects should be proposed to EDP for evaluation, as there is an acquired commitment of investment in development projects, as part of the Bidding process.

9. It was commented that the company must be registered in the City Hall for the payment of taxes.

   It take note.

Ms. Brenda Lovato, I explain to the staff of the Mayor's Office that it is up to them to report on development projects to expedite support from EDP.

I took advantage to make an appointment with the person in charge of social

promotion for Wednesday.

It was informed that the publication in the magazine of the Patron Saint's Festivities

would be made.

It was reported that the office in Acajutla will soon be open.

Energía del Pacifico
LNG to Power Project

Meeting Report May 28, 2014.

ECO INGENIEROS
LÍDERES EN CONSULTORÍA AMBIENTAL

DILLON CONSULTING

REPORT
PRESENTATION

The report refers to the meeting held with the Municipal Council of Acajutla, Sonsonate, which aimed to inform the components of the "**Electric Power Generation"** project.

The purpose of the report is to describe the results obtained at the meeting with the Municipal Council and submit comments, suggestions, and opinions that were obtained from the participants.

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1. DESCRIPTION OF THE MEETING HELD WITH THE MUNICIPAL COUNCIL OF ACAJUTLA

The following describes the methodology carried out at the briefing on the **"Electric Power Generation"** project by means of a thermal power plant which will be located in the Port of Acajutla of the said municipality.

1.2. OBJECTIVES OF THE DAY

- To inform the Municipal Council of Acajutla the components of the "**Electric Power Generation**" project, among these: the presentation of the companies involved, the need for the generation of electricity under this modality, location of the project, the benefits of the generation of natural gas, the Environmental Impact Study and the citizen participation component of the project.

- To get opinions, suggestions, and recommendations from this stakeholder, with the purpose of identifying the critical areas, the potential environmental and social impacts, the generation of preventive measures, attenuation and compensation for the identified impacts.

1.3. PARTICIPANTS

- Local stakeholder: Acajutla Municipal Council, Sonsonate
- CEPA
- EDP S.A de C.V
- ECO Ingenieros S.A de C.V.

2. DESCRIPTION OF THE DAY

The activity was held with the participation of people who are part of the Municipal Council of Acajutla, members of CEPA and the companies responsible for the execution of the project.

The items developed during the day were the following:

- Welcome words to the EDP-ECO Ingenieros Company by the Municipal Council of Acajutla
- Presentation of the institutions involved in the execution of the project
- Exhibition of the presentation prepared on the components of the project, basic aspects of this, Environmental Impact Study, citizen participation and the benefits of this at a local and national level.
- Open space for questions, comments, and suggestions by the Municipal Council. (A guideline for questions To promote the involvement from the participants was available)

In a general way, the participants submitted their comments, doubts, suggestions and different situations that they considered appropriate to clarify with regard to the project as it is in its initial phase.

- Place: City Hall of Acajutla, Sonsonate
- Time: 9:00 AM
- Date: May 28, 2014

Below is a photographic record of the activity:

IN THE PHOTOS IT IS POSSIBLE TO OBSERVE THE DEVELOPMENT OF THE ACTIVITY, IN WHICH A PRESENTATION OF THE PROJECT WAS MADE. ALSO, THE SUPPORT OF THE MUNICIPALITY WAS CHANNELED.

Source: Own elaboration ECO/Dillon, May 2014

3. OPEN SPACE FOR COMMENTS, QUESTIONS AND SUGGESTIONS

The members of the Municipal Council of Acajutla openly participated in the activity, submitting some comments, proposals, and consultations on the actions included in the project

Members of the Municipal Council, representatives from CEPA and EDP-ECO Ingenieros gave their opinions and suggestions on the following aspects of the project:

3.1. SPACE FOR PARTICIPATION OF THE MUNICIPAL COUNCIL

Within the opinions of the members of the Municipal Council, the following were highlighted:

- The number of people to be hired at the time of the construction phase and its stage of operation was emphasized.

- At this same point, they asked EDP to generate local employment. That is, the hiring of unskilled workforce, and if necessary, to train employees in the respective matters so that the demand is in accordance with the needs of the company.

- It was also explained to the company EDP-ECO Ingenieros that the municipality has a labor exchange in order to have it as a reference at the time of recruitment, this will allow prioritizing the local workforce.

- There is already an approved plan for the execution of social works which has been prepared in coordination with the FISDL to be executed next year in order to begin to investigate an estimated cost of each project. Such is the support from EDP that we want in order to have an approximate cost per work.
  [FISDL = Fondo de Inversión Social para el Desarrollo Local (Social Investment Fund for Local Development)]

- On the other hand, the municipality perceives as an opportunity that CEPA will be established in the territory because they consider that it will carry with it investment for the locality.

- They also expressed that the project is visualized as something positive for the fact that the company is taking into account the population when conducting the respective study and getting to know the opinions from local stakeholders. They see in the project an opportunity that, in the history of Acajutla, had never happened before because there are social investment, workforce and working opportunities for people of the locality.

- Likewise, they stated that the City Hall will take maximum advantage of the opportunity of this project, despite a change in local government, laying the basis for social investment and taxes to be adequately invested in solving problems that are aimed at improving the

quality of life of the population, as something productive.

- They requested from the EDP-ECO Ingenieros Company the copies of all the pertinent information related to the project, among these the contractual basis.

3.2. CEPA INTERVENTION

The CEPA intervention was in charge of Eng. Roberto Mendoza who explained the following key points:

- The opinion was based in informing that the company EDP (formerly Quantum) was the one awarded with the execution of the project, thanks to the fulfillment of all the requested requirements in the basis of the offers.

- Lic. Mendoza expressed that the company has the commitment to the implementation of social works, which go straight to the municipality of Acajutla. This, is established in the basis and is the guarantee with which the municipality is provided.

- In this same item, the municipality together with the Fondo de Inversión Social para el Desarrollo Local (FISD) *[Social Investment Fund for Local Development]* will elaborate the Work Plan that EDP will develop based on the needs that will be established in the said document. These issues must be the most urgent and necessary for the municipality.

- The project is characterized as one that establishes the social responsibility topic in a very punctual way. The municipality is responsible for defining the needs. EDP becomes a medium, but the main stakeholder is the City Hall.

3.3. EDP and ECO INGENIEROS INTERVENTION

The EDP Company and the consulting firm ECO Ingenieros expressed the following aspects:

- EDP is willing to support the project in what it might be required. In addition, it is committed to complying with everything established on the basis with regard to the social benefits to be established in the municipality.

- On the other hand, EDP was interested in the project being developed in the municipality of Acajutla because it has the right conditions for the execution of this project due to technical and infrastructure matters. Fortunately, the opportunity was given and the contract was signed. In this sense, the company is satisfied to be able to count with the support from the municipality.

- This project is valuable for EDP and, in order to have all that is required, suitable studies are being carried out such as the Study on Social Impact. Hydrogeological, geotechnical, and geophysical studies will also be performed as well as a geological fault level research to know how the soil will react in case of an earthquake.

- In order to respond to some concerns of the Municipal Council about the social commitment of the company, EDP representatives said that the topic on social works is defined in the basis, it is a commitment to make this investment, no participating and winning company has been excluded at this point. It is something very concrete that is defined and it will be worked out in conjunction with the municipality.

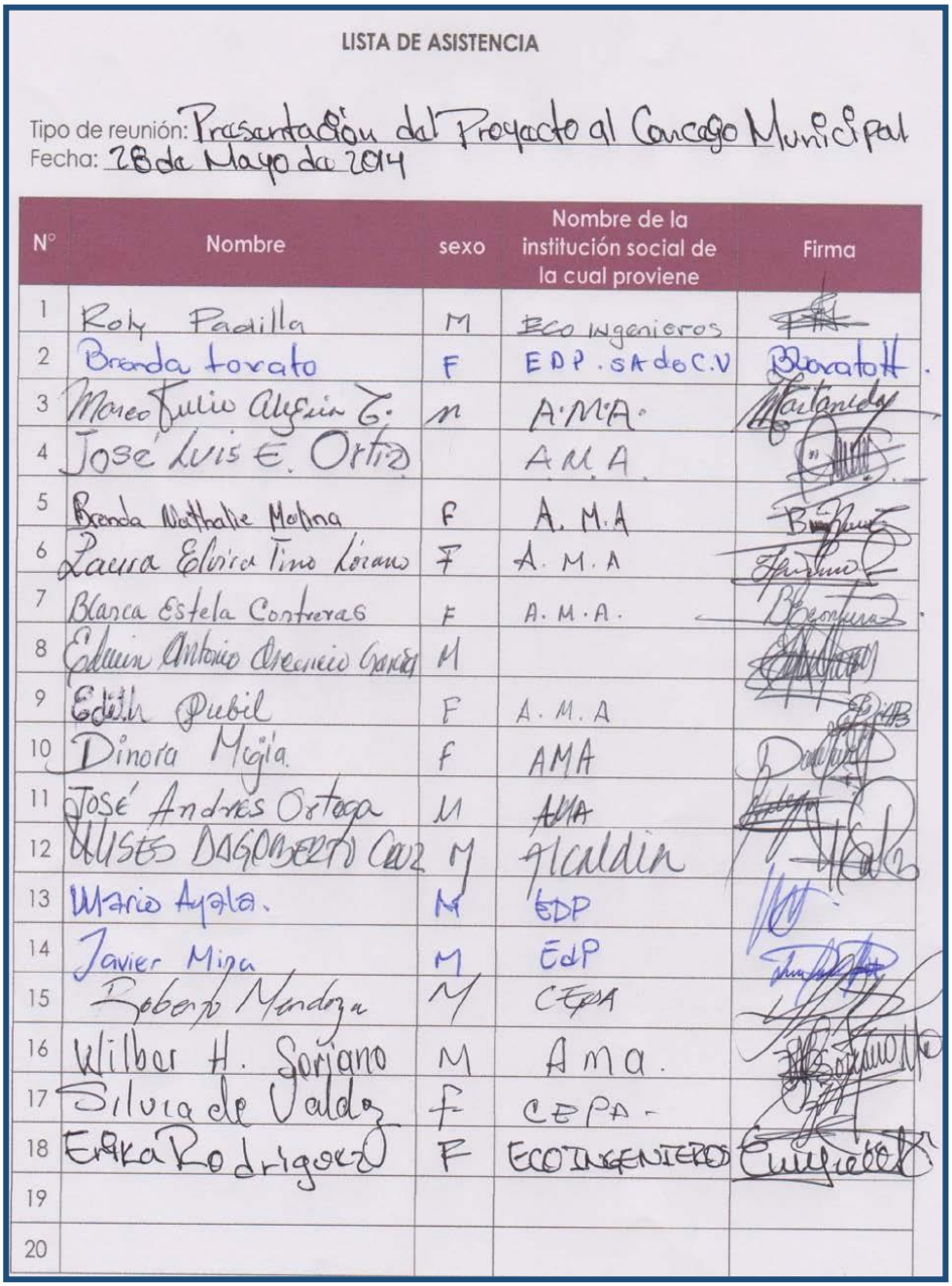
- Likewise, they were informed that a constant contact will be kept with the municipality and the local population with the purpose of solving concerns, taking into account ideas, holding meetings and will have a Social Communication Office, which will carry out this process. Also, when obtaining the results of the study, these will be shared with the municipality so that they know about the impacts and the measures that will be taken.

Below is a photographic record of the open space for questions and comments:

Source: Onw elaboration *ECO/DILLON, May 2014.*

IN THE PHOTOS IT IS POSSIBLE TO OBSERVE THE SPACE FOR QUESTIONS, COMMENTS AND SUGGESTIONS OBTAINED BY THE PARTICIPANTS IN THE ACTIVITY

3.4. ACTIVITY'S ATTENDANCE LIST



LISTA DE ASISTENCIA

Tipo de reunión: Presentación del Proyecto al Concejo Municipal
Fecha: 28 de Mayo de 2014

N°	Nombre	sexo	Nombre de la institución social de la cual proviene	Firma
1	Roly Padilla	M	ECO Ingenieros	
2	Brenda Lovato	F	EDP. S.A de C.V	
3	Marco Julio Alfaro G.	M	A.M.A.	
4	José Luis E. Ortiz		A.M.A.	
5	Brenda Nathalie Molina	F	A. M.A	
6	Laura Elvira Tino Lovato	F	A. M. A	
7	Blanca Estela Contreras	F	A. M. A.	
8	Edwin Antonio Orellana Cano	M		
9	Edith Pubil	F	A. M. A	
10	Dinora Mejía	F	AMA	
11	José Andrés Ortega	M	AMA	
12	ULISES DAGOBERTO CRUZ	M	Alcaldia	
13	Mario Ayala.	M	EDP	
14	Javier Mira	M	EdP	
15	Roberto Mendoza	M	CEPA	
16	Wilber H. Soriano	M	Ama.	
17	Silvia de Valdez	F	CEPA -	
18	Erika Rodriguez	F	ECO INGENIEROS	
19				
20				

Summary of the Preliminary Assembly with the Local Social Stakeholders

Energía del Pacifico
LNG to Power Project
Report of Public Consultation with Local Stakeholders of the Municipality of Acajutla, Sonsonate

June 2014

ECO INGENIEROS
LÍDERES EN CONSULTORÍA AMBIENTAL

DILLON CONSULTING

REPORT PRESENTATION

This report refers to the first meeting held with local stakeholders from the Municipality of Acajutla, Sonsonate which aimed to inform about the components of the **"Electric Power Generation"** project, and obtain opinions, suggestions, and comments from attendees.

The purpose of this report is to describe the results from comments, suggestions, and opinions obtained from the participants during the meeting.

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1. DESCRIPTION OF THE MEETING WITH LOCAL STAKEHOLDERS

Below is a description of the methodology carried out in the meeting with the local stakeholders among these Board of Directors, Churches, Public Health Centers, City Hall, and Naval Force among others, on the **"Electric Power Generation"** project by means of a Thermal Power Plant which will be located in the Port of Acajutla of the said municipality.

1.2. OBJECTIVES OF THE DAY

- To inform the local stakeholders of the Municipality of Acajutla about the elements of the **"Electric Power Generation"** project among these: the need for electric power generation under this modality, the location of the project, advantages of the generation of natural gas, Environmental Impact Study, and the citizen participation component of the project.

- To obtain opinions, suggestions, and recommendations from these stakeholders with the purpose of identifying critical areas, potential environmental and social impacts, to generate prevention, mitigation and compensation measures for the identified impacts.

1.3. PARTICIPANTS

- ADESCOS, Board of Directors, women's committees, fishing cooperatives, among others.

- Local stakeholders: Health Unit, Social Security, Naval Force, among others.

2. DESCRIPTION OF THE DAY

In general, the participants submitted their comments, doubts, suggestions and different situations that they consider appropriate to be clarified regarding the project as this is in its initial stage.

The day was held with the participation of local leaders and with local stakeholders such as Health Unit, Social Security, Naval Force and Fishermen's Cooperatives.
The local stakeholders participating in the activity expressed their comments, doubts, suggestions, and the different situations that they consider could outcome from the implementation of the project.

The Environmental Impact Study, the components comprising it, the studies that will be carried out, and the development of a strategy for citizen or social communication were explained so that the population is well informed about the project.

The agenda developed during the day was as follows:

1. **Roll call to the attendees of the activity and delivery of information three-fold leaflet of the project.**
2. **Welcome and presentation of the institutions involved in the Project**
3. **Short presentation of the invited communities and local institutions attending**
4. **Presentation of the project (through a Power Point presentation)**
5. **Open space for comments, doubts, opinions and suggestions (Through a question guide to promote the participation)**

- Place: Restaurante KILO 2
- Time: 2:00 PM
- Date: June 5, 2014

Below is a photographic record of the activity developed:

IN THE PHOTOS IT IS POSSIBLE TO OBSERVE THE DEVELOPMENT OF THE ACTIVITY IN WHICH A PRESENTATION OF THE PROJECT WAS MADE AND THE OPINIONS OF LOCAL STAKEHOLDERS INVOLVED WERE OBTAINED

3. OPEN SPACE FOR COMMENTS, QUESTIONS AND SUGGESTIONS

Participants openly expressed their opinion, comments, proposals and consultations on the actions included in the project.

Opinions and suggestions were made on the following aspects of the project:

ACOOPPAC- COOPERATIVE OF FISHERMEN OF ACAJUTLA

Ricardo Napoleón Jovel:

- Expressed that 15 years ago fish were still found and currently the waste from these plants has affected the coast.
- He additionally expressed that it is regrettable to see how our coasts are nowadays as a consequence of Acajutla being a primary axis of the industry.
- He pointed out that the project sounds good, but that it cannot be foreseen the impact that his might have in the future.
- He said that they already have bad experiences in Acajutla due to some negative effects such as vibrations, pollution from the pipes that were made at the entrance of the artisanal pier which broke and all the water falls at the entrance of the pier. He added that when they complain to the industries about these negative effects, nobody takes responsibility.
- He also wants to know what guarantee will the Energía del Pacifico Company offer
- He considers that the environmental impact will be a tremendous one, otherwise, they would not have been invited to the meeting
- He is concerned about the City Hall being more interested in the taxes to be collected than in the environment.
- He is worried about what he will inherit to his children and grandchildren in the future who will no longer be able to make a living from fishing.
- Where will the polluted water go?
- He is concerned about the floating ship which he considers to be a time bomb.
- He expressed that fish are very scarce in that area and considers that the construction of the pier will make it even more complicated.
- He wants to know what will they give to his community or to the fishing sector when they can no longer engage in fishing activities in consequences of the project's negative impact. He said that up to date they have not been benefited by any industry.

INDUSTRIAL AREA COMMUNITY

Nelson Gavidia (President of the community):

- He said that he was never invited to a meeting before and that he is pleased that he was invited this time. For example, Duke Energy, never took into account the community and from that point of view, he is pleased with the invitation.
- In his opinion, the Mayor had played an important role in bringing the project to the area as they could have gone to La Unión, he is interested in the project being developed in his municipality.
- In the future, he sees as positive the generation of employment which will result from the execution of this project.
- He considers that the project will help in the development of the country which has been in a backward country status.
- He prefers to wait for the studies to see what measures will be taken to minimize the impact.
- He considers that it is necessary to be proactive because it is for the benefit of the communities.

ACAXUAL COMMUNITY

- He is concerned about the exploitation of underground areas and how aquifers will be protected as the project will exploit these resources.

CEPA CITADEL COMMUNITY

Will Navarro:

- He is interested in knowing the main purpose of these meetings; if these will be of informative character only, or if they are intended to know the opinion of the community and to take it into account.
- He had a couple of technical questions which he did not understand.
- He does not understand much the scheme of the plant and wishes to know the advantages and disadvantages of the project.

COOPERATIVE OF NETTERS AND LOBSTER FISHERMEN

José Antonio Cordero:

- He states that he fishes in part of that area where he still finds some fish, with the construction of the pier, he is concerned that he will not be able to fish in that area anymore.
- He wants to know what benefits could they have in the future, or what benefits can they get from the company when they have to step back from that area where the pier will be built.
- He said that there are no fishing grounds anymore and that they have been cornered. During periods of bad weather, they no longer find shelters because everything is private. In general, he is concerned about the restriction of fishing areas.
- He fishes since he was 12 years old. Fishing is his sole source of income. Since he has never received aid from anyone, he doubts about the benefits that he might receive.
- They are worried about the expense of gasoline because when they build the pier they will have to make longer turns.
- He says that they wash ships' stores and pollute.

HEALTH UNIT

Health Unit Representative:

- They consider that there must be a policy of dialogue.
- The counterparty of these companies is to help the community.
- They consider that the benefits to be offered should be managed directly with the communities without intermediaries as other companies have done before with water, energy, and other projects.
- The company must have a policy for supporting the sectors affected by the project.
- He is sure that the environmental impact will be high, but he considers that there are many measures that can be taken so that communities can benefit from them.

INTERVENTION FROM ECO INGENIEROS

Oscar Molina:

- Our marine biology technical specialist explained some of the alternatives that could be available for fishermen:
- Everything is going to be a process.
- Probably, in order to reduce the negative impact on artisanal fishing, a "chispeo" might be considered.
- Construction of artisanal structures where lobsters can be cultivated.
- He said that there are alternatives that can be recommended that are even cheaper and even safer.
- Negative impacts should be moved to a neutral status and even more, try to see if they can become positive ones.
- He explained that the project will be jointly built, reason for what their opinions are being taken into account.
- They were explained that this first meeting was only informative.

VARIOUS COMMUNITIES

- They need to know clearly the advantages and disadvantages.
- They say that they have not seen the benefits from any of the companies since some do it through FUNDACAJUTLA, but they never see the results.

ACTIVITY'S ATTENDANCE LIST

LISTA DE ASISTENCIA

Tipo de reunión: Asamblea informativa del proyecto "Generación de Energía **Fecha:** Jueves 05 de Junio de 2014

N°	Nombre	sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Correo electrónico	Firma
1	Francisco Velásquez	M	Bendición de Dios	7125-1305	bubito-32@yahoo	
2	Carolina de Mendoza	F	Urb. Brisas N°1	7762-0034	Mojoe1972@Hotmail	
3	Susana Yaneth Ruiz	F	Urb. Brisas N°1	7437-0326		
4	Omar Esau De la O Barahona	M	ADESCOMAR	7098-2856		
5	Edgar Leonel Guzman	m	UCSF I-Acajutla	77467107	edgarleoguzman@yahoo.es	
6	Ana Betty Bruno	F	UCSF I Acajutla	24523082	bettybruno82@Hotmail.es	
7	Nelson DAVID Alvarado	m	zona Industrial	74686993		
8	Josselyn Beatriz Reyes	f.	Col. Santa Isabel	7026 0093		
9	Wilber Alberto Alvarado	M	Pescadores de Acajutla	74430906		
10	Jose Antonio Cordero	M	Pescadores de Acajutla	Tio 74430906		
11	Silvia Estela Enriquez	F.	Col. El Barquito	61-00 2630		
12	Ricardo N. Tovel.	m	ACOOPPAC.	71029766.		
13	Victor Hernan Quijada	M	La playa	24525653		
14	Rafael Gomez Jerez	m	fuerza Naval.	22500210		
15	Ana Lorena Rico	F	alcaldia Municipal	77463338		
16						

LISTA DE ASISTENCIA

Tipo de reunión: Asamblea informativa del proyecto "Generación de Energía **Fecha:** Jueves 05 de Junio de 2014

N°	Nombre	sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Correo electrónico	Firma
17	Maria de Jesus Calan	F	ADESCOMAR	77107354		m de J C
18	Ana Cecilia Guillen de Molina	F	ADESCOMAR	70417576		
19	Walter Montoya Castro	M	Alcaldia Acajutla	2427-7328		
20	Francisco Antonio Lazo	M	Alcaldia Acajutla	74688098	Franciscoantoniolazo@hotmail.com	
21	Reyes Humberto Hernandez	M	A/D Iglesia Maranatha	24524465	iglesiamaranatha@live.com.sv	
22	Reina Rodriguez C	F	C. San Roque	77643841		
23	CELIA HERNÁNDEZ	F	B° LA PLAYA	76686416		
24	Romeo Alonso Aguilar A.	F	Ciudadela Capa	77141924		
25	Wil Antonio Navarro	M	Ciudadela capa	78153773	wilnavarro1340@gmail.com	
26	Susana Beatriz de Martinez	F	ADESCO CASA #1	76689806		
27	Yolanda Isabel Avalos		ADESCO RASA #1	77421959		
28						
29						
30						
31						
32						

GENERAL ASSEMBLY AGENDA

ACTIVITY	OBJETIVE	CONTENTS	RESOURCES	TIME
Roll call to the attendees of the activity and delivery of information three-fold leaflet of the project	Quantify people's attendance to the activity and provide project information	Full fill information: name, place of visits, sex and signature	Attendance list and three-fold leaflet	During the arrival of guests
Welcome and presentation of the institutions involved in the Project	That the participants know about the representatives of the companies involved in the project	The representatives of the institutions present themselves and refer to the objective of the activity	Computer and projector	5 min
Short presentation of the invited communities and local institutions attending	That the leaders feel part of the activity (Only reference will be made of the communities and their leaders)	Name of communities and representatives of each one who attended the event	Computer and projector	5 min.
Presentation of the project (through a Power Point presentation)	That the participants know about the components of the project	Presentation of the components of the project, Environmental Impact Study, mechanism of citizen participation, and the benefits of the project at a local and national level.	Computer and projector	30 min.
Open space for questions and answers	That the participants submit their comments, doubts, opinions or suggestions on the implementation of the project	Opinions, doubts, comments and suggestions on improving the road.	Microphone	30 min.
Snack				

Appendix 8I–

Interview and Correspondence Report 2014

Interview Guidelines with Different Stakeholders

APPENDIX 8I:

GUIDELINES FOR INTERVIEWS WITH LOCAL STAKEHOLDERS

INTERVIEW FOR LOCAL STAKEHOLDERS: MUNICIPAL MAYOR: MAYOR

1. INTERVIEWEE IDENTIFICATION:	
Name:	**Profession or Occupation:**
Position:	**Area:**
Sex:	**Date:**
Contact phone number:	

2. OBJECTIVE: To know the expectations of the key stakeholders of the municipality and the area of influence of the Acajutla Thermal Power Plant Project. The said information will serve as a qualitative input for the elaboration of the Final Report on identified impacts and the creation of social and environmental compensation measures.

3. QUESTIONS

1. What is the opinion of the City Hall on the construction project of the Thermal Power Plant to be located in the Port of Acajutla?

2. What expectations does the municipality have regarding on how the project will be developed?

3. What information, concerning the project, could the municipality request in the future?

4. What have been the similar projects to the construction of the Thermal Power Plant that have been executed in the municipality? How have these contributed positively or negatively to the economic and social modification of the area where they have been developed? What lessons have been learned from these other projects that might be useful for EDP to know?
5. Being the project, still, at a premature stage, is the municipality aware of the communities' opinions about it? Do they support it, are they against it or are they undecided? Do you know of any kind of concern in the communities related to the project up to date?

6. What is the best way to distribute the information to the community? What might the population be interested in regarding the project?
7. What concerns or worries do local communities have with existing plants such as Duke Energy? How serious are these? Does the municipality keep a record of the complaints related to this plant? What role has the municipality played in order to solve these complaints?
8. Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent? What role has the municipality played to date in solving these complaints?
9. How would you describe the relationship between the municipality and the port authorities (CEPA)? Good, poor, neutral? Please explain.
10. What are the major problems or challenges faced by the city and the municipality?
11. What benefits do you think the development of this project will give to the municipality?
12. Would there be a strengthening of the economic activities in the municipality and especially on the area of the intervention of the project with the construction of the Thermal Power Plant? If the answer is yes, what kind of strengthening?
13. What are the disadvantages that you perceive that could result with the execution of the project for the municipality, for the cantons, hamlets, and communities that are located in the area of influence?
14. Do you consider that there would be some level of opposition to the project by some local stakeholder or by the local population? How would it be manifested? Would it affect the development of the project?
15. What will the support of the City Hall be in the execution of the project? What recommendations, in general, would the municipality give to EDP concerning the development of the project?
16. Could you tell us what associations, communities, groups of interest, non-governmental organizations should we address to in regard to the project?

INTERVIEW GUIDELINES FOR LOCAL STAKEHOLDERS: MUNICIPAL CITY HALL: ENVIRONMENT

1. INTERVIEWEE IDENTIFICATION:	
Name:	**Profession or occupation:**
Position:	**Area:**
Sex:	**Date:**
Contact phone number:	

2. OBJECTIVE: To know the expectations of the key stakeholders of the municipality and the area of influence of the Acajutla Thermal Power Plant Project. The said information will serve as a qualitative input for the elaboration of the Final Report on identified impacts and the creation of social and environmental compensation measures.

3. QUESTIONS

1. What is the opinion of the City Hall on the construction project of a Thermal Power Plant which will be located in the Port of Acajutla?
2. What are the main environmental problems manifested in the municipality? Which of these problems are palpable in the area of influence of the project?
3. What have been the similar projects to the construction of the Thermal Power Plant that have been executed in the municipality? How have these contributed positively or negatively to the economic and social modification of the area where they have been developed?
4. What are the negative impacts that you perceive that could result from the execution of the project of the Thermal Power Plant, not only for the municipality, but also for the cantons, hamlets, and communities that would be carried the creation of the Thermal Power Plant?
5. What would be the positive impacts that you perceive that would be generated by the execution of the Thermal Power Plant project, for the municipality of Acajutla as well as for the cantons, hamlets, and communities that would be carried by the creation of the Thermal Power Plant?
6. What recommendations could you provide to the project on the environmental topic? Are there any municipal restrictions or ordinances that should be taken into account for the development of the project (for example, access roads during construction, dust emissions, noise, etc)

7. What would be the support from the City Hall in the execution of the project, specifically in the Environmental topic?
8. What concerns or worries do local communities have with the existing plants such as Duke Energy? How serious are these? Does the municipality have a record of complaints related to this plant? What role has the municipality played up to the date in order to solve these complaints?
9. Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent? What role has the municipality played up to the date in solving these complaints?
10. Being the project, still, at a premature stage, is the municipality aware of the communities' opinions about it? Do they support it, are they against it or are they undecided? Do you know of any kind of concern in the communities related to the project up to date?
11. Could you tell us what associations, communities, groups of interest, NGOs should we address to in regard to the Project?
12. Could you inform us about environmental projects in the municipalities that might be considered in the environmental compensation of the project, for instance, reforestation projects, basin management, etc?

INTERVIEW GUIDELINES FOR LOCAL STAKEHOLDERS: MUNICIPAL CITY HALL: TOURISM

1. INTERVIEWEE IDENTIFICATION:	
Name:	**Profession or occupation:**
Position:	**Area:**
Sex:	**Date:**
Contact phone number:	

2. OBJECTIVE: To know the expectations of the key stakeholders of the municipality and the area of influence of the Acajutla Thermal Power Plant Project. The said information will serve as a qualitative input for the elaboration of the Final Report on identified impacts and the creation of social and environmental compensation measures.

3. QUESTIONS

1. What is the opinion of the City Hall on the construction project of a Thermal Power Station which will be located in the Port of Acajutla?
2. What have been the similar projects to the construction of the Thermal Power Plant that have been executed in the municipality? How have these contributed positively or negatively to the environmental, social and touristic modification of the area where they have been developed?
3. What would be the positive and negative impacts that you perceive that would be generated by the execution of the Thermal Power Plant project for the municipality of Acajutla as well as for the cantons, hamlets, and communities that would be carried by the creation of the Thermal Power Plant?
4. What impact would this project bring on the topic of the local tourism?
5. How will the increase in tourism in the municipality benefit the population through the creation of the Thermal Power Plant?
6. How would the municipality, through tourism, positively exploit the creation of the Thermal Power Plant in such a way that it contributes to improving the living conditions for the population?
7. What recommendations could you provide to the project?

INTERVIEW GUIDELINES FOR LOCAL STAKEHOLDERS: MUNICIPAL CITY HALL: SOCIAL OUTREACH

1. INTERVIEWEE IDENTIFICATION:	
Name:	**Profession or occupation:**
Position:	**Area:**
Sex:	**Date:**
Contact phone number:	

2. OBJECTIVE: To know the expectations of the key stakeholders of the municipality and the area of influence of the Acajutla Thermal Power Plant Project. The said information will serve as a qualitative input for the elaboration of the Final Report on identified impacts and the creation of social and environmental compensation measures.

3. QUESTIONS

1. What is the opinion of the City Hall on the construction project of a Thermal Power Plant which will be located in the Port of Acajutla?
2. What have been the similar projects to the construction of the Thermal Power Plant that have been executed in the municipality? How have these contributed positively or negatively to the social modification if the area where they have been developed?
3. Being the project, still, at a premature stage, is the municipality aware of the communities' opinions about it? Do they support it, are they against it, or are they undecided?
4. What is the best way to distribute the information to the community? What might the population be interested in regarding the project?
5. Could you tell us what local associations, communities, groups of interest, NGOs should also be involved?
6. Could you provide us information on the location and boundaries of the major communities that are located closer to the project? Could you provide precise information from each of these communities (for example, population, infrastructure status, community leaders, etc.)?

7. What are the main social problems manifested in the municipality? Which of these problems are palpable in the area of influence of the project?

8. What are the positive and negative impacts that you perceive that could result with the execution of the Thermal Power Plant project for the Municipality of Acajutla, cantons, hamlets, and communities that would be caused with the creation of the Thermal Power Plant?

9. How would the municipality, through the Social outreach point of view, positively exploit the creation of the Thermal Power Station in such a way that it contributes to improving the social conditions for the population?

10. What recommendations could you provide to the project as for the social topic?

11. What concerns or worries do local communities have with the existing plants such as Duke Energy? How serious are these? Does the municipality have a record of complaints related to this plant? What role has the municipality played up to the date in order to solve these complaints?

12. Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent? What role has the municipality played to date in solving these complaints?

13. Being the project, still, at a premature stage, is the municipality aware of the communities' opinions about it? Do they support it, are they against it or are they undecided? Do you know of any kind of concern in the communities related to the project up to date?

14. Could you tell us what associations, communities, groups of interest, NGO's should we address to in regard to the project?

INTERVIEW GUIDELINES FOR LOCAL STAKEHOLDERS: HEALTH CENTERS

1. INTERVIEWEE IDENTIFICATION:	
Name:	**Profession or occupation:**
Position:	**Area:**
Sex:	**Date:**
Contact phone number:	

2. OBJECTIVE: To know the expectations of the key stakeholders of the municipality and the area of influence of the Acajutla Thermal Power Plant Project. The said information will serve as a qualitative input for the elaboration of the Final Report on identified impacts and the creation of social and environmental compensation measures.

3. QUESTIONS

1. Currently, what are the most frequent diseases in the communities, cantons, or hamlets located in the area of influence of the project? Which of these diseases has been attributed to or increased by the companies that are located in Acajutla?
2. What is the opinion of the Health Unit on the construction project of the Thermal Power Plant that will be located in the Port of Acajutla?
3. What have been the similar projects to the construction of the Thermal Power Plant that have been executed in the municipality? How have these contributed positively or negatively to the health conditions of the population in the area where they have been developed?
4. What are the disadvantages or issues that you think would be manifested with the construction of the Thermal Power Plant?
5. What would be the manifested advantages with this project for the population in the area of influence?
6. What concerns or worries do local communities have with the existing plants such as Duke Energy? How serious are these? Does the municipality have a record of complaints related to this plant?

7. Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent?
8. What would be the support that the Health Unit could provide to the company that will execute this project?
9. What recommendations could you provide to the project as for the health topic?

INTERVIEW GUIDELINES FOR LOCAL STAKEHOLDERS: COMMUNITY LEADERS

1. INTERVIEWEE IDENTIFICATION:	
Name:	**Profession or occupation:**
Position:	**Area:**
Sex:	**Date:**
Contact phone number:	

2. OBJECTIVE: To know the expectations of the key stakeholders of the municipality and the area of influence of the Acajutla Thermal Power Plant Project. The said information will serve as a qualitative input for the elaboration of the Final Report on identified impacts and the creation of social and environmental compensation measures.

3. QUESTIONS

1. What is the opinion of the community in general about the construction project of the Thermal Power Plant to be located in the Port of Acajutla?
2. What benefits would the development of the project provide to communities in the area?
3. What are the social and economic expectations of the communities with the construction of the Thermal Power Plant?
4. Do you consider that some development level would be generated in the communities involved with the implementation of the project?
5. What are the disadvantages that you perceive that could result in the execution of the Thermal Power Plant project for the cantons, hamlets, and communities that would be carried out with the creation of the Thermal Power Plant?
6. What are the advantages that you perceive that could result in the execution of the Thermal Power Plant project for the cantons, hamlets, and communities that would be carried out with the creation of the Thermal Power Plant Project?
7. Do you consider that there would be some extent of opposition to the project by some local stakeholder or by the local population? How would it be manifested? Would it affect the development of the project?

8. What would be the support from the Board of Directors and leaders of the area in the execution of the project?

9. What concerns or worries do local communities have with existing plants such as Duke Energy? How serious are these?

10. Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent?

11. Could you tell us what associations, communities, groups of interest, NGO's should we address to in regard to the project?

12. What recommendations could you provide for the construction of the project?

INTERVIEW GUIDELINES FOR LOCAL STAKEHOLDERS: COOPERATIVES

1. INTERVIEWEE IDENTIFICATION:	
Name:	**Profession or occupation:**
Position:	**Area:**
Sex:	**Date:**
Contact phone number:	

2. OBJECTIVE: To know the expectations of the key stakeholders of the municipality and the area of influence of the Acajutla Thermal Power Plant Project. The said information will serve as a qualitative input for the elaboration of the Final Report on identified impacts and the creation of social and environmental compensation measures.

3. QUESTIONS

1. What is the number of members with which the cooperative counts on?
2. What have been the similar projects to the construction of the Thermal Power Plant that have been executed in the municipality? How have these contributed positively or negatively to the living conditions of the population in the area where they have been developed?
3. What disadvantages or issues do you identify that could be generated with the creation of the Thermal Power Plant that could affect the cooperative?
4. What are the advantages for the population in the area of influence and for the cooperative that would be manifested with this project?
5. Would there be any opposition from the population or from any local stakeholder to the project?
6. What would be the support provided by the COOPERATIVE to the company for the execution of this project?
7. What recommendations could you provide for the execution of the project?

INTERVIEW GUIDELINES FOR LOCAL STAKEHOLDERS: EDUCATIONAL CENTERS

1. INTERVIEWEE IDENTIFICATION:	
Name:	**Profession or occupation:**
Position:	**Area:**
Sex:	**Date:**
Contact phone number:	

2. OBJECTIVE: To know the expectations of the key stakeholders of the municipality and the area of influence of the Acajutla Thermal Power Plant Project. The said information will serve as a qualitative input for the elaboration of the Final Report on identified impacts and the creation of social and environmental compensation measures.

3. QUESTIONS

1. What is the current student population of the Educational Center?
2. The students attending this school belong to which communities?
3. How have the projects already established in the Port of Acajutla, factories or companies contributed, positively or negatively, to the living conditions of the population in the area where they have been developed?
4. Have the students shown any kind of illness or other problems that could have been attributed to these projects?
5. What have been the areas of intervention of the companies located in the municipality? For example, community improvements, support to educational centers, support to young people or women among others?
6. What recommendations could you provide to the Energía del Pacifico Company so that in the project the conditions of the municipality are taken into account?

CENTROS EDUCATIVOS: CHURCHES

1. INTERVIEWEE IDENTIFICATION:	
Name:	**Profession or occupation:**
Position:	**Area:**
Sex:	**Date:**
Contact phone number:	

2. OBJECTIVE: To know the expectations of the key stakeholders of the municipality and the area of influence of the Acajutla Thermal Power Plant Project. The said information will serve as a qualitative input for the elaboration of the Final Report on identified impacts and the creation of social and environmental compensation measures

3. QUESTIONS

1. What is the number of parishioners in the church?
2. People attending church belong to which communities?
3. How have projects already established in the Port of Acajutla, factories or companies contributed, positively or negatively, to the living conditions of the population in the area where they have been developed?
4. Has the parishioner population submitted any claim or complaint to the Church asking for support to solve any problems that could have been generated by these projects?
5. What have been the areas of intervention of the companies that are located in the municipality, for example, improvements in the community, support for schools, support for young people or women, among others?
6. What recommendations could you provide to the Energía del Pacifico Company so that in the project the conditions of the municipality are taken into account?

Format of Letters for Companies

Antiguo Cuscatlán, 02 de julio de 2014.

Señores
CENERGICA
Presente.

Estimados señores,

Reciban un cordial saludo de parte de Energía del Pacífico, S.A de C.V., entidad constituida por el Asocio adjudicatario de la "Licitación Pública Internacional No. DELSUR-CLP-001-2012" convocada por DELSUR y responsable del proyecto de suministro de 355 MW de potencia y su energía asociada, el cual estará ubicado en el Puerto de Acajutla, departamento de Sonsonate.

Junto a la presente, les adjuntamos la información respectiva concerniente al proyecto en mención, dentro de la cual podrán encontrar: Antecedentes, Descripción General del Proyecto, Proceso de Evaluación de Impacto Ambiental, Actividades de Participación Ciudadana y EIA y Programa de Trabajo.

En este sentido, les solicitamos de la manera más atenta que nos envíen sus opiniones, comentarios o inquietudes relacionadas con el citado proyecto, a fin de incluirla información en el Estudio de Impacto Ambiental que se está realizando para tal efecto; misma que podrá ser remitida a través de los siguientes medios:

- **Oficina de Comunicación del Proyecto:** Colonia RASA 1, casa #44, en la intersección de Calle Circunvalación y Pasaje Tres, ciudad de Acajutla, departamento de Sonsonate.
- **Correo electrónico:** blovato@edp.com.sv
- **Teléfono**: 2452-6313

Lo anterior, atiende a nuestro propósito de obtener los mejores resultados para los habitantes de la zona y el municipio en general, a través del involucramiento de las comunidades y demás actores locales en las actividades desarrolladas en torno a su ejecución.

Sin más por el momento y agradeciendo de antemano su atención a la presente, me suscribo.

Atentamente,

ENERGIA DEL PACIFICO, S.A. de C.V.

Alejandro Gustavo Alle.
Apoderado General Administrativo.
Energía del Pacífico, S.A. de C.V.

Edificio AVANTE, Nivel 7 Oficina 709 Calle llama del Bosque Poniente Urb.
Madre Selva III Etapa Antiguo Cuscatlán.
La Libertad, El Salvador, Centro América.
Tel. 2133-0700

Recibe:
Nombre VICTOR E. PAULA (CENERGICA)
Firma
sello
Fecha: 3/09/14

Antiguo Cuscatlán, 02 de julio de 2014.

Señores
Luis Alonzo Castaneda Lovato
Puma Energy
Presente.

Estimados señores,

Reciban un cordial saludo de parte de Energía del Pacífico, S.A de C.V., entidad constituida por el Asocio adjudicatario de la "Licitación Pública Internacional No. DELSUR-CLP-001-2012" convocada por DELSUR y responsable del proyecto de suministro de 355 MW de potencia y su energía asociada, el cual estará ubicado en el Puerto de Acajutla, departamento de Sonsonate.

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Atentamente,

Alejandro Gustavo Alle.
Apoderado General Administrativo.
Energía del Pacífico, S.A. de C.V.

ENERGIA DEL PACIFICO, S.A. de C.V.

Recibido: Luis Lovato
Nombre:
Firma:
Fecha:

Edificio AVANTE, Nivel 7 Oficina 709 Calle llama del Bosque Poniente Urb.
Madre Selva III Etapa Antiguo Cuscatlán.
La Libertad, El Salvador, Centro América.
Tel. 2133-0700

Antiguo Cuscatlán, 02 de julio de 2014.

Señores
Operadores Portuarios Salvadoreños, S.A. de C.V. (OPSAL, S.A. de C.V.)
Presente.

Estimados señores,

Reciban un cordial saludo de parte de Energía del Pacífico, S.A de C.V., entidad constituida por el Asocio adjudicatario de la "Licitación Pública Internacional No. DELSUR-CLP-001-2012" convocada por DELSUR y responsable del proyecto de suministro de 355 MW de potencia y su energía asociada, el cual estará ubicado en el Puerto de Acajutla, departamento de Sonsonate.

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Atentamente,

ENERGIA DEL PACIFICO, S.A. de C.V.

Alejandro Gustavo Alle.
Apoderado General Administrativo.
Energía del Pacífico, S.A. de C.V.

Edificio AVANTE, Nivel 7 Oficina 709 Calle llama del Bosque Poniente Urb.
Madre Selva III Etapa Antiguo Cuscatlán.
La Libertad, El Salvador, Centro América.
Tel. 2133-0700

Recibido.
Nombre: Manuel Alfredo Gonzalez. Fecha: 03-09-14.
Firma:
Sello:

OPSAL, S.A. DE C.V. EL SALVADOR C.A.

Antiguo Cuscatlán, 02 de julio de 2014.

Señores
Ing. Ruben Peña
Duke Energy
Presente.

Estimados señores,

Reciban un cordial saludo de parte de Energía del Pacífico, S.A de C.V., entidad constituida por el Asocio adjudicatario de la "Licitación Pública Internacional No. DELSUR-CLP-001-2012" convocada por DELSUR y responsable del proyecto de suministro de 355 MW de potencia y su energía asociada, el cual estará ubicado en el Puerto de Acajutla, departamento de Sonsonate.

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Atentamente,

ENERGIA DEL PACIFICO, S.A. de C.V.

Alejandro Gustavo Alle.
Apoderado General Administrativo.
Energía del Pacífico, S.A. de C.V.

Edificio AVANTE, Nivel 7 Oficina 709 Calle llama del Bosque Poniente Urb. Madre Selva III Etapa Antiguo Cuscatlán.
La Libertad, El Salvador, Centro América. Tel. 2133-0700

Recibe:
Nombre: Marcos Humberto Ventura.
Firma:
Sello: Caseta de Vigilancia
Fecha: 03/09/2014.

Notes for each interview

INTERVIEW HELD WITH THE MUNICIPAL MAYOR OF ACAJUTLA

Name: Darío Guardón

Municipality of Acajutla

Position: Mayor

OBJETIVE: Find out the expectations of the key stakeholders of the municipality and the area of influence of the project: Acajutla Thermal Power Plant. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. What is the opinion that has the Municipality on the construction of the Thermal Power Plant that will be located in the Port of Acajutla? What expectations does the municipality have regarding how the project will be developed?

A/ As Acajutla, we have a great opportunity to grow, it is to prioritize among all the priorities as they say, high school, the technician, things that can serve us because from there we start to work, and we have formed people, then that is where we could help as well.

2. What information concerning the Project could the municipality ask in the future?

A/ We are well informed, the start dates, the folder, because I have to sell this and I have to tell the people or prepare the population, tell them the time has come, I am selling it, in fact at the festivities of ALBA PETROLEOS mother's day I talked about this project, in the program of a national interview in the same radio. It can cause some kind of ideological confrontation, but I believe that the reality of Acajutla can change, but I have to sell this, I need people to see it as positive, after having been hit by a lie, after they sold us a plant called PETROGOL, I do not know if you saw it on the news, the people of PETROGOL came by helicopter, the mayor summoned the population, and thousands of people filled curriculums, and

it was a lie but the need of the people was evidenced, after that, people have not believed a100%, then my duty is to introduce, and as it develops I am asking you to inform me of the process and I ask you to allow me to send you curriculum packages, I would be grateful if you could inform me with the responsible from job exchange, because we know the needs of the people, we know many people who come to leave us a curriculum and to update them, and it is very delicate that in a population where there is a strong industrial zone, we have this problem, and with respect (to the issue) that the people of Acajutla are not well prepared (it is another point to which We must also bet to prepare the people we have to take advantage of these social works, but if people do not want to, we'll see what to do and I know that there are many professionals stranded), the other thing architect, is that, they (EDP) are invited to participate in our patron saint festivities (In the magazine there is a publication, and now we are organizing, but we are interested in reaching the radio, television to inform people), and EDP can help us provide them with a situation X now for the cavalcade, If Quantum you are sponsors, and the animator can repeat every 15 or 20 minutes (of the sponsorship), I leave you the option to be used because many people arrive and television programs also, you can tell me tomorrow the horseback riding are Wednesday, Thursday and Friday of the other week, it could be a good sponsorship, also in sports articles like balls, if it could be and if you cannot that way, But it's up to you, my commitment is not only that they could help me but because I'm interested and I'm more grateful than anyone that Quantum gives me that.

3. What have been the similar projects to the construction of the Thermal Power Plant that have been implemented in the municipality? In what way have these contributed positively or negatively to the economic and social modification of the area where they have developed?

A/ With the most recent ALBA, there have been many benefits, they have fiven 99 scholarships half of them for high school, others for higher education, they pay taxes, are punctual, have the theme of social purpose well defined, help much to the nearby population , I believe it's because of the damage they have done as a compensation measure, that is why I told you about Alvarado community which is a very poor community, but they have the support of ALBA, and with them they have a great approach, but not with other communities, and I would like if it was with all the communities of the municipality.

But there are some companies whose assets are declared in other towns and only leave us the garbage, the pollution and pay the minimum in taxes, some of them are subscribed in Antiguo Cuscatlán, the law has allowed them for political reasons, most of these companies were part of the old governments and so it was, that would be the only thing, and as well the lack of confidence, because of the lack of transparency we lost the confidence in the companies, then we get lucky in this lottery, then we are fighting and I told Alejandro that not a penny is not going to leave, and that I have said it is a benefit. Another important thing is that I feel that what they are doing with us can allow us to make things clearer, in the mayor's office there are still members who handle things at their whim and I insisted at the

house of Doña Silvia in something very simple , That Marcus at the closure of the plant lost the job, it hurt me enormously that, then they were at risk, she looked for us, and the conditions that I told Marcus, I can recommend to many people, without any kind of Malice and without anything that repays me to not be transparent.

4. While the project is still at a premature stage, is the municipality aware of the communities' opinions about it? Do they support it, are they against it or are they undecided? Is there any kind of concern in the communities related to the project?

A/ not at all, on the contrary people are waiting for it, because I am selling it, I tell them about the jobs, I talked to Alejandro and he sent me the amount of jobs they would need. We have no complaints regarding the plants, but together with my workmate from the job bank department, who is in contact with the public, there have been opportunities that seek us for contamination things but now in the assembly of Acajutla in front of RASA by the Duke tanks, we have a complaint and we are negotiating to see how they minimize noise pollution and pollen, but it has been very limiting and not many people have been informed, but the truth we need from these people because if not We are going to drift, then the community has to be aware that companies can generate pollution, noise, annoyance but in the end have to see the positive aspects, so we have no problem.

5. What are the biggest challenges that the city is facing?

A/ The most serious problem of this town is poverty, that's why I insist on the generation of jobs because there aren't, it is very difficult and those that are obtained are very poorly paid; And the other problem we have is delinquency even though there is security throughout the municipality, the gang problem, criminal groups, there is some control of them but we have already had two homicides (we have to assess where we invest In the population because that's why we get paid badly, they do not want to study, so I think we could do more, and I feel blessed and happy to be part of this project, really outside the polytheists only speak bad things). Then the issue of security 2 homicides in 2 years has a cost and people do not realize, I have particularly assumed the subject of the negotiation, I meet with them, and I committed myself to get them $ 3,000 for the gang and buy a motor they can go fishing, and give work to other gang members, so they stop bothering and I told them that the other week I would give $ 1200 pesos and I will remove the program I have been asked for bicycles to order The bread, and they have been asked not to do it by force and not intimidate the buyers, that they do it well, one is the cashier, another sells and one that serves with gloves and then they are giving a service to other people, then we have that bad habit of not making it hygienic. We are going to ask them later if we continue in the mayor's office, because we want to continue with the programs of attention to the gangs, because today we had to send a letter to the UNDP with the subject of the restructuring, we have demonstrated not only to Acajutla , But to the world that before being the

municipality #14 in the index of violence, today we are the #148, that we have achieved in two years, as I repeat has a delicate cost and I believe, and I am honest that if it we were to lose the mayor's office all this goes away, and I cannot cover all that is with them, I can leave and I may have opportunities to go to another place for I am prepared in all aspects emotional, economic, but it would hurt me, then we hope that the other governments will assume the responsibility what we have done.

6. What benefits does the development of this project bring to the municipality?

A / The generation of employment, social responsibility and opportunity, I do not know how you can see, the political activity of the municipality.

7. What are the disadvantages you perceive could result from the execution of the Thermal Power Plant project in Acajutla Port, both for the municipality, and for the cantons, hamlets and communities that are located in the area of influence?

A / I do not get to visualize that and I believe that the technical aspects would be yours to review, so far, I do not find a negative aspect.

8. What will be the support of the Municipality in the execution of the project? What recommendations, in general, would the municipality give to EDP concerning the development of the project?

A / The subject that I mentioned, accompaniment, apart from the issue of social responsibility, accompaniment in programs in training young people, minimize the opportunities for people to harm others, that is not great, as we or me in particular handle it, it has a cost, a company I asked for help with an oven, it cost them a thousand two hundred or five hundred dollars and I do not bother again, and I sell it in another way in about five thousand dollars, people are simple and Humble, they believe me and then we throw the political show because we have to do it. I thank you for being the only company in this municipality that seeks to get closer to people.

INTERVIEW HELD WITH THE RESPONSIBLE OF ENVIRONMENTAL UNIT FROM THE MUNICIPALITY OF ACAJUTLA

Name: Lic. Walter

Workplace: Municipality of Acajutla

Position: Responsible of the Environmental Unit

OBJETIVE: Find out the expectations of the key stakeholders of the municipality and the area of influence of the project: Acajutla Thermal Power Plant. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. What is the opinion of the Municipality on the construction of the Thermal Power Plant that will be located in the Port of Acajutla?

A / I as unit of environment, I am aware that the company Quantum is a gas company, it is a thermal. Here we have been making inquiries about the degree of contamination, we have been informed that the contamination would be reducing by 50% in level of the other thermals, by the type of technology. But as an environmental unit we want to see what the processes are, apart from that, the social compensation that will leave the municipality.

As the coworker form projects unit told us, we would be interested in doing projects that benefit the environment, which are reforestations with several species of trees, as a company if they can help in the purchase of some property, to recover some wetlands that are lost, because those are the expectations that we have as a municipality. Apart from the fact that the MARN will ask for all requirements, now that you are in the EIA, after you present it, MARN will send the file for us to analyze, and if we agree there will be no observations, but if we We observe that there are voids in environmental matters we are going to make it see.

2. What are the main environmental problems that are manifested in the municipality? Which of these problems are present in the area of influence of the project?

A / Well, I consider that one of the main problems we have as an environmental unit is the tree felling of the salted forest, because what is solid waste is controlled, because the service provided by the municipality is a good service as all solid waste is transferred to their final disposal to MIDES. Another problem is the sewage that flows to the Rio Sensunapan, the ideal would be to have a treatment plant, currently its discharge is direct; Even energy could be generated, but because they are burdensome projects, they can not be done.

3. What would be the negative impacts that you perceive that would be generated by the execution of the Thermal Power Plant project, both for the municipality of Acajutla and for the cantons, hamlets and communities that would be brought with the creation of the Thermal Power Station?

A / Well first the impacts that we have seen, is the affectation to the terrestrial surface. Whether or not it is always where there is a building to be built, a plant; There is always affectation, natural core that is going to be replaced by cement, asphaltic streets, besides that the sonic generation, the environmental pollution of the hydrocarbons; Non-compliance of compensation by some companies; Then creates the impasse that we are not often allowed to monitor, as an environmental unit we have presented to the mayor an environmental ordinance, that ordinance is already submitted to the council hoping that in a few months the council approve; If we are approved the environmental ordinance will be more control, because we will have a legal basis that will allow us to do so. Positive we could mention the opening of jobs, the only company that helps us in reforestation projects and some other activity, is RASA; They allocate some annual budget for the environmental theme.

For the thermal plant to be built, I could not tell you because I do not know the size of the company and the size of what they will build, I do not know if they will install turbines, I do not know what kind of machinery they are going to bring, Pollution intensity; He would have to see the EIA to give them an exact impact.

4. What would be the positive impacts that you perceive that would be generated by the execution of the Thermal Power Plant project, for the municipality of Acajutla, as well as for the cantons, hamlets and communities that would bring about the creation of the Thermal Power Plant?

A/ As positive social impacts we could say that the generation of labor sources, we as an environmental unit do not oppose an industrial development, what we are seeing is that industrial development and development in environmental matters go hand in hand; We see the social development through the generation of sources of jobs and the support that the company of in the future.

5. What recommendations could you give to the project on the environmental issue?Are there any municipal restrictions or ordinances to be taken into account for the development of the project (eg, access roads during construction, dust emissions, noise, etc.)

A / As Environmental Unit we have incorporated an Environment Ordinance at the local level, however this is still in process because it has to be approved by the City Council. However, in general there is no regulation by the municipality, because it is not up to us to install the companies in the Port. However, if there are complaints and requests from people, we talk to those responsible for the companies and resolve situations that affect the population, for example in the area of dust generation, we have reached the consensus of watering in populated areas, in terms of Noise, is something that can hardly be controlled but is worked less at night hours. So as a municipality we coordinate with companies so that the population does not mention so much affectation.

Well, please note that all environmental controls are coordinated with MARN, when a degree of contamination is identified, contaminating with "X" contaminant, we coordinate with the ministry, the ministry is in charge of sending us the technicians in each area, there is always coordination Direct with the ministry. For us as a recommendation it could be said that of the property, half (50%) is left as natural shelter; But he would have to wait for the ministry's observations.

6. What would be the support of the City Hall in the execution of the project, specifically in the area of Environment?

A/ As an environmental unit, we could give a support in advising on how to create an attractive environment for all, the species of trees they could cultivate.

7. What concerns or concerns do the local communities have with the existing Duke Energy plant? How serious are these? Does the municipality have a record of complaints related to this plant? What role has it played to date? The municipality to resolve these complaints?

The only problem that most affects DUCK ENERGY is the turbines, the turbines when they activate them generate some kind of seismicity that is felt in the population, to the point that there are people who can not sleep because they think it is an earthquake . With transportation companies, it is noise, dust, smoke. It is what affects the health most.

There have been citizen complaints and they have managed to solve different odd. Which have been written. The complaints are made dare the council and they delegate it to those responsible in each area.

8. While the project is still at a premature stage, is the municipality aware of the communities' opinions about it? Do they support it, are they against it or are they undecided? Do you know of any kind of concern in the communities related to the project? Project to this date?

A / The population is divided, many people are expecting the opening of sources of employment and others pending what will affect. It is more the people who see well the execution of the project. We still have to inform the population, including ourselves as responsible for areas of the municipality.

9. Can you point out to us that associations, communities, interest groups, non-governmental NGOs that we should address about the project?

A / Because the ADESCO really handles social projection and could not comment. In the environmental issue, we coordinate with the Health Unit environmental sanitation, ISSS, schools, naval force, Environmental Unit of the PNC.

10. Could you inform us about environmental projects in the Municipalities that can be considered in the environmental compensation of the project, such as reforestation projects, watershed management, etc.?

A / You can carry out cleaning campaigns of the Sensunapán River, reforestation in general; Reforestation of the salted forest are sown annually from 15,000 to 20,000 Candelillas, reforestation in the urban area, fumigation campaigns in Acajutla. Recovery of wetlands.

We are like municipality to recover the salty forests, which are rich in biodiversity, to generate a long-term project of recovery of the salty forest.

INTERVIEW HELD WITH SOCIAL PROJECTION UNIT RESPONSIBLE FROM THE MUNICIPALITY OF ACAJUTLA

Name: Lic. David Moisés Bonilla

Workplace: Municipality of Acajutla

Position: Responsible of Social Projection Unit

OBJETIVE: Find out the expectations of the key stakeholders of the municipality and the area of influence of the project: Acajutla Thermal Power Plant. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. What is the opinion of the City Hall on the construction of the Thermal Power Plant that will be located in the Port of Acajutla?

A / The expectations are many, they are not in the aspect of the plant, but the population itself in conjunction with the municipality we are in the expectation, if the human resource will be from Acajutla, will be from the country or what type of contracting will do, but more That that the type of company that will come and if it meets the environmental requirements; And secondly the quality of employment are generated both for the municipality and the access that will be had for the companions of the mayor. These would be the great expectations.

2. What have been the similar projects to the construction of the Thermal Power Plant that have been implemented in the municipality? In what way have these contributed positively or negatively to the social modification of the area where they have developed?

R / It is the first time a plant will be made, but if there is power generation here, for example the DUCK ENERGY company that invested a lot of money in the country,

there are employees in Acajutla in the company ENERGY, it is another type of energy with another Process, but the DUCK ENERGY was planted here and is a company recognized at the level of serious Acautla, although the power generation or the process of this is different; But if we caused serious environmental problems to the surrounding communities, for example pollution, noise for example if you go at night to the communities they start to move the house and generate a hostile environment so to speak. The company generates abundant toxics, which generates and creates discomfort to the community we still have because of the fact that there are communities nearby, when you go at night that plant generates discomfort, that plant worth $ 1000,000.00. They have generated good revenues not only give energy to El Salvador but throughout Central America. It had some type of rejection, but also in the job in the generation of employment there are benefits, more or less there are 100 permanent jobs plus the other issues of maintenance and seasonal. Although they have helped the municipality a lot in the subject of social responsibility, they invest enough in the municipality. The negative impact, being close to the communities that noise affects people, is terrible the strength of the plant.

3. If the project is still at a premature stage, is the municipality aware of the communities' opinion about it? Do they support it, are they against or undecided?

R / People are not aware at the moment about the plant, they do not know what kind of plant it is, they have listened to it by the mayor and by communications, so people are there if they do not know it, people do not really know what plant will come. One goes to the community but people do not know very well the name of the company, who is going to build it, who are going to generate it, some think it is shrimp farms, there is a lot of expectation that people do not know in the municipality. From q to 10 maybe we are in 1, in knowledge, because even here in the community we know little, although it has been presented but it is not known in depth, that if there is an idea but it needs to be really disseminated what the project is about.

4. What is the best way to distribute information to the community? How could people be interested?

A / I consider that it is necessary to have images of the company from the entrance of Acajutla, since people are more visual and always look for signs or images, that the company had a label at least of what is going to go, I think That would help them much more than what is spoken, the image of the company do not know it, there are some who do not know what is called, images that give the pattern for people to see what is really going to do, for Example would help them 10 images from the entrance of Acajutla, people are well visual that would help them a lot, so they will know that to know what will be done in the municipality and the benefits of this for the locality, for example the DUCK was sold very Well here, they helped people from the beginning, a footbridge that you see there, the entrance of KILO 5 they donated it, so look is a work of impact for people who helps them a lot.

When they opened that footbridge a lot of people came, the mayor gave half but it was a big profit for them. The DUKE began to get into all the soccer teams that were not of their people but the support, support the team then was key because the brand was around Acajutla, they even got in with a promotion team, I help them a lot, here Men like soccer a lot, so if you went to the stadium you would see the DUKE brand, the brand grew, they gave it like 10 uniforms before entering the town. Here we try to convince the people of the territory, with things so simple but people see it well regardless of the havoc they are doing now.

5. Could you tell us about local associations, interest groups, NGOs or others that should be involved?

A / Here we live two worlds in Acajutla, first is El Puerto in the industrial zone and the coty of Acajutla, this is a rather disorderly municipality, if you go to other municipalities, the city hall, parish and park are nearby, not here. It grew messy because the communities grow we have an approximate 28 thousand people living in the urban center in Acajutla, so we have more than 58 communities here, most are women presidents and say what they think and what affects them, so look When the project of the DUKE was implemented this type of project in the women had a lot of influence was thus as they supported the women sector, which made them brought food to the most precarious communities, bought LANGOSTINA people that is not produced here true , They brought that product and they gave it to people for two months were 10 pounds.

Then the communities of Acajutla women and men, as women spend more in the house, the hook has to be with them, since they are the ones that mostly pass at home. People are key, we have 52 communities, we have well organized communities, people if they are not taken into account, but they are taken into account there is problem, this has been calve, I hope this company has this initiative to visit Communities, an entrepreneur social worker came and realized that there is a large organization of people.

6. Could you provide us with information about the location and boundaries of the major communities that are closest to the Project? Could you provide us with timely information on each of these communities (eg, population, infrastructure status, community leaders, etc.)?

R / The company will be located to one kilometer of the communities and would be close to the whole urban area of Acajutla, this municipality counts approximately with 7 and a half square kilometers, reason why it would affect all the zone, since everything is in function with the port. Everything here is seen depending on the port, is affected more than anything urban.

Here there are a lot of ONG'S, USAID that collaborates with us, there are the cooperatives, the fisheries, that here we have a sensitive subject in what is the

artisanal fishing, here we have 4 cooperatives, these are the immediate sectors to the project, of 21 To 10 they would be the first, the Pier is here and the cooperative is in front. ACOOPAT is the one in the center of Acajutla.

7. What are the main social problems that are manifested in the municipality? Which of these problems are present in the area of influence of the project?

A / Because the project is new I do not know what it can cause, it would be good to provide the knowledge, to size the problem, so what you are doing now is good to take into account the population since people are assimilating with the negative impact that provoked the DUKE ENERGY, but the people it seems good that the companies work in the municipality. You see the containers at the entrance of the municipality, there is a sign that says no vans, that's a problem here in the municipality, but they always come in, there is the situation in the communities that are going to put graves, you know what the drags generate When they light it in front of the houses, then that impact of the plant is not known, then they are related to the impact of DUKE ENERGY, because it is similar and related to it, the impacts would be smoke, vibrations, noise.

People tell us that smoke and dust cause diseases, there are girls with asthma, so all that part of the impacts are aspects that people are currently feeling. If you go to the health unit and ask what are the most common health problems and they will tell you that they are respiratory diseases, not in rainy season but the first year the respiratory problems, the most impact Big that must be careful is the health issue.

8. What would be the positive and negative impacts that you perceive would be generated by the execution of the Thermal Power Plant project, for the municipality of Acajutla, as well as for the cantons, hamlets and communities that the creation of the Thermal Power Plant would entail?

R / Well within the positive impacts we have the generation of employment, social investment, that is why it has to be clearly known so that people see more positive social aspects than the negative that this can generate. They would see it more as positive aspects and not as negative aspects to the project. The municipality's priorities would be as part of the involvement of projects, such as water sanitation activities, health, infrastructure, mangrove care, support of civil protection for risk reduction, for example the creation of shelters.

The investment of water, health, infrastructure is very good, that's why the impact of the footbridge was great there, children used that footbridge, it served them a lot. It is to make an impact project, an afforestation, the mangrove, another simple aspect is the support to civil protection, with a vehicle, that is made as a proposal. Investing in the civil protection of these municipalities is a very good thing, risk management is what serves the municipality, early warning, early attention, I told

the DUCK we do not have Municipal Alert system, here in the municipality You need one of that, I told you to buy one and put it to you as an early warning, now the environment is asking for it, which is doing to mitigate impacts in the municipality. You have to guide the company to do things in advance. I believe that what you are doing is good, what I am telling you what I live daily is a vicious circle, because they founded FUNDA- ACAJUTLA to organize all the companies that are here in Acajutla, for whom it is made up of the 8 Largest companies in the municipality that is DUKE ENERGY, FERTICA, ALMAPAC, ALCASA, DISAGRO and CEPA which is the owner of everything, which is part of that conglomerate.

We do not have shelters, that would be another point depending on risk management, we always use schools because there is not. The World Bank and anyone who finances them asks them to do so in the social function.

9. How could the municipality, through the Social Projection area, be able to positively exploit the creation of the Thermal Power Plant, which would contribute to enhancing the social conditions of the population?

R / we already receieved the social worker of the company, we did the route, the approach to the actors and sectors, the most important thing is that we are an ally of you, we have relations with the private company, as a municipality accompanying them in the rapprochement with Private company and in all the social programs that would execute in the municipality, we would help them for example with calls, in the logistic area to maintain a good relation with the company and locality. We would be helping you in all of this, to maintain a strong relationship, to be frank and sincere with you who are in harmony working together.

11. Can you tell us what associations, communities, interest groups, NGOs? Nongovernmental organizations that we should address about the project?

R / the key players in maritime safety in the naval force of El Salvador, those who give environmental permits that the Ministry of Health (SIBASI Sonsonate), social insurance that also have a significant impact on the decisions, the house of culture of Acajutla . Other sectors such as women's organizations that are good to take into account at the time of executing the project, also this FUNDAACAJUTLA, see in them an ally not as a rival. They must make a rapprochement with all the companies, especially with FUNDA-ACAJUTLA

What recommendations could you give to the project in the social area?

There must be an approach of the company with the people, the will to want to do things, there must be openness with the people, for example, to organize assemblies or workshops with the communities, in which emphasis is placed on the ecological impacts that Will have the communities, so that they know the process of electricity generation.

In addition, the company must carry out works or programs to strengthen or develop early warning systems (SAT), risk management (shelter construction, evacuation programs), etc.

INTERVIEW HELD WITH TOURISM UNIT RESPONSIBLE FROM THE MUNICIPALITY OF ACAJUTLA

Name: Lic. Dany Bautista

Workplace: Municipality of Acajutla

Position: Tourism Unit Responsible

OBJETIVE: Find out the expectations of the key stakeholders of the municipality and the area of influence of the project: Acajutla Thermal Power Plant. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. What is the opinion of the City Hall on the construction of the Thermal Power Plant that will be located in the Port of Acajutla?

A / First of all, I had the privilege of being there when President Funes was in CEPA and took advantage of the situation of the presentation of a project that they had and the presentation of this energy generation project, We see from the point of view that the population sees it, because we know that it is a type of energy for the country, we know that the expectations that the user has is that they generate cheaper energy, that is in theory, but we know that Until it is not installed and the results can not be said that this is it, then this is the expectation that there is in terms of population. At the local level, obviously with the data presented, one has the expectation of job creation, but also the expectation if the population is prepared for the demand of the labor that will be required, just as there has to be a feedback to the Local labor, to know if it is qualified, we know that the work is not so for truth.

The other expectation is that we are making a very strong link in terms of sustainable tourism, we know that we are not experts in the situation of natural gas power generation, so the question arose about the impact it will have. In fact, there is already an environmental impact with respect to bunker burning, then how much would be the contribution of CO2 that would be giving this plant and obviously that is what is intended to part of the impact that has in the pocket of people, would be to see What is the impact that it would bring in the environment,

because reason, because we are an industry zone. In fact, we are getting a diploma in sustainable development and that is one of things, we become the local players involved in that sustainable development, then obviously, there are expectations, in fact there are students of the diploma who then ask what happens, what will be the impact Generate, which will be the reports that the company will present on the environmental impact that it will have. We know that in every project there is an environmental impact, but we want to know what the impact will be generated at the local level. So on the subject of environment we are to the expectation. We hope that as a company with social responsibility, responsible and of international character take the measures, so that the Mayor and the City Council have given the approval, well, that is already a fact and in my case as responsible of the tourism area know what the impacts will be.

2. **What have been the similar projects to the construction of the Thermal Power Plant that have been implemented in the municipality? In what way have these contributed positively or negatively to the environmental, social and tourist modification of the area where they have been developed?**

R / In this sense, repeating what Acajutla had already said is an industrial zone at least the urban and surrounding, so practically the impacts, I repeat are positive and negative impacts, which are the positive, always looking at a plant, A factory generate positive impact by the number of jobs generated but it would also have to evaluate the impact it has at the environmental level for example on the beach of Acajutla some companies have taken some measures such as water, truth that is a very strong issue , And some have begun to introduce piping for water treatment, at least that is what has been outlined, because because many tourists have noticed the sudden changes in the color of the sea, suddenly also as we are berthing zone of Merchant ships suddenly there are no controls, in fact we as municipality do not have a control of the ships, it is a weakness also p To be able to intervene, at least when cleaning ships, boats that bring basic grain on the shore, is a terrible impact that the true swimmers suffer, usually that kind of berths always feel, is very sensitive, first What is perceived is the coloration of water, because people associate today has not rained, whenever it rains the waters the mouths pour into the rivers because they are super saturated obviously that drags everything from the trash to the waste that can be found and Obviously the water becomes cloudy and that is notorious, then the tourist knows that it has rained heavily that there is a torrential impact on sea water, the impact is tremendous.

So, let's add to that in normal season that there's sunshine that everything is fine, suddenly that impact is very strong. We have another impact, that is, in fact Acajutla is hot, we are coastal zone, but let us add the emission of gases of the companies, I will not mention names by professional ethics, but those that produce agrochemicals, those that practically produce industrial issues Or the processing of some raw material, then that is a situation, as we do not have a Technical Center that does the respective revision, but if we the inhabitants have felt, that mezcal, is already hot by itself, but if there is a mixture by The changes that are and more

now that we are training in the environmental issue, we are already differentiating when there is a climate change that is for the time, but also when it is a disorder caused by the emissions and to some extent I do not know to what extent Are regulated, there is an environmental unit, but it does not have the capacity or the technical equipment to do that type of measurement and say look at this Measure are affecting.

We know that at the global level, the studies are being done by the friends of the National University, tell us to see if there is an accumulation by the emissions and practically affects, you can feel the change by the heat, but there is a heat product of the temperature of the Natural climate and add emissions, I say, is strong, I could not tell you how strong the impact is because I am not a specialist but if in the lifestyle of people we have felt, even at night, hot nights, when In reality the temperature has already gone down, but if the temperature has changed, also in some seasons, emission issues that are also sensitive to smell, which we know, we know is not normal either, your neighbor is grilling your barbecue, you Feels rich because the smell comes to the sausages and the meat, you say my neighbor is cooking because he does not send me some portion, in fact, there has been a couple of incidents In some companies, the same truth because of carelessness or something, thanks to God there have been no fatal victims, but if victims who have inhaled those substances that are not suitable for human beings and are issues maybe not extreme but have Happened truth. There are always good and bad things, companies must have their safety equipment to avoid such impacts, thank God there has been something so great because neither in the news to come out but if it is an impact.

3. **What would be the positive and negative impacts that you perceive would be generated by the execution of the Thermal Power Plant project, for the municipality of Acajutla, as well as for the cantons, hamlets and communities that the creation of the Thermal Power Plant would entail?**

R / We know that sources of work are generated, obviously there will be an increase in per capita income for the people involved, obviously for a job a person working in that plant, regardless of the position that has according to their capabilities, we know that there will certainly be a Social and economic impact, we know that CEPA had a change, that in reality, when it had a change in the way of production, contracting was a strong impact at local economic level, because reason a good part of the population was employed in CEPA, the impact was felt because internal consumption began to decline, and people with their basic basket began to decline, but just as true had to choose other ways to use, social impact also by immigration, in the sense that many people Have had to be used in merchant companies, then we know that every change, changes many things, then the social impact was good, but equal to be And to evaluate that both the impacts would be positive and negative.

In the issue of impact on tourism, we would see if the position of the plant at the geographical level is not going to generate an impact that has to do with the sea, with land, we know that we are a natural area protected by the part of the Reefs, then for that part we hope that there are no impacts, I really do not know the exact location of the plant, then I do not know if there will be a direct impact with the sea, I would have to know the information better.

4. What would be the impact that this project will bring to the theme of local tourism?

A / Let's see that we have a beach that is practically not considered tourist or several beaches that are not considered virgin beaches because they have already been explored, which are beautiful but unfortunately are in industrial zone, then many times the impact, You can not do tourism in that area because, because it is a contrast that I go to Las Flores beach which is practically to the west state of the CEPA wharf, we have the alcoves, basic grain industries, then this area can not be Potentiate because in the first place is very tremendous access, then if it is a tremendous impact because if it is a beach that is public but it can not be accessed because it is a beach that is public, people know that it can access because people are impacted Psychologically to see the tanks and ask, look that they have those tanks, they are tanks of alcohol, then what would happen with a spill, with a pipe , Then that is an impact when there are practically unused areas and others that are potentially tourist, then we have that impact.

In the same way we have Los Almendros area, there are industrial pipes, there is a direct impact, how can we generate tourism there, I do not tell you that it can not be done but first hand there is a barrier like that does not look very good the environment, they are Small beaches that can be exploited, there can be no municipal investment because there are areas that are already perimetradas industrial and practically what is left for beach infrastructure is little truth, now, outside of what is the area of scope or the area where it would be installed The plant because I think that there can be no impact, whether or not if in the mind of the tourist as long as there is a social work that can support the Company, QUANTUM is supporting us in this, whether or not this is true, in the The theme of the reed generate an impact, the trails when they go with their reeds fall, they send their squares after they have already passed the heavy transport fleets, collaborating with the environment Entity and the society they send to raise the trash that leaves, bone would have to see all the weave and handle as we say in good Salvadoran that will be good company, I imagine that during the period of construction of the plant is going to Implement equal, it would have to see the impact that will be in tale to the flow of other companies that are going to have to transit in the territory so that obviously, I do not know if it is going to make by sea the transport, maintenance and that, but equal that is it What can I say.

5. How will the population benefit by increasing tourism in the municipality, with the creation of the Thermal Power Plant?

A / Well impacts maybe would be more of a social type, here we mentioned social impacts that we have as a municipality to see how they are solved, there is an expectation regarding the squares, it will be a very good social impact as long as you manage to win-win. It touches that to make a bond within the municipality training the local labor force so that the demand of the company in the subject of labor is complemented with the training of the local people, I imagine for the good relations that we have had until The moment the meetings and the approval of the mayor along with the Council, we would expect that this part is pending, that the social part is great, also do not know what part of linking there has been when we say we are going to use local hand we obviously know That some technical or professional areas are going to bring them from abroad, that is understood. That an information facility be generated by telling the mayor that this local hand will be needed during the installation of the plant. Something positive is the investment that the company will have from social aspects.

7. What recommendations could you give to the project?

A / This is like a friendship, on the one hand they generate commercial friendships, I would say that if there is enough dialogue to put into practice the win-win philosophy, then I think it will go well. Because we will be an ally, that there is a continuity, that every department every section of the municipality that can support the company, the doors are open since the approval was given. Make a win-win link.

We have had the experience that many companies have a budget for social investment, but it would be good if the company sat down with the mayor to define what area to invest in, which is a priority. It is necessary that the local manpower is trained for the jobs that the company will require. This is a wonderful impact because it achieves better results. Sometimes other companies tell us, we do not hire local hands because they do not have the necessary capacity. I would say that with the dialogue it would reach a good term where there is a win-win. In the tourist theme we would be of your to your to generate synergies with the company.

If the relations of dialogue between the municipality, the company and the local actors, in this case would be the communities, would be generated win-win.

We have had this experience because the companies seek only to get the permission, but it is necessary to approach the community to change those paradigms, to soften already the psychological part of people, are already speculating, are seeing empirically, something else is Let the experts come and explain what it is. Some people are already speculated that it is more harmful. That is why we must do that process of prior dialogue with local bases. This must be done by the company so that they begin to make campaigns of approach, that do not see it as a company that is going to come to the locality.

INTERVIEW HELD WITH REPRESENTATIVES FROM THE ACAJUTLA RED CROSS

Name: Morales

Workplace: AGAPE

Position: President

OBJETIVE: Find out the expectations of the key stakeholders of the municipality and the area of influence of the project: Acajutla Thermal Power Plant. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. **What are the most frequent diseases in the communities, cantons or hamlets that are located in the zone of influence of the draft?**

   As a study we hardly have it, but respiratory diseases have been, people with hypertension, kidney problems where we have to refer them to another place, but right now I know there are no confirmed cases, but if the incidence is quite enough, In addition there are diseases of the skin are enough also, this is what we have at the level of our consultation at community level what is more reported.

2. **What is Agape's opinion on the construction project of the Thermal Power Plant to be located in the Port of Acajutla?**

   A / Opinion as Agape, hardly, because we do not have it institutionalized, but it does seem attractive so that I can understand the generation of energy naturally without generating as much pollution and this would be for a long time, besides it seems attractive to start betting on another way of subsisting without Continue polluting the environment.

3. **What have been the similar projects to the construction of the Thermal Power Plant that have been implemented in the municipality? How have these contributed positively or negatively to the health conditions of the population in the area where they have developed?**

   A/ I do not know, I would lie.

4. **Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent?**

R / Children are affected a lot, that is one of the few things that people have adapted so far, the noise of the machines, deforestation, since it appears that it is a hot zone, deforestation is even greater and it seems deserted Although the sea is near; Something very characteristic that as Salvadorans we are affected, is that people when they see a project have the hope of work and have found that by the level of study can not get it because their level of study does not apply to the requirements that the company asks and say they stay Without employment because they put many obstacles and sometimes they were won with jobs to carry the water, those are the complaints.

5. **Concerns or questions about the project:**
   A/ Honestly not for the moment

6. **Have you heard of the Duke Energy plant and the implications it has had in the area?**
   A/ No.

7. **What recommendations could you give to the project on health?**
   A / Well perhaps the fact that when it is a projecta, that all parts win, the people and those who make the project, although later it could be more polluting, more destructive, only that they must take the measures, that is if it is really making the study of environmental impact that truly adheres to the results.

8. **What are the positive and negative aspects of the project?**
   A / What I said at the beginning, a positive aspect that sounds interesting is that this is other non-polluting form, employment generation and negative aspects should be good environmental impact, the conditions of the population, because they believe or not always there are releases Of gases, then you have to see what levels that gases and how toxic and harmful they can be for the population. The health issue is vulnerable in the area is the case of water, since two years ago already put in the area where we work there were no water pipes, so many people do not consume the water because it is not of good quality is Contaminated with toxic, because the pipes are superficial, since the promoter tells me that the pipes are toxic, they do not consume it for that and those who do have problems in the urine tract which are not infections, because some prefer to consume the Well even though it is contaminated, that is why water even in that state the population has to consume it or look for other means.

9. **What areas does Agape address?**

   A / Same as the one addressed in the health unit, since the promoter of us is in the unit of Acajutla, for example we are provided in the topics of sanitation, abatizacion or vaccines, they provide we complement since there is no Doctors or health promoters, such as controls on healthy children, pregnant women, care for the elderly and all of that.

INTERVIEW HELD TO SALVADORAN RED CROSS OF ACAJUTLA

Name: Rafael Martínez

Workplace: Red Cross of Acajutla

Position: President

OBJETIVE: Find out the expectations of the key stakeholders of the municipality and the area of influence of the project: Acajutla Thermal Power Plant. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. **At present what are the most frequent diseases in the communities, cantons or hamlets that are located in the zone of influence of the project?**

   R / Here in the village the biggest disease has been bronchitis and kidney failure, which is by ammonia, caustic soda, a pile of chemicals that carries gasoline, waste is thrown to a gully by the part of the passage , This is polluting and what is left in the water floats, they throw a detergent and sank and ruin the marine fauna, then they pull out lobsters full of oil in the antennas, when to fallen ammonia the fish die and float, then the Diseases are mostly lungs and kidney failure, the cough begins with little, when the smoke comes out and is watered through the air.

2. **What is the opinion of the Red Cross on the construction of the Thermal Power Plant located in the Port of Acajutla?**

   A / is well to come, because it will benefit a lot of people is a great boom that because it will generate energy to the people and other cities. The impact they will have with the company, which will have to put the people of Acajutla is a bonus they will have with people but if it is from other people it will be something that they will put up against. Because the companies that come here the most that they put are from Acajutla.

3. **What have been similar projects to the construction of the Thermal Power Plant that have been implemented in the municipality? How have these contributed positively or negatively to the health conditions of the population in the area where they have developed?**

   R / if the plant would exist, the contamination of the land, the water that projects have protection and the pollution of the people that are around, because safety measures, I have seen, RASA, PUMA, among others, All that bring product, caustic soda, ammonia, then the main thing of this would be in these cases, because in El Salvador there is no law that regulates, they have done nothing to them, they had many people injured and they took them out of hiding And only gave them 15 days of disability.

   I already read the law that I bet the government and every company has to put a security committee and it is difficult for each company to comply because it is a broad the aspect; First they have to follow up on people's illnesses, safety at work, use of the machines, what time they will give you life and what time they will give you to fix it, maintenance, I read it because I'm going to have a committee And it is not so cool to comply.

4. **What are the disadvantages or problems that you think would manifest with the construction of the Thermal Power Station?**

   A/ The diseases, the pollution.

5. **¿Cuáles son las ventajas que se manifestarían con este proyecto, para la población de la zona de influencia?**

   A/ Generate jobs for the people of Acajutla

6. **What concerns or fears do local communities have with the existing Duke Energy plant? How serious are these? Does the municipality have a record of complaints related to this plant?**

   R / It is serious because psychologically annoying, the engines are strong then the windows, the doors, the walls, the walls crack, so even if you are asleep that noise you already have. Where the communities IVU and La Obrera are located, is far away, but then the plant will be managed with natural gas and that is volatile then it will be spread and people will feel it, those are the advantages although many people say no; Because when you dislodge or plug from the pump to the ship that oil is left and spills into the sea, they wash and just turn it to the sea, and it throws it to the shore and it stings people and they do not know, they say the sea is sick and They do not know that there are chemicals, that's why they see that all the black beaches of the bait and even

the people when it leaves is all butchy, then the gas is volatile is in the air, the water, the people cook and there it is.

7. Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent?

A / Complaints have been made, but as they say when the diamond is cut well, it is silent, deafening, and closing the eyes. Then we are not going to be given (paja) lies, because a person selling fish would throw the guts into the sea and the health came and only gave shrimp and were silent, then look where you throw the waste away that do not fall to the sea.

8. What recommendations could you give to the project on health?

A / That they take safety precautions in all cases, in equipment such as masks, gloves, helmets for workers, must have a social program to care for people. Because every month we have a credit box and we give a small social item, for medicine, soccer teams, in ASA that are surfers, another called Association of dreamers for Acajutla, we work with people of scarce resources, as widows, then We buy timber and we make them houses. So that they care about the children, follow them up, because if they give that social service of medicine and preventive that they have doctor and they make examinations to them because the people like that they examine them although the doctors do not see it again, because I arrive To the red cross a lady in great pain and lixer with a little water and forcefully we put it and at a short time was dead and everyone was fucking me, but I was not dead, we wake up because I hit him a few slaps, and She woke up all crazy, insulted us and went home. Then there are many cases of psychological illness, so you must have a doctor because the people who are working know that they have control.

INTERVIEW HELD TO DIRECTOR OF LOCAL HEALTH UNIT OF ACAJUTLA

Name: DR. Walter Martínez

Workplace: Acajulta Health Unit

Position: Director ISSS Acajutla

OBJETIVE: Find out the expectations of the key stakeholders of the municipality and the area of influence of the project: Acajutla Thermal Power Plant. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. **At present what are the most frequent diseases in the communities, cantons or hamlets that are located in the zone of influence of the project?**

A / Two things, we have the epidemiological profile, one is respiratory tract infection (this is the trend in the last two years), #2 is diarrhea, enteritis and gastroenteritis, irritable bowel and urinary tract infection is #4 and disorders ff anxiety occupies the #7 position in the causes. Throughout the country (the most frequent) diseases are those related to the respiratory airways. Here obviously we have a zone when it comes from Sonsonate that clearly sees the climate change. Here there is little insistence or calls to attention to this, it is sad to read when diseases are due to carbon and all that. But the first causes, the problem of all cities here is not vehicular traffic, but companies like Metasa that send gases and all other issues (into the environment), although now it has decreased, I do not know how each company works in terms of its level of emission of gases. However, the important thing is the level of contamination and that is what we breathe and it has increased respiratory problems. Now the gastroenteritis, is because of the poor management of water. A year ago the stream was opened and the water came out black, when you entered the bathroom and could say that it was not washed by the black crust, that is very bad, there are periods of public health control but sometimes it is difficult.

2. **What is the opinion of ISSS about the construction of the Thermal Power Station that will be located in the Port of Acajutla?**

   R / As a health institution, what we want and aspire to is a greater social development. Not only isolated economic and business (development), but also a social one, we know that everything involves risky situations and to sacrifice some things, but we agree on the balance. We can't stop developing in social terms, I see this as very good.

3. **What have been similar projects to the construction of the Thermal Power Plant that have been implemented in the municipality? How have these contributed positively or negatively to the health conditions of the population in the area where they have developed?**

A / Well, the project I know that has not been implemented is that of Termoport, which has to do with Alba, based on gas. I do not know of another project like yours. We had some like the shrimp washing company, which closed in the end, the problem was the handling of the waste. I do not know why I closed, but generally perhaps (what happened) was that maybe before we allowed the law to get companies to do inspections but (the law) corrected some terms like those that handle metals, or the use of appropriate filters, masks. We had several of those cases in San Salvador.

4. **What are the advantages that this project would bring to the population of the zone of influence?**

A / What strikes me is how you handle the risk of having an anchored vessel permanently connected to a supply that is smaller (they clarified the doubt). Sometimes you do not know and handle a bit of information and you like to talk about what you do not know, that's why I went to read information on the first gas drums in the house, they said it was a time bomb that could explode, that is now no longer true (for me). The probability that something like that would happen is so low that the benefits are more (than the risk). Probably there will not be someone who wants to make trouble and say that thing and fly the port of Acajutla.

5. **What concerns or concerns do local communities have with the existing Duke Energy plant? How serious are these? Does the municipality have a record of complaints related to this plant?**

A / Honestly in terms of health, not that we have filed something, not unless we have saved it, there is perhaps (something filed by) Public Health but not us.

6. **Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent?**

A/ No, at least associated of that type, there are none that are already and are dealt with the laws to modify them, but others have not advanced. For example, we have Izalco's sugar plant, a lot of things have not been done have been able to move, they have used technology, they have like 5 jets of water coming out, but we do not see anything at least macroscopically.

7. **While the project is still at a premature stage, is the municipality aware of the communities' opinions about it? Do they support it, are they against it or are they undecided? Do you know of any kind of concern in the communities related to the project this date?**

8. **What recommendations could you give to the project on health?**

A / I think what they are doing what the law says. Because of the little experience that I have and the things that have happened throughout history, perhaps I think that as long as the communication part keeps improving and there is more information to the population (we are good). I think as I share the disinformation is shared informing, most of us are not experts or know that area, but in the correct language we can perceive a lot of things, but also help not to interfere and if something serves to help in the right channels and correctly (we should do so).

INTERVIEW GUIDE FOR LOCAL ACTORS: CHURCHES

Name: Napoleón García

Charge: Parish Priest of Catholic Church "San Francisco de Asís"

1. **OBJECTIVE**: Know the expectations of the key players of the municipality and the area of influence of the project: Acajutla Power Plant. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

2. QUESTIONS:

1. **What is the number of parishioners in the church?**
   A / I do not have exact knowledge; maybe about 5,000 people.

2. **From which communities are the people who attend church?**
   Not only from here in the city, but also from the communities of Cobanos, Flor, Colima, Punta Remedio. Five communities in this area; Salinitas, in the area going to La
   Libertad, Miralvalle, Pabuill, Polvón, Manzano and then Sonsonate.
   Community of the Sagrada Familia in front of the new one, from there Santa Marta, El Kilo 5, are communities that we serve in this area, there we attend to all the area here and colony but not to all Acajutla because it has two
   Parishes the San Juan Maria Vietnei and San Francisco, the San Juan has already been 4 years of being founded and attends the other area, the colony of Miracles and The Bethlehem and we meet every day in the afternoons of community each week. Daily there are like 5 communities that we visit weekly, although here in Acajutla there is much particularity because since there are not many places of recreation the church is like the center.

3. **How have the installed projects in the port of Acajutla, factories or companies contributed positively or negatively to the life of the population in the area where they have been developed?**
   A/ Positively, I was here from 1989 to 1997. I was present in the first stage, at that time it was a totally different Acajutla. Economically it was better. Being a time of war most people did not travel to San Salvador, and most engineers like Cepa, Rasa, the storage companies, Fertica and all those people were from here, but after the war they started to travel and coming from other places and then people just come and go and bring nothing to the municipality.

Formerly CEPA was a lot of work now it's pretty much the same, but they give it to people who are not from Acajutla. When there was and union that was in front of the mayor's office on the opposite corner there was what they called "the call" and the different crews working in the port were called by a whistle that was heard throughout the city. According to the times the whistle rang that's how the crews that would work in CEPA were picked. Now it does not work like that, because the work has lowered; the environment was a newer topic. The local labor has gone down because formerly the contract was made in CEPA and the union did the work, now a contractor is in charge of hiring people for either gardening and all that. There is now a second hand and he looks for other sides and different interests and as there were problems with the union, contractors are afraid to hire people from the municipality then the people who come are from outside the specialized workforce and this makes the municipality not grow. Then the refinery no longer processes raw, and they bring it all elaborated so there is less qualified work, less contract of workers, although lately I have seen that CEPA has quite strong work, because formerly the places where the containers are were within CEPA, and it is another form of contract an agency does and is another second hand contractor, and this makes that transportation from San Salvador comes here when before lots of people over here had it, but they went out of business.

4. **Has the parishioner population filed a complaint or complaint to the church requesting support to solve any problems that may have been generated by these projects?**

A / I feel that this electricity generator affects because the noise is strong at night and the people who live nearby (for example in the colony Alvarado), the ones living in the industrial zone somehow that noise and gases affect them. They say that sometimes in that chimney you see a large black smoke and there hasn't been done a specialized study, but if we do, I think the environment is contaminated and this is every day and there are days that it is blacker and others lighter. The noise at night is heard more than in the day and people complained about that and that it causes vibration; for example, this comes to my room and I am located like a kilometer away. Imagine (how it is for) the people who are closer, this is an ecological impact and people live in tension.

5. **What have been the areas of intervention of the companies that are located in the municipality, for example community improvements, support to schools, support to young people or women, among others?**

A / I do not think that these companies (have done improvements or interventions). Formerly RASA collaborated with the schools, the Liceo de Acajutla. Sometimes with the church itself, they tried to offer some help through projects they gave out. Therefore, FERTICA had some projects, but lately nothing and not only to the church but to institutions and for them to give (a project/improvement out), one has to request it and sometimes it does not arrive. I feel that they would have to collaborate with the closest people because it is a great environmental impact that they generate.

6. **Have you heard about the construction of the Thermal Power Plant that will be located in the Port of Acajutla, which will emit low pollution energy? What perception do you have of this project?**

A / I think it can help in the sense of labor, as I don'r know how to develop the technology they have I cannot tell the impact it will have on people. I don't know how it will be that is why until we do not see we do not have to think because we do not know. However, if in the sense of labor they could try to make that a benefit for the municipality and one of their priorities, if all these institutions would collaborate, it would be a large municipality. But with the mayor's office, I do not know how they are with taxes. Talking to the mayor I do not know what the collaboration they give to improve the town or projects of the municipality is, but I think it is a way to be able to help and present a benefit to the place they occupy.

7. **What advantages and disadvantages do you perceive from this project, what would be its impacts for the population and for the municipality in general?**

A / As I was saying, the social issue, so that in this way they can hire people from here, because of course they look everywhere, but for them to have a priority with the workforce here (would be an advantage).

8. **What recommendations could you give to the company Energías del Pacifico so that the project takes into account the conditions of the municipality?**

A/ I think it is important that they do an environmental study, already clearly calculated, to see the quality of the air we breathe because FERTICA produces fertilizer and is a pollutant. For example RASA that made crude oil and all that, I think that doing a study of the sea would be necessary, because there is a tremendous pollution of the sea. There were no protests, neither studies nor laws because the river Sesunapan is a totally polluted river because all the black waters of Sonsonate come to and end in the sea. This not only brings pollutant of Sonsonate, but from many places, then I think they could do a natural study, because sometimes institutions are not interested.

INTERVIEW GUIDE FOR LOCAL ACTORS: EDUCATIONAL CENTERS

Name: Israel Enríquez Tapas

Place of Work: School Center Comunity Alvarado

Charge: Educational Center Director

1. OBJECTIVE: To meet the expectations of the key players of the municipality and the area of influence of the project: Thermal Power Plant of Acajutla. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

2. QUESTIONS

1. How much is the current student population of the Educational Center?

A / 260, from nursery school to ninth grade, with a fusion of kindergarten 4,5 and 6 for not having teachers (and resources).

2. From which communities are the students attending this school?

A / From all the industrial area, the Zope and the colony and others of the Obelisco.

3. How have the projects installed in the port of Acajutla, factories or companies contributed positively or negatively to the life of the population in the area where they have been developed?

A / The truth is that I have seen that the community has not been supported, because first ALBA is born with the purpose of social function but to date has not done anything just set the street that they themselves use, from there on they have done nothing and they already have 5 to 7 years of operating, at school about 2 years ago we were supported with something badly wanted but we were told that they would help us with the kitchen until they took them and nothing, they told us that when they won they would do it but they have not done it.

4. Have the students presented any kind of illnesses or other problems that could have been generated by these projects?

A / The water comes chlorinated, it is also ALBA and the children suffer from stomach pain, but that is also a problem of FERTICA. I saw (one of their) trucks and said it "transport of infectious biological waste" and those are raw material.

for the insecticides, pesticides or fertilizers they make and are key points that emanate, because sometimes there are children who feel bad smell in the wind and we go out and see that it is these people who emanate those smells. Also what ADECA does in the warehouses we do not know, but when they clean the warehouses and we are in the courtyard they put out a dark cloud of dust, although there they only keep grains, it can be the poison that they throw and that makes students dizzy, because for me a factory must be two or three miles away from the colony at least because that affects us; There was already discussion on the subject and we were told that this was given for an industrial building. The bad thing that the owner did was that he gave it to us for housing lithification so they say they are in their rights.

5. What have been the intervention areas of the companies that are located in the municipality, for example community improvements, support to schools, support to young people or women, among others?

A / The perimetral circulation of the school gave us a hand, but it left us in the middle, because in the summer the children suffer from asthma, because from both sides there is transportation from here to there. They had said that there would be employment generation for the colony; however, there is very few people who work there, others are with other companies and others prefer to seize. Although ADECA is helping with job (generation), they are affecting us with the dust because it makes us cough, (some students) get skin allergies, some are with flu, coughing, and that's why they do not come. These diseases are common very often, especially the skin allergies.

8. What recommendations could you give to the company Energías del Pacifico so that the project takes into account the conditions of the municipality?

R / Regarding the mayor's office, this one has not supported the school, because we have problems with the garbage. They do collect ALBA's garbage but as in this community the garbage truck does not pass they do not collect it from us. We don't know if this company can give us the tax for that, but (they could) do it with the communities themselves, because we noticed that they were asked for reports between March and April when we had the intramural activities at school, but as the mayor politicizes it, then to Lisandro's school Which is larger than the one behind the mayor's office, says the little girl Sandra, who, by section, gave them sports uniforms and here the school is scarce and families have no work to train them, they did not respond, they did not say Yes or no, then we ask for simple things they can cover because they help others too and this we have people on the council, and notice that most people supported the front, so I feel that Ne very abandoned to the community and they are votes that add to him, then there for the magisterial for the church they have pretty nice even with swing, we need black water, and ALBA say to pave the streets when there are sewage but not seen Beginning of the projects, although some streets are still in bad states, here one gets into the mud. So the contribution should be with the institution or the school, I do not know if part of your company could help us with the construction of a basketball court so that the children are entertained so we have not put any more trees there if someone ever did He listens to us, although the wall is also more necessary for us to have more security.

INTERVIEW GUIDE FOR LOCAL ACTORS: EDUCATIONAL CENTERS: SCHOOLS OF ACAJUTLA

Name: María Elvira Saravia Morales

Work Place: School

Position: School Principal

1. OBJECTIVE: Be informed of the expectations of the key players of the municipality and the area of influence of the project: Acajutla Power Plant. This information will serve as a qualitative input for the preparation of the Final Report of the identified impacts and the creation of measures of social and environmental compensation.

2. QUESTIONS

1. **How much is the current student population of the Educational Center? R/**
275 students.

2. **From which communities are the students from?**
R/ There are many children who have half scholarships, these were half funded by raza, and some workers of raza had full scholarship. Since now the workers do not exist, these children were left with a scholarship, so with our low income we must pay them. They take us as a private company, and although we are a nonprofit, taxes are high, we paid $ 185.50 of water and I checked the meter and we should pay only $ 12. 00 for the water that is spent, but as that private company the Superintendence assigned us a fixed quota, the energy is super high sometimes the bill is as high as a thousand dollars, and others times it is of about five hundre. It is a quota that is not understood because for example, in December the school is always empty and the bill comes just as high, because they consider us as a private company for profit and we are nonprofit, we help children with small scholarships and small things. We also a migration problem all year, at the beginning 275 enter and we end up with 250 or 248, Because almost every day they make me go, they are in the USA. And so, if this company could help us with about five thousand that would be of great help, otherwise I say that there would not be so much noise because it is in the sea.

3. **Have the students presented some type of illness or other problems that could have been generated by these projects?**

R/ No, I would say no, what has been given most is because of the mosquitoes but that is not because of the company but the environment, nothing related to chemical emanations.

4. What have been the areas of intervention of the companies that are located in the municipality, for example community improvements, support to schools, support to young people or women, among others?

R/ We are 50 years,1964, the engineers of RASA, because there were no prepared people of the country did not have the gringos to study, then the children who came to school were the engineers children, only them, were distinguished, then took over the mothers who are in charge of the San Antonio school, then in 1969 they had an accident, they were the gentlemen of RASA through Father Joaquín Ramos Jesuit, he worked with faith and joy, then the lords asked him and they went with the Eucharistic and told them If they could send sisters to continue with education and then they were told that they would help if the school opened to all the people, then in 1971 the school was opened for the whole society, because this school had it as high rank , When they opened they began to come a few times sometimes scholarships for RASA, they paid teachers, energy, everything else. The sisters administered in 1976, the mothers said they wanted the school to be left to them, they left it to an association of mothers, but they could do it, so the schooll were back to the sisters, with the condition that they would help us; They helped with 75% even though it is small there are a lot of taxes. I have not heard anything about a company that has helped, I only know because I have been asking, I came in 2010 and there has been an up and down of students depending on the economic situation, from Cepa came several children because they had work and paid well, then when that decreased they took the children, so we depend on the industrial zone, now that the parents earn little they cab no longer send their children to school. Raza no longer exists, now is puma and is its organization is not very well understood, it is a company that we don't know in depth; Of the other companies that I have asked say they help FUNDA-ACAJUTLA, they tell me that they already have all the requests, they analyze which one needs the most, and because they see we are private they do not help us. The Duke Energy of all those companies meets and put a sum of money to FUNDA - ACAJUTLA for helping schools, with roofs and things for the children, but they only help public schools.

5. Have you heard about the construction of the Thermal Power Plant that will be located in the Port of Acajutla, which will emit low pollution energy? What perception do you have of this project?

R/ It is a positive company because of the fact that they will give work to almost a thousand people and the people are in need of work, and what I feel and feel the country is the insecurity, then you leave and do not know if only God returned with one, then There are many companies that because of the problem of rent, they leave. To us, by the grace of God, they have not come to bother and ask for rent. I ask God to take care of us. All the parents that have business, although they are very small, they all have been asked for rent by gang members. In some

cases, people have told us that if there is no better solution than leaving the country. Don Mario who had a lab left with his little girl because he was threatened. This is the biggest problem we have: insecurity.

6. What advantages and disadvantages do you perceive from this project, what would be its impacts for the population and for the municipality in general?

R/ As for the construction of the project, it does not affect the noise because when they were building the pier it was bigger and they had to throw those blocks from above and it made all Acajutla tremble, I do not know if with the construction of this project is to build the inside like a type of swimming pool where they will put the shipment, in regards to the environment I said, I do not know if they will build like a tower, because where its close and because we are a school I do not know if it affects the gas emissions, the noise, since we are the population that is closer to the project, because this will do it inside the sea, then I do not know if this will affect us with the noise or emanations of gas because it is natural gas. Until now we are calm no company makes so much noise that affect us in degrees, emanations of gases and chemicals I do not know because there are many people out there who have kidney disease, I do not know if its because of water but the chemicals always affect, right now people have not complained about anything, that's why we hope it does not affect us, because if there are companies with a greater source of pollution like fertica, they have years of being here and people do not see that; So, I think that if there is no noise would be good and that they try to minimize the emanations of gases also seems good to me. Also, talking about helo it important because we want to put the baccalaureate next year, so we want an economic aid because this school was founded and donated By RASA which no longer exists, there are new owners and we do not know if they are going to help us because RAZA helped us with a 50% and another with what the parents pay, so a help from Energia del Pacifico would be very welcomed by us.

7. What recommendations could you give to the company Energías del Pacifico so that the project takes into account the conditions of the municipality?

R/ Be careful with the gas emanations not only for the student population, but for the entire population because that is why there are engineers who see all those problems. In the social part I recommend that they give a job in a 100% to people and to be stable because we depend on these people, because the school we have in San Vicente was falling when the government gave the package, all the students left for the population, when the extension of the university opened up a bunch of graduates who went to live there and the school rised up agaian because all their children were going to school, so there are things that help, they could attract more children to school. In the social ascpect, increase the work opportunities because because people are worried wanting to leave the country, if more working opportunities existed, gangsters wouldnt exist. People is hardworking, but I imagine they are going to be selected.

There are many who are prepared but since they do not find work, they leave the

country or to other side of the country, there are many engineers in different categories, so there are some in the UCA, others in the UES, etc.
Because of that, we want to open the general baccalaureate which gives them the entrance to the national university, to give opportunities to young people who have values. When they leave the school they resent it because here they have security, we take them to chapel and all that, they feel all the movement, and in consequence they do not feel well in other schools. This is the only Catholic school in Acajutla, there is another one of laymen but it is small, in contrast we have bigger facilities and have air safety, etc. I know the ninth grade student groups that go to Sonsonate and are now studying in the university, in different schools the children are doing well and we have tried to improve the teaching and even other schools have congratulated us,we have English teachers who teach from 4 years to 6th grade to improve the student quality of the school, the same for computation beginning from four years, and so on.
Academically, they must boost tourism and English because there is a gossip that a boardwalk that will be done, so I dream of doing a baccalaureate of English and tourism. We have not done it because of the limited space, but what we want is to show quality for the people coming from outside to work to see that their children can work here too because there is good quality.

INTERVIEW MADE TO THE PRESIDENT OF THE COOPERATIVE OF REDEROS AND LANGOSTEROS

Name: José Antonio Cordero.

Work Place: Cooperativa

Position: President of the Cooperative

OBJECTIVE: Be informed of the expectations of the key players of the municipality and the area of influence of the project: Acajutla Thermal Power Station. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. **How many members does the cooperative count with?**
   R/ 35 members.

2. **What have been the similar projects to the construction of the Thermal Power Plant that have been implemented in the municipality? In what way have these contributed positively or negatively to the life of the population in the area where they have developed?**

   R/ Maybe there have been more problems than benefits, because with the construction of ALBA pipelines, which is on the other side of the pier, no benefits were identified as they were built and we are with the problem when there are spills they carry a liquid called bon, which has a part that weighs down and a float above, they stretch it doesnt spill, they put a boat that throws liquid that says that it dissolves it, but it is not true, the oil does not dissolve, what it does is that it makes it weight more and sink, I'm telling you because when we go fishing, we have already developed a sixth sense to fish, just like Napoleon fishermen and say where we can go fishing, a little lobster to survive, ALBA has already told us, but the need is big too. When we get in, I've walked pieces that look like rock and sometimes breaks and there is something that looks black and shine and is not a seabed stone because I have already checked that it is the same oil that becomes solid; Sometimes it goes out and I have said that when it comes out I will keep it and show it, because the oil may sink but keeps on giving off material.

Near Los Cobanos they sank a boat and we were doing well, we had a little fishing and I told Jorge that we should hit the coast guard so that they could see the fish that they were going to damage, that this could be beneficial for tourism; But they told us not to worry that in two months we were going to fish more and a year passed and the fishing was no longer the same because there are residues left; The same where they built ALBAS pipelines, before we caught lobster and now we don't. Equally for the area where they want to build the pier, there is almost no fishing, it is protected by CEPA, they can give the permission because they do not see how this harms us, they are only going to see what the benefits they are going to get. This affects our system, now I have to go all the way to Los Cobanos to bring 10 pounds of lobster, from which I make $ 40 dollars (I sell for $ 4 dollars a pound), from that I spent $ 18 to $ 16 gasoline, $ 4 backyard $ 4 oil, That I pay the people who fix my nets, so in the end I do not earn anything, maybe only $ 5 to ten dollars and thatsall. Now I have better stayed where they are going to build and I have made 15 pounds, and have gained a little more, because as in the cooperative we have debts and obstacles, sometimes there are donations from Japan, but we have not achieved any of those projects.

3. **What disadvantages or problems do you identify that could be generated with the creation of the Thermal Power Plant that affect the cooperative?**

With what they are constructing we will have a time bomb on our backs, because they build that pier, pass the pipeline, we will almost have to withdraw from fishing, because it is bad, from that area if from where I brought a little lobster and fish, it will be double expense because I would have to go to more places; meaning more disadvantages. My companion, who I did not understand what he said the other day, said it because he has work is the secretary of CEPA, got into politics and I told him that I have never seen a government care about us. In the construction of ALBA they said that they would build only plant, I put papers but nobody from the pier was contracted, not even for the construction. I know that they occupied pipes Ricardo's son has carried out a study and he has gained a little but it is not guarantee because tomorrow they will look for others, there is a company SOLOMAR of maritime operations, he is already applying and when the process begins and the preparation of the land where the pipe will go, I don't know whether it will be outside or burried. We will not be able to stop it, but it would be nice for them to take us into account, I apply with the Colombians and I did a couple of months with them, the old Marcelo was in charge, I work from 7 to 4 and sometimes I had to wait for the captain Of the boat until 10 or 9 at night they payed me good overtime because they pay well, but he owed me 15 extra hours and took my workbecause of that, so to date he gives work to other companies but me.

4. **What are the advantages that would manifest with this project, for the population of the zone of influence and for the cooperative?**
   R/ May be because other people may have advantages, because there may be people who apply to the company and they will get a job, because they say that when the project is approved from 2015 to 2018 many people may obtain a job; But we will have no advantages, perhaps if they would take us into account

and tell us to put our boats to achieve benefits for all, because in ALBA sometimes we worked until night, we could all rotate and all receive benefit, because SOLOMAR is a private company that do not hire us.

That's why I tell you that we were surprised that it was the first company that has taken us into account and they ask us in what affect us because there are other companies that have not cared at all, that's why we thank you.

5. Would there be any opposition from the population or from any local actors to the project?

R/ No, because in the end it does not work, but we would like to have a benefit for ourselves. It is a lie that we can stop it, we will have disadvantages, but we can not do anything because it is something big and the ministry of economy knows that this will generate great income for the country. Although we oppose, we can not stop them.

6. What recommendations could you provide for the implementation of the project?

R/ I do not know why they looked for this area, I think: why did they didn't look for another location, because believe or not this boat will be a time bomb, why did they did not put it next to the almond trees, that is what we recommend, because we think that it should further apart. This can be due to the proportion of the land of CEPA, we see that on one side it receives the hit from the waves and we see that it will be permanent - If it would come in bad times, that will benefit them.

The company could compensate in the economic part, with more works for the population and that is why in these cases several people from communities with San Rafael and from the city hall down they are seeing the benefit they will have. The mister of the citadel spoke that the impact was not very strong with the chemicals, he sought the advantages and disadvantages of chemicals, for example DUKE Energy has only 6 boilers and it will have more, then these gases can affect us more; I was talking with my wife and told her that we can have advantages but also disadvantages, although I said that I hope that later on I can sell this house and go further because this boat will be a time bomb, in the end chemicals will always affect us. Looking at the case of San Luis Talpa, what they did, now that I am already on that course, I advise my son to better study because fishing is only getting worse.

INTERVIEW MADE TO THE PRESIDENT OF THE COOPERATIVE OF FISHERMEN OF ACAJUTLA- ACOOPAT

Name: Ricardo Napoleón Jovel

Work Place: ACOOPAT

Position: President of ACOOPAT

OBJECTIVE: Be informed of the expectations of the key players of the municipality and the area of influence of the project: Acajutla Thermal Power Station. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

3. QUESTIONS

1. **How many members does the cooperative count with?**

   R/ 50 members (partners), we are all fishermen inhabitants of Acajutla.

2. **What have been the similar projects to the construction of the Thermal Power Plant that have been implemented in the municipality? In what way have these contributed positively or negatively to the life of the population in the area where they have developed?**

   R/ They have affected us because of the pollution of the sea now we have to go more than 2 miles to work, there was no need since on the coast we had production. Its not the fishing boats, but all the companies that have come to give Acajutla have affected because they send their toxic waste to the sea and this causes the marine fauna to die. Before I left early and I only fished with a net, but now everything is dead there is no production, even the stones have lost their color. Because of the construction of the pier now everything is dead, there is no production; By CEPA and where you will build there are gullies that lead to the sea were rich in construction and now because of the pollution it is all dead. Although I admire that
   You have taken into account the opinion of the population, because I have seen how over time this has brought environmental and economic impacts, I have more than 40 years of living here, soon there will be no more areas where to fish, Because what ALBA did when I came, I was part of that, they gave me a

chainsaw to further extend their place, but the environment asked for some Cuban houses where the lobsters could live but they made them out and I do not know if it was because of ignorance but the key was to make them out so they could live there, but for example because of oil spills generated a great negative impact, it caused fish like chimpanzees to taste like gasoline, because when there are spills they consume oil and when one cooks thats how they taste and consequently you can not eat it, we have to throw a lot of them when this happens. Likewise, when the DIUC engines work, they make all the houses tremble, I repeat again they have been more negative impacts according to my experience although MARN could say no.

3. **What disadvantages or problems do you identify that could be generated with the creation of the Thermal Power Plant that affect the cooperative?**

   R/ As a fishing sector, the problem would be that the waste generated by the company when washing their boilers would pass to the sea, it always ends up falling there, hence the fact of the terminal has no problem to the contrary; But the pier will cause problems because where they do the pier we live far, because when you wash the boilers will pollute the sea and then we where we go to fish, then it will be a prohibited area where we will not be able to fish although we might get in, the cameras will see us and they are going to take us out, we were told that the duke will remain there then we will move away from the risks, this will bring us economic impacts because we will have to go further to fish.

4. **What are the advantages that would manifest with this project, for the population of the zone of influence and for the cooperative?**

   R/ For the fishing sector none, but we have to be realistic that the construction of the plant will be beneficial to the population of Acajutla and national level will be beneficial because the energy prices could reduce.I pay enough energy and I have nothing, so I think that the program is beneficial , as I repeat I consider it has been something historical and good that we have taken into account, however, I think that the impact of the Thermal Power Plant could be big.

5. **Would there be any opposition from the population or from any local actors to the project?**

   R/ No, none.

6. **What would be the support that COOPERATIVA could provide to the company for the execution of this project?**

   R/ Well, we would support them in any kind of information that they want, and if they want to do inspections we can take them without any commitment. What I'm looking for is for the cooperative to move forward, so we are willing to support them in whatever we can.

7. **What recommendations could you provide for the implementation of the project?**

   R/ I have been a person that have fought through the orientations of the government so that as a cooperative we are recognized, this has been hard, so I think it would be good for the company to bring social programs for young people to free them from violence. The easist thing to do is to join the gangs to steal and kill, although Acajutla is considered as a municipality free from poverty the reality is another because when the person is not in the shoes of the other does not know what really happens here, I worked 23 years in CEPA and promised never to go back there, I have seen that there are young people that I have carried them since babies that are now gang members because they have had no support, they have joined gangs groups. Because here there are many children who tell us to fill our water bottle in the hope that one gives them a fish or a dollar.

   Because ALBA oils, although they speak of social responsibility, are only programs but they don't known them or execute them, because at most they only have 10 people working. They celebrate Mother's Day in Colonia Alvarado, that's all they do. I asked them for a lot of help because the manager they have is a friend of mine and I was pushing them to give me a bomb but they told me that the boat sank in the end I got it but it was really hard, ALBA is the only thing that does is that it has government programs but not social projects to young people because there are children that are really sad to see. So I think that even if the plant is built, social programs must always be present, it would be nice to provide the space where children are entertained and no longer wanting to go steal. RAZA in their golden age gave us soccer uniforms for all the schools and it was nice to go to those tournaments; For example ALBACASA, CEPA, SAGRISA have not brought anything to the community. We also can not access the baccalaureate study so we often fail to opt for a job in the companies, for example Alex Segovia said that there couldn't be in the beaches' big hotels because we do not have qualified people, young people think that studying Mechanics or, tourism is not going to be useful. So the programs are good to generate for the young people to want because they must exist but also must be executed for all those young people who want to train. The construction will always be done, nobody is here to fight and it will not stop, as a cooperative we have 40 Years of existence and about to collapse as well.

INTERVIEW MADE TO COMMUNAL LEADER, BOARD OF DIRECTORS INDUSTRIAL AREA

Name: Nelson David

Board of Directos

Position: President of the Board of Directors

OBJECTIVE: Be informed of the expectations of the key players of the municipality and the area of influence of the project: Acajutla Thermal Power Station. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. **What is the opinion of the community in general about the construction of the Thermal Power Plant located in the Port of Acajutla?**

R/ The first thing that strikes people in my area is that there will be a new source of employment and that comes to save the poverty of my people and people are happy because they see a serious investment of this size they know is a big investment; I already explained to them how the thing is and as community president I am happy and trusting in the Lord that they will give employment to many boys who are already parents and need to work, only the fact that they will take us into account would be of great help. On that side there are very poor people who need to work.

2. **What benefits would the communities in the area bring to the development of this project? What are the social and economic expectations of the communities with the construction of the Thermal Power Station?**

R/ Another thing I am struggling with is that with the mayor who has promised me that is fighting on whether it remains or is not, it is the drinking water, people need it because water is given to us by Duke Energy but in a very small quantity. There are big lines that people do to fill a pitcher, there are people coming from the center of the city, as well as kilo 5. There are times that water is removed whenever they want, so I had a meeting with them to explain and tell them to

help us and to charge us a fee but they have not responded, we need them to do a well for us to distribute water throughout the community, which is divided into 60 families and this would be a blessing to have water because in the summer the wells dry. We have a small river that passes nearby, but Duke Energy is building a wall where it passes so women can no longer go wash there, because it affects them, people have agreed to pay a fee, as well as in colonia Alvarado that is close to ALBA, there is a well that distributes to the whole colony, so we agree to change to any company that wants to help us, and that's what I've been told to tell them and I hope and you guys want to help us. On the other hand to what is the government, I am sympathetic to the FMLN, we are in project of the writings, there are several people who already have it because we have seen how the industry has been growing since before, so I am in those two projects And I hope that now I can fulfill them, at least one.

3. **Do you consider that some level of development would be generated in the communities involved from the project implementation?**

R/ Yes, that would be a lot, I would benefit because I have a restaurant, I have one for by CEPA and when there is a project like this, it helps us because we all eat and there are several people who are going to leave food, then various people come out benefited, so when I do well I help other people, I share.

4. **What are the disadvantages you perceive could result in the execution of the Thermal Power Plant project for the cantons, caseríos and communities that would bring with the creation of the Thermal Power Plant?**

R/ In disadvantages, as we are the community that is in the industrial zone, it would be the chemicals that sometimes feel the bad smell, but of course we are already familarized and we do not realize that and we are paying attention to other people who do not like it that would want to go, because people are interested in the project, because as I told you at that time and I have told them not to be so negative. People tell me to speak well, because it will be a great benefit and so it is, and because of me it has the endorsement and support, that way I can speak with other directors and tell them to support and give any firm. I am Grateful that they take me into account.

5. **What are the advantages you perceive could result in the execution of the Thermal Power Plant project for the cantons, caserios and communities that would bring with it the creation of the Thermal Power Station?**

R/ Employement in the area.

6. Do you consider that there would be some level of opposition to the project by some local actor or local population? How would it manifest? Would it affect the development of the project?

R/ No, as I was saying, there have been a lot of companies that have done their projects and is the first time they take me into account as much as me and other, telling me the story as they say the benefit and all that of the project and until now there has been no manifestation.

7. What would be the support of the boards and leaders of the area in the execution of the project?

R/ Support for me they have it in a 100% sure in what you think that what we can do we will, and I have my facebook page, so from there I can work saying that it is a blessing to have the project come here.

8. What concerns or concerns do local communities have with the existing Duke Energy plant? How serious are these?

R/ I The complaints I have and the people who live nearby is with respect to the motors that buzz too much and there are people who can not stand their ears, we didn't consider all that was going to happen to the people that live there and they didn't bother to inform us and did not give us options, the people who live there are very poor and have had to move, so what I say that is that it is not difficult to break a little hole there and get some water where people can go to and take it so that people don't need to go so far to drink water, but they did not want to do even that. I did not want to take bad actions, but where I live a small river passes and what they have done is throw oil so that people can no longer wash, the fish and shrimp that are there die, so I ask for help because people are willing to pay do not want it for free, I bought the pipe and we were left with nothing. We were only deluded, now it is stored, and they are saying that they will make a wall and people will not be able to see anything. They want to close it so they can throw the oil freely and that people can not wash there anymore, I could go to the MARN but I don't want to do it. But we do need the water, there by Duke Energy passes a river that could supply all Acajutla. But with other companies we had no problems, just asking FERTICA not to throw the oil, but apart from that, they celebrate us in December with a children's party and with ALBA celebrating Mother's Day, because of this I feel good with these companies because they help the children and they are very happy.

9. Have there been any concerns or complaints in the past related to the operations of the Pier? What have they been? How frequent?

The complaints are related to what I just mentioned, the noise and the vibrations. In addition, Duke Energy does not want to give us water for family consumption. Those would be the complaints.

10. Can you tell us what associations, communities, interest groups, NGO's we need to address about the project.

R/ I saw that in Col. Alvarado I did not see anyone present in the meeting and then they should take it into account, but since it is very far away, they have not taken it into account but I think it would be good, but they are not quite right, but in the directive in what is the ALBA oil when wanting to work. I ask people what they wanted they said the drinking water and they fulfilled it and they also pay the bus tickets, so we are fine with those companies.

11. What recommendations could you provide for the construction of the project?

R/ As a community, I want to have a communal house to be able to hold meetings and trainings with the people and put into practice everything I have learned as a union leader and also to act on that area and the rest because here we lack projects, but according to what I see the town will have nice incomes so they should take action with the young people, fix the court and make it as a sports center, then winning and executed the project hopefully they will invest well for the young people to spend entertaining with soccer tournaments and all that to do championships between Acajutla, it would be nice.

INTERVIEW MADE TO COMMUNITY LEADER, BOARD OF DIRECTORS, LA PLAYA

Name: Marlene Canjura

Board of Directos

Position: President of the Board of Directos

OBJECTIVE: Be informed of the expectations of the key players of the municipality and the area of influence of the project: Acajutla Thermal Power Station. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. **What is the opinion of the community in general about the construction of the Thermal Power Plant that will be located in the Port of Acajutla?**

R/ In the assembly we gave them the information and expectations are that there may be an improvement in what is the community, but they remain with doubt because it was the same with ALBA company, there were expectations that there would be work for young people and help but until today this has not been, several requests have been sent to help us but these have not been corresponded, so fue to previous experience, it is thought that with this company the same will happen. We went to request work ALBA told us that yes but they asked for many requirements and because there is no place where young people can train, they had to bring people from outside.

2. **What benefits would the communities in the area bring to the development of this project? What are the social and economic expectations of the communities with the construction of the Thermal Power Station?**

R/ Perhaps it would be social works that could be done due to the purposes of the company and we hope that they support us to the development of the community, since this one is due to the cooperatives and companies for the development and help of the community. The town hall also helps but it is not enough, and not all companies support.

3. What are the disadvantages you perceive could result in the execution of the Thermal Power Plant project for the cantons, caseríos and communities that would bring with it the creation of the Thermal Power Plant?

R/ Disadvantages we do not see many, just the lack of support with young people, although we were looking that there are men who are dedicated to ostriate and they would be affected because they will put limits to where they can get, ALBA did the same, given that their company will get near the Almond tree, that would be the only disadvantages; Otherwise we believe that it brings advantages and support to people of scarce recourse.

4. What are the advantages you perceive could result in the execution of the Thermal Power Plant project for the cantons, caserios and communities that would bring with it the creation of the Thermal Power Station?

R/ The improvement both economic and social because the coming of the company is going to cause a higher bet on tourism, because people will focus in coming even if it only means to take a quick look and while that happens people could put some stores or something and this could be beneficial.

5. Do you consider that there would be some level of opposition to the project by some local actor or local population? How would it manifest? Would it affect the development of the project?

R/ I do not see it that way, because what people want is for you to bet on development, so I do not think people oppose it.

6. What would be the support of the boards and leaders of the area in the execution of the project?

R/ If you require any important information we are at your disposal to provide it.

7. What concerns or concerns do local communities have with existing plants? How serious are these?

R/ Until now there have not been problems, but it happened that when the government of Ms. Isabel came and said that they were going to open jobs and it was not only like that, it was just political, then it is believed that the same thing will happen, but asides from that, nothing.

8. Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent?

R/ Only the company that is replacing RASA, the pollutionis a problem because they emit a lot of smoke and that affects the health of the people who live around the company, another one is the waste coming from restaurants because it all thrown to the sea, just like the oil spill that has been happened twice.

9. Can you tell us what associations, communities, interest groups, NGO's we need to address about the project.

R/ As they did not go to the meeting, you could take into account captaincy, in the house of the culture Celina could be contacted, who is the one in charge, because they support enough and could give you information, same for civil protection.

10. What recommendations could you provide for the construction of the project?

R/ Firstly, the company, when giving the steps, should come to the community to provide the safety standards that they are going to impose, because other companies have not done so, instead they only set limits. We also ask that you to help the young people of the community with work, since we are 5 communities at high risk, first for crime and second because of environmental vulnerability, since after only 2 hours of rain we have to evacuate, we are all of limited resources and single mothers, men who are engaged in fishing and all need help. When it comes to giving jobs do not ask for so many requirements because young people, when they form their homes stop studying and can no longer access these jobs, so they are always given to other people coming from outside.

INTERVIEW MADE TO A COMMON LEADER, BOARD OF DIRECTORS EL BARQUITO

Name: **Silvia Estela Henríquez**

Board of Directors El Barquito

Position: President of the Board of Directors

OBJECTIVE: Be informed of the expectations of the key players of the municipality and the area of influence of the project: Acajutla Thermal Power Station. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. **What is the opinion of the community in general about the construction of the Thermal Power Plant that will be located in the Port of Acajutla?**

R/ I have spoken with several people, not with all of then but there are several opinions some are in agreement and others are not, they say that in soil there can not be many disadvanages, but at water level there can, since the most affected will be the fishermen. Many people see it well that they take our opinion as citizens into account, since the ALBA only came and settled without asking opinion, the important thing is that they have taken into account the opinion of the citizens because there is a time bomb there, because as you told me that there will be a permanent boat and the fishermen will be removed from there, because there may be a tsunami although this is never happens, and we will not know what we to do in that case, but I already told them that they should know what steps to take, but they tell me to look at those tanks because they are found to be risky and there will be others. In addition they think that it is beneficial because they generate work, and that pros and cons will always exist and this will exist until it is done, because now it is only a proposal and then we will see if it really happens.

2. **What are the disadvantages you perceive could result in the execution of the Thermal Power Plant project for the cantons, caseríos and communities that would bring with it the creation of the Thermal Power Plant?**

R/ The benefits are the generation of jobs, and decrease in the cost of energy, because one as a poor person is always looking for that, and first God it will happen like that. I could recommend opening up more employment opportunities for fishermen because where they fish lobsters is where it is going to be built, so they will not be able to do so because of the risks that would lead to that area and also because of the prohibitions, I believe that jobs should be created according to the population of the municipality given that these people are very hardworking, they can not present the requirements that companies need to offer them as recommendations; Taking into account that if they know that the project will bring benefits it will be better seen, so they also see that they are prioritized.

The social would be the generation of employment and that supposedly the economic reduction in the cost of energy, it will be cheaper because I do not have a refrigerator, television and iron and pay $ 27 dollars and iron once a time and it sums up to $42 dollars. Recently I went to complain and the woman was very mean, telling me that they were not to blame that we didn't have money, so I got angry and answer, but someone saw me and I took me to another office. Someone came to check and only that month came from $18 dollars but the next came again with $37 dollar, so the only way is just to pay and see how you pay as well. So hopefully energy will be cheaper.

3. **What are the disadvantages you perceive could result in the execution of the Thermal Power Plant project for the cantons, caseríos and communities that would bring with it the creation of the Thermal Power Plant?**

R/ I commented that I hope and it doesn't happen like San Luis Talpa that after they did the project the people got sick and now they are dying of renal failure, I hope and the thermal does not generate greater consequences in the health level. I was telling that Napo; I imagine that maybe it can bring some impact or disadvantage to health, because right now you have not heard anything of that, but we do not know how later on this company could affect. Another disadvantage could be that planting such as maize, beans, potatoes can be affected equally by the chemicals that the thermal can generate in the soil, as well as the water could be contaminated and there are people who would get sick because they drink water from the well and if Is contaminated it could affect, because one does not know the chemicals that are there so I think they could affect.

4. **What are the advantages you perceive could result in the execution of the Thermal Power Plant project for the cantons, caserios and communities that would bring with it the creation of the Thermal Power Station?**

R/ The advantages would be the generation of jobs and reduction of the cost of energy.

5. **Do you consider that there would be some level of opposition to the project by some local actor or local population? How would it manifest? Would it affect the development of the project?**

R/ No because we can not do anything, high authorities already gave permission, because for example in Guatemala when they wanted to put the dollar all the people showed themselves, we could do the same, but we should not because we would not like to see ourselves involved, although people have been pleased that their opinions have been taken into account, because as I repeat ALBA did the opposite, plus we can not expose ourselves to being put to jail. Because they asked me if you guys have anything to do with Petro Caribe, then she told me that it would be more dangerous for one, but either way I commented that we were not told about that, and also told them that I thought you would be 80% Salvadorans and the rest foreigners, but as you say you're not.

But I think there would not be any opposition because we are already aware of what they will do because although we can arm ourselves and say no and no and no, it will not be good because many prisoners are in jail for that, neither way we would not do it because at least we are informed, we are not even guerrillas..

6. **What would be the support of the boards and leaders of the area in the execution of the project?**

R/ Support them in attending to the meetings, give them our opinion on how unemployment affects the community, to take it into account, because as I say it again, here there are people who do not have a job and hopefully as you have told us you will take us into account. I have already been told that these are lies, although as I repeat people have been pleased to be taken into account in the execution of the project, since many other companies have only come and done. But because we have been informed, we are aware of the impact it can generate. So they have our support.

7. **What concerns or concerns do local communities have with existing plants? How serious are these?**

R/ As I said earlier, we have never been asked permission. When we realized, ALBA had already settled here, they didn't say anything and have not done anything because there is always unemployment. The same with Duke Energy, I consider that All those factories are a time bomb because at any moment we could be affected because of some damage in those machines or accidents that occur, because as they generate us jobs because they do even if they pay little, they can also affect health and Environmental because even though they have given us work I also think that they should have sought a place farther away from the people because everything they throw goes to the sea and it is affected in the fishing of workers, because now they have to go further and spend more gasoline. I have noticed that in other countries there are no such things around the project. In terms of health, there are workers

Who are suffering that the liver is becoming small because of exposure to these chemicals, because there is nothing that they take into account for security and all that, they only give them suites but that does not protect them at all.

8. Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent?

R/ The difficulty of the fishermen in their work, because the companies do not have exit of sewage these arrive at the sea, contaminating it so that the fishermen do not find fishes near and they have to go further to find product, spending more in gasoline, which affects them economically. At the health level some people suffer from diseases due to exposure to the chemicals generated by companies, so I consider that they must take into account the protection of them and ensure them in the ISSS so that in some accident they know where to go and / Or placing doctors in the company that can serve them. I think all this should be checked in case anything happens because in companies there is no one to take care of them, no emergency kits or anything, because if they want a good worker they should treat them well.

9. Can you tell us what associations, communities, interest groups, NGO's we need to address about the project.

R/ With the schools with the older children to inform them about the project so that they realize what is going to happen, because there are several schools here, for example the Lisandro, the San Luis, and they could also collaborate with the school by constructing a wall for the protection of children and their safety as it is now very dangerous. They should also approach health units and FUNDA-ACAJUTLA. Because once they help the population, they will respond. Only by giving them work they are going to collaborate, providing support to the elderly, and take into account what other people do not asking for as many requirements as insurance, AFP. We've never had any of that, so we do not take it into account.

10. What recommendations could you provide for the construction of the project?

R/ That everything is legal and that they fulfill what they have promised, that prioritize in the safety of the workers always looking for its benefits and protection.

INTERVIEW MADE TO COMMUNAL LEADER, ACAXUAL BOARD OF DIRECTORS

Name: Omar De la O

Board of Directors

ACAXUAL

Position: Vice-President of the Board of Directors

OBJECTIVE: Be informed of the expectations of the key players of the municipality and the area of influence of the project: Acajutla Thermal Power Station. This information will serve as a qualitative input for the preparation of the Final Report of identified impacts and the creation of social and environmental compensation measures.

QUESTIONS

1. **What is the opinion of the community in general about the construction of the Thermal Power Plant that will be located in the Port of Acajutla?**

A/ The community is happy because of the investment that is being made in Acajutla with the execution of the project, but it is equally worried because we made a comment that there would be some wells for the cooling zone of the company, so the concern is water because we are running out of reserves, that is why we want to implement measures in which the aquifers are protected from any pollution.

2. **What are the disadvantages you perceive could result in the execution of the Thermal Power Plant project for the cantons, caseríos and communities that would bring with it the creation of the Thermal Power Plant?**

A/ In economic terms the generation of employment and in the social, as we already explained, you have a social responsibility approach, which we have seen well, so we expect the company to actually comply with all that has been talked about and as the years pass by, not to forget all the meetings and agreements that are now being made.

3. **What are the disadvantages you perceive could result in the execution of the Thermal Power Plant project for the cantons, caseríos and communities that would bring with it the creation of the Thermal Power Plant?**

R/ The creation of new factories, although it was explained that pollution is less, it always carries risks in the contamination of the environment and water resources, that is what we see that this could lead us to; In another sense not much, but we do consider pollution. Likewise, the fishing sector will be harmed by the creation of the pier, as they explained they will no longer be allowed to fish there, so to protect them it would be good to implement fish farms.

4. **What are the advantages you perceive could result in the execution of the Thermal Power Plant project for the cantons, caserios and communities that would bring with it the creation of the Thermal Power Station?**

R/ The generation of jobs and the social responsibility of the company.

5. **Do you consider that there would be some level of opposition to the project by some local actor or local population? How would it manifest? Would it affect the development of the project?**

R/ There are always oppositions in the creation of new companies, for example here we already have a little opposition from the artisanal fishing sector, that would be it, now if everything that we have been told is not implemented, the serious opposition would be to avoid pollution in what is the Port of Acajutla, but I do not think they oppose it, but it would affect the respect of the agreements.

6. **What would be the support of the boards and leaders of the area in the execution of the project?**

R/ It would be something that you will have to tell us and we will have to answer if we can or not. For example support in the attendance of meetings and workshops given.

7. **What concerns or concerns do local communities have with existing plants? How serious are these?**

R/ If there have been problems with smoke emanating chimneys and pollution, now that they have been solved is a complete lie, the communities closest to them have been disturbed by the noise. These complaints have been brought up to the mayor, but no help has been sought, as they are already established companies since years, it is common, people have already adapted to this. Before there was water, which people grabbed for consumption, then the rumor that was contaminated with lead.

8. ¿ Have there been any concerns or complaints in the past related to the operations of the Port? What have they been? How frequent?

R/ Basically the same as I just mentioned, the subject of dust, noise and pollution of the aquifers in Acajutla.

9. What recommendations could you provide for the construction of the project?

R/ The main thing is to respect all that has been given during the course and beginning of construction that the agreements are respected and comply with what is being said with the support of the mayor to channel this assistance with the communities that most need it, and in general with the entire population of Acajutla, that would be the main thing and in general much attention to the water issue, since El Salvador is running out of its water resource, as I repeat, it is important that it be kept free of contamination of any type.

Table of Interviews Summaries

APENDIX 8I:

TABLES SUMMARY OF INTERVIEWS DONE

PRELIMINARY TABLE OF PENSIONS OBTAINED IN THE INTERVIEWS MADE TO LOCAL ACTORS OF THE MUNICIPALITY OF ACAJUTLA ON THE LNG POWER PROJECT.

INTERVIEWER	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
MUNICIPAL MAYOR: DARIO QUADRÓN	Generate sources of development for youth and communities Investment and payment of taxes in the municipality. Transparent social compensation. Collaboration in creation of a technical specialized people in the municipality to count on skilled labour, according to the demands that the project will have in the stage of construction and operation.	Don't visualize any negative aspects that could be generated by the energy generation project
RESPONSIBLE FOR SOCIAL PROJECTION: MOISES BONILLA	Generation of jobs, Social Investment, attention to community needs, development of potable water projects, sanitation, infrastructure, strengthening of the civil protection system What EDP is doing now is good to take into account the population as people are assimilating it with the negative impact that caused the DUKE ENERGY Plant. The generation of employment, social investment, it has to be made known clearly so that people see more positive social aspects than the negative that this can generate. They would see it more as positive aspects and not as negative aspects to the project. The municipality's priorities would be as part of the involvement of projects, such as water sanitation activities, health, infrastructure, mangrove care, support of civil protection for risk reduction, for example the creation of shelters.	Some type of pollution that can be generated. Not inform the population. Not involve communities in the processes of disclosure, construction and operation.
RESPONSIBLE FOR TOURISM: DANY BAUTISTA	The expectations that the user has is that cheaper energy will be generated, that is in theory, but we know that until it is installed and the results can not be said that it is.	Some type of pollution, decrease of areas and beaches to promote some type of tourism.

INTERVIEWER	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
	As for the population. At the local level, obviously with the data presented, one has the expectation of job creation, but also the expectation if the population is prepared for the demand of the labor that will be required, just as there has to be a feedback to the Local labor force, to know if it is qualified. We know that there work opportunities, obviously there will be an increase in per capita income for the people involved, obviously for a job a person working in that plant	
RESPONSABLE DE MEDIO AMBIENTE: WUALTER MONTOYA	We would be interested in doing projects that benefit the environment, which are reforestations with several species of trees, as a company if they can help in the purchase of some property, to recover some wetlands that are lost The generation of work sources, we see the social development through generation of sources of jobs and the support that the company of in the future.	The affectation to the terrestrial surface. Whether or not it is always where there is a building to be built, a plant; There is always affectation, bark that is going to be replaced by cement, asphaltic streets, besides that the noise generation, the environmental pollution of the hydrocarbons
COMMUNITY LEADERS INTERVIEW		
NEIGHBORHOOD THE BEACH: MARLENE CANJURA	The expectations are that there may be an improvement in what is the community, but they remain with the doubt because that was with the company ALBA there were expectations that there would be work for young people and help but until closing this has not been so rave sent several requests to help us but have not responded. It would be good if the company collaborated in the creation of a technological institute to specialize the young people who leave high school and that these same ones will be hired so that they do not look for labor of outside. Social works that could be done due to the purposes of the company and we hope that they support us to the development of the community, since this one is due to the cooperatives and companies for the development and help of the community	Do not support young people through training. Do not take them into account to use them in the plant. There are men who are dedicated to gather oisters and they would affect them because they will set limits where they can reach just as ALBA did the same.

INTERVIEWER	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
ADESCO MAR: ACAXUAL COMMUNITY, OMAR ESAU DE LA O.	Generation of jobs for the inhabitants of Acajutla. In economic terms the generation of employment And social responsibility It is expected that the company will actually comply with all that has been said and that over the years will not forget all the meetings that are now being made.	Affection of the artisanal fishing sector because they will not be able to fish in the areas where they do it. Acajutla is running out of clean water, there is no reserve by the companies of this liquid, request that measures be implemented in which to protect the aquifers from any contamination
EL BARQUITO COMMUNITY: SILVIA ESTELA HENRIQUEZ	Generation of jobs for the inhabitants in the construction and operation of the plant. ALBA PETROLEOS only settled and nobody asked for an opinion, the important thing is that they are involving the population of the area and asking for their opinion Energy cheaper for the municipality and for the country.	The pollution that is generated in the water, that will affect to the communities poorer. The involvement of fishermen in the work, due to the limitation of the fishing area. Severe cases of diseases such as kidney failure or other diseases can occur. Seeding such as maize, beans, peas can be affected equally by the chemicals that the thermal can generate in the soil
COMMUNITY INDUSTRIAL AREA: NELSON DAVID ALVARADO	The first thing that strikes people in my area is that there will be a new source of employment and that comes to save the poverty. We hope that the company helps us with the introduction of household water, we are of scarce resource and no company supports us, with the mayor's office we have spoken but so far, we have not had answer because it does not provide. It will generate some sale of food, I have a dining room for the employees and this is an extra income. This way they will help us too. Here they have paraded a lot of companies that have made their projects and it is the first time that they take me into account as much as me and the outgoing, telling the story as they say the benefit and all that of the project	All type of contamination product of the plant. In disadvantages, as we are all the community is in the industrial zone, it would be the chemists who sometimes feel the bad smell

INTERVIEWER	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
COOPERATIVES OF FISHERMEN		
ACOOPPAC: RICARDO NAPOLEÓN JOVEL	Although I admire that you have taken into account the opinion of the population, because I have seen how over time this has brought environmental and economic impacts For the fishing sector none, but we have to be realistic that the construction of the plant will be beneficial for the population of Acajutla and at national level will be beneficial because the energy could reduce	Pollution. Modification of the way out of the craft pier for fishermen. Reduction of fishing areas As a fishing sector the problem would be that the waste generated by the company when washing their boilers would pass to the sea, they will always fall there, hence the fact that the terminal has no problem
REDEREOS AND LANGOSTEROS: JOSÉ ANTONIO CORDERO	Give priority to the possibility of generating jobs for directly affected sectors, during the construction and operation of the plant. Cheap electric power for the country and for the municipality Advantages for the fishing sector are not many, they expect the company responsible for the studies and construction to request the boats for travel, that would bring benefits to all That's why I tell you that we were surprised that it was the first company that has taken us into account and they ask us in what affect us because there are other companies that have not cared about them, that's why we thank them.	Chemical pollution, spills, wastewater management. Modification of the route of exit of the craft pier. Because they are currently restricted in the circulation to certain areas of the sea, now with the construction of this project, they consider that they will be the most affected because they will still be restricted further their access to certain areas considered as productive. The variety of fish, shrimp and lobster will be less, because the boat will be anchored in fishing zone. On the other hand, by the spills and contamination the fish will die.
HEALTH CENTERS		
UNIT OF HEALTH: CARLOS JAVIER VILLAFUERTE	First we have that good perception of a company coming, because almost all companies have a social projection mentality and almost all help us, not only with the health unit, not only CEPA, ALBA oil, so we have a good perception. Good perception because is a clean energy that does not produce a lot of	I cannot find any disadvantages, and it is not because you are here, but is because is a company that generates electricity and jobs.

INTERVIEWER	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
	environmental pollution, then this is another good perception and they will also generate jobs even if they are not related to Health, but just as social. Many people will be hired, even in the lifting of infrastructure, many local people will have work, then those are great advantages, they will generate dynamism to the local economy, and something else will generate employment to the one that works in the generation of energy and generate Taxes to the mayor who indirectly helps us, then those are the advantages I see and the other generation of clean energy without pollution.	
SOCIAL INSURANCE: WALTER MARTÍNEZ	Opening of sources of work, production of clean energy, involvement of communities. We aspire to a greater social development not only isolated economic and business, but also social, we know that everything involves risk situations and sacrifice some things, but we agree on the balance	Any
RED CROSS OF ACAJUTLA: RAFAEL MARTÍNEZ	Generation of employment to the people of Acajutla, if it is of other people will be something that will put against the population. The impact they will have with the company, which will have to put the people of Acajutla is a bonus they will have with people Generation of energy throughout the country	The generation of accidents to workers The noise caused and the smoke generated by the plant, this will affect the nearby communities
AGAPE SONSONATE: DRA. MORALES	The generation of energy naturally without generating as much pollution and this would be for a long time, it also seems attractive to start betting on another way of subsisting without continuing to pollute the environment. People when they see a project have the hope of working	By the level of study can not get the work that the companies have since their level of study does not apply to the requirements that the company asks and say they are unemployed because they put many obstacles and sometimes they were won with jobs to carry the Water, those are the complaints. The environmental impact, population conditions, because there is always or no gas releases, then you have to see what levels of gas and how toxic and harmful they can be for the population.

INTERVIEWER	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
SCHOOLS		
CENTRO ESCOLAR "COMUNIDAD ALVARADO": ISRAEL TAPAS	Help for the School, because no one does, the greater does not even collect the garbage, that generates illness to children. We hope this company has social responsibility, especially with children. The contribution should be with the institution or the school, I do not know if part of your company could help us with the construction of a basketball court for children to entertain themselves so we have not put any more trees there if someone ever Listen, but Also the wall is more necessary to have more security.	
CATHOLIC COLLEGE OF ACAJUTLA: MARÍA ELVIRA SARABIA	It is expected to have a support of the company for the school, the fact of being private sometimes makes no institution support us, this school was created by RASA when RASA was strong, I believe it with the intention that the children of its employees from outside Continued their studies here, was exclusive. So we hope to support us with improving the school and even the employees who come from outside can bring their children to study here. This project will generate employment for the population of Acajutla, is a positive aspect for us because people have more resources to put their children to study in a school.	The negative impacts would be the noise and the gases that emanaras. From there we see no other impact.
CHURCHES		
EVANGELICAL CHURCH: FELIX AGUIRRES	It would be the purpose of you to make yourself known and hopefully it is a reality and a serious expectation that our young people would have employment opportunities that no longer emigrate to San Salvador or elsewhere There are several young people here prepared in high school few have drawn technicians they are more prepared, there is good manpower only lack technified it It would be good for a company to run a job fair would be a blessing	

INTERVIEWER	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
CATHOLIC CHURCH: NAPOLEON GRACIA	In the sense of labor could try to be a benefit for the municipality and one of the priorities, if all these institutions collaborate would be a large municipality, but with the mayor's office I think I do not know how they are with taxes, I talking With the mayor I do not know what the collaboration they give for improvements of the town or projects of the municipality I think it is a way to be able to help and to present a benefit for the place that occupy	As one does not know how to develop the technology they have can not tell the impact it will have on people, one does not know how it will be that is that until you do not see you do not have to think because you do not know

PRELIMINARY TABLE OF PENSIONS OBTAINED IN THE INTERVIEWS MADE TO LOCAL ACTORS OF THE MUNICIPALITY OF ACAJUTLA ON THE IMPACTS GENERATED BY THE COMPANIES AND FACTORIES INSTALLED IN THE LOCALITY

TYPE OF ACTOR INTERVIEWED	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
MUNICIPAL MAYOR: DARIO QUADRÓN	Opportunity for professional and job growth. It considers that it is of great importance to spread the project as something positive and of benefit for the municipality. It sees as a positive aspect to be supported by EDP to the activities of Acajutla.	It warns of possible contamination complaints with the population but indicates that a campaign should be carried out to report on pollution hazards.
RESPONSIBLE FOR SOCIAL PROJECTION: MOISES BONILLA	DUKE sold very well here, they helped people from the beginning, a walkway that you see there, the entrance of KILO 5 they donated it, so look is a work of impact for people who helps them a lot. People tell us that smoke and dust cause disease, there are girls with asthma, so all that part of the impacts are aspects that people are currently feeling	DUKE ENERGY we cause serious environmental problems to the surrounding communities, for example pollution, noise for example if you go at night to communities start to move the house and generates a hostile environment so to speak. The company generates abundant toxics, which causes discomfort to the community we still have because of the fact that there are communities nearby, when you go at night that plant generates discomfort
RESPONSIBLE FOR TOURISM: DANY BAUTISTA	Environmental for example in the beach of Acajutla some companies have taken some measures like the water task, true that is a very strong subject, and some have begun to introduce pipeline for the treatment of water, at least that is what has been Profiled	When cleaning ships, ships that bring basic grain on the shore, is a terrible impact that the true swimmers suffer, usually that kind of berths always feel, is very sensitive, first what is perceived is the coloration Of the water, because people associate today it has not rained, whenever it rains the waters the mouths pour into the rivers because they are super saturated that drags of everything from the trash to the waste
RESPONSIBLE FOR THE ENVIRONMENT: WALTER MONTOYA	Positive we could mention the opening of jobs, the only company that helps us in reforestation projects and some other activity, is RASA; They allocate some annual budget for the environmental theme.	Noncompliance with compensation by some companies; Then there is impasse that is sometimes not allowed to monitor. The problem that affects more the DUKE ENERGY company, are the turbines, since when they activate they generate some type of movement that is felt in the population, to the point that there are people who can not sleep because they think it is an earthquake. With transportation companies, it is noise, dust, smoke. It is what affects the health most.

TYPE OF ACTOR INTERVIEWED	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
COMMUNITY LEADERS INTERVIEW		
COMMUNITY THE BEACH: MARLENE CANJURA		For the pollution because there they get enough smoke and that affects the pollution of the people who live around the company, another restaurants their dirt will give to the sea, equal to the oil spill that has been given as twice.
ACAXUAL 1: ESAU TO O		If there have been problems with smoke emanating chimneys and pollution, now that they have been solved is a lie, the communities closest to them have disturbed the noise. These complaints have been sent to the mayor's office, but no help has been sought
EL BARQUITO COMMUNITY: SILVIA ESTELA HENRIQUEZ		As I repeat here has never been asked permission, because when we realized that ALBA only came to settle here, or we were saying and have not done anything because there is always unemployment and equal, with respect to Duke Energy I consider that All those Factories are a time bomb because at any moment we could affect some damage in those machines or accidents that occur, because they generate us jobs because if they do even if they pay little, they can also affect us at the level.
COMMUNITY INDUSTRIAL AREA: NELSON DAVID	FERTICA celebrate in December the party for children and with ALBA celebrating Mother's Day and because I feel good with these companies because they help the children and they are very happy.	The complaints I have and the people who live nearby is regarding motors that buzz too much and there are people who can not stand their ears, so there we do not take all that was going to happen to the people that live there and not us They took into account to inform us and did not give us options, the people who live there are very poor and have had to move The complaints are related to what I just mentioned, the noise and the vibrations. In addition, Duke Energy does not want to give us water for family consumption.

TYPE OF ACTOR INTERVIEWED	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
COOPERATIVES OF FISHERMEN		
ACOOPPAC: RICARDO NAPOLEÓN JOVEL	Well what ALBA did when I came I was part of that, I got a motorcycle to close to expand its place, but the environment asked for some Cuban houses where locusts inhabited ALBA oils although they speak of social purpose, they are only programs and we know them or execute them, because at most they only have 10 people working, they only celebrate Mother's Day in Colonia Alvarado, that's all they do. RASA in his golden age gave us soccer uniforms for all the schools and it was nice to go to those tournaments	Negatively has affected us because of the pollution of the sea now we have to go more than 2 miles to work, there was no need since on the coast we had production, not the fishing boats that not, all the companies that have come to give Acajutla have Affected because of the toxic that the companies that have come to give to Acajutla send them to the sea and this generates that the marine fauna dies The oil spills generate a negative impact, it produces that the fish like the chimberas know with gasoline, because when There are spills these consume oil and when one cooks those they know. Like the DUKE when the engines work make all the houses tremble, I repeat again have been more negative impacts according to my experience although environment could say no. Because for example ALBACASA, CEPA, SAGRISA have not brought anything to the community.
REDEREOS AND LANGOSTEROS: JOSÉ ANTONIO CORDERO		Alba pipelines that is on the other side of the dock did not get profits just like they built and we are with the problem when there are spills they carry a liquid called bon, it has a part that weighs down and floats up, they stretch it so they do not water , They put a boat that throws liquid that says that it dissolves it, it is not true, the petroleum does not dissolve it, because what it does is that it weighs and sinks. Beneficial for tourism; But they told us not to worry that in two months we were going to fish more and spent a year and the fishing was no longer the same because there are residues left; Same where they built ALBA pipes, before we caught lobster now. Even the area where they want to build the wharf is no longer almost fishing, it is protected by CEPA, because in the ALBA building they said they would build a plant, I put papers in them but nobody from the port hired them, not even in the construction

TYPE OF ACTOR INTERVIEWED	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
HEALTH CENTERS		
UNIT OF HEALTH: CARLOS JAVIER VILLAFUERTE		ALBA oil, Duke Energy, really so far from the point of view of health have not had any impact or incidence, because it is true that they have had similar projects but have not collaborated properly, because when we ask, for example the health institution Of Acajutla has had needs do not help us, so if you ask me positive or negative, not any because they have not contributed but have not affected either.
SOCIAL INSURANCE: WALTER MARTÍNEZ		We have had some as the company washing shrimp things, which closed at the end, the problem was the handling of the waste, I do not know because I hill,
RED CROSS OF ACAJUTLA: RAFAEL MARTÍNEZ		Environmental pollution, chemicals that carry gasoline, the waste is thrown to a stream by the part of the passage, this is polluting and what remains in the water floats, you throw a detergent and it sinks and ruins the marine fauna, then they are removed Lobsters full of oil in the antennae, when ammonia has fallen fish die and float, then the disease is mostly lung and kidney failure, the cough begins with little, when the smoke comes out and is sprinkled through the air . It is serious because psychologically annoying, the engines are strong then loosens the windows, doors, walls crack, then even if you are asleep that noise you already have it. Where the colony Ivu, the worker, feels and is far, then the plant will be managed with natural gas and that is volatile then it will be watered by the whole town and people will feel it, those are the advantages although many people say no ; Because when you dislodge or plug from the pump to the ship that oil is left and spills to the sea, they wash and just give the sea, and it throws it to the shore and it causes people to itch and they do not know say the sea is sick and They do not know that they are those chemicals, that's why they see that the beaches are all black bait and even when people bathe is all but fat, then the gas is volatile is in the air, water, people cooking and there it is.

TYPE OF ACTOR INTERVIEWED	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
AGAPE SONSONATE: DRA. MORALES		Children are affected a lot, that is one of the few things that people have adapted so far, the noise of the machines, deforestation, as it appears that it is a hot zone, deforestation is even greater and it seems deserted even though the Sea east close The health issue is vulnerable in the area is the case of water, since two years ago already put in the area where we work there were no water pipes, so many people do not consume the water because it is not of good quality is Contaminated with poisons, because the pipes are superficial
CENTROS ESCOLARES		
CENTRO ESCOLAR "COMUNIDAD ALVARADO": ISRAEL TAPAS	The perimeter circulation of the school made us hand, but left us on average ADRECA is helping with employment	In the community there has been no support, because first ALBA is born with the purpose of social function but to date has not done anything just fixed the street that they use, nothing more and already have 5 to 7 years of being in operation, in the School about 2 years ago they supported us with something grudgingly, they said they would help us with the kitchen until they took them and nothing, they told us that when they won they would, but they did not. The water comes chlorinated, it is also from ALBA and the children suffer from stomach pain, but that is also a problem of FERTICA, observe a truck and said transport of infectious biological waste and those are raw material of the insecticides, pesticides or fertilizers that they They make and they are key points from which they emanate, because sometimes there are children who feel bad smell like windy and we leave and we see that it is those people who emanate those smells. I also adeca does in the wineries we do not know what but when they clean the wineries or I do not know what they do but when we are on the court a dark cloud of dust is put, although there only they keep grains, it can be the poison that they throw to him and that makes They give them dizziness. Although ADRECA is helping with the job but it is affecting us with the dust because it gives us coughs, they give them allergy in the skin, they are with flu, cough and for that reason they do not come, they give us followed a lot of allergy in the skin.

TYPE OF ACTOR INTERVIEWED	QUESTIONS / COMMENTS / CONCERNS	
	POSITIVE ASPECTS	NEGATIVE ASPECTS
CATHOLIC COLLEGE OF ACAJUTLA: MARÍA ELVIRA SARABIA		The negative impacts that have created the companies are noise and gas emissions. The other is that really the companies didn't help, well speaking about this school, that have not received support from any company.
CHURCHES		
EVANGELICAL CHURCH: FELIX AGUIRRES		The gain that we have is pollution that is the profit, because at least as a church, and from the companies we have never received any benefit. ALBA petroleum made a great propaganda but the majority of people who work there come from San Salvador so I thank you if you give priority to the people of the colony. On the subject of diseases when FERTICA rises a muriatic acid say that it is a drop That escapes, we live it because we live by the paved, there by the industrial zone if one goes the eyes burn, the children go but they do nothing we cover ourselves with a rag but with the children it is difficult to do that, of the Gasoil He escapes and feels that way because when he smells alcohol for two hours, his head hurts; Those are the benefits, in the environment. In days, a black cloud is generated, but this is of a gas or chemical that emanates and then it feels an itch in the body, in addition, this has generated respiratory diseases in the community
CATHOLIC CHURCH: NAPOLEÓN GARCÍA	Formerly RASA collaborated to the schools, to the grammar school of Acajutla, sometimes with the same church themselves of offering some aid that could give projects therefore; FERTICA had some projects but lately nothing and not only the church but institutions and for them to give something one has to request it and sometimes it does not arrive. I feel that they would have to collaborate with the closest people because it is a great environmental impact that they generate.	The noise is strong at night and the people who live nearby, for example in the Alvarado colony, in the industrial zone somehow affect that noise and the gases that release that sometimes in that chimney you see a great black gas and one that Has not done a specialized study, but if we do, I think the environment is polluted and this is every day and there are days that are more black and others clearer, noise at night is heard more than in the day and people Was complaining about that and also that causes vibration for example this goes to my room and this we are about a kilometre imagine the people who are closer, then this is an ecological impact and people live in tension.

Appendix 8J–
Workshop Reports 2014

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Meeting Agenda with Representatives of the Board of Directors of the Communities

Workshop Methodology

Results of Workshops with The Directorate of The Communities

Results of Workshop with Women

Workshop Results with Fishermen

Meeting Agenda with Representatives of the Board of Directors of the Communities

Workshop Methodology

APPENDIX 8J:
MEETING AGENDA WITH REPRESENTATIVES OF THE OF THE COMMUNITIES AND METHODOLOGY FOR WORKSHOP AND ASSEMBLIES.

The journey will be made based on the following important points to develop:

1. **Taking of assistance to the people attending the event and delivery of an informative triptych of the project.**
2. **Welcome and presentation of the institutions involved in the Project.**
3. **Brief presentation of invited communities and local institutions.**
4. **Presentation of the project (through a presentation in Power Point)**
5. **Space for comments, doubts, opinions and suggestions (Through a question guide to promote participation)**

- **OBJECTIVE OF THE MEETING**

To present that the Power Generation project, which will be located in the municipality of Acajutla to local leaders, with the purpose of obtaining ideas, opinions, concerns and comments from all the people participating in the day, that information will identify Situations that the population considers should be taken with special interest by the company. This will allow to identify potential environmental and social impacts and proposals of prevention measures to the identified impacts.

- **PARTICIPATING POPULATION:**

- ADESCOS, Boards of Directors, women's committees, fishing cooperatives, among others.
- Resident population interested in the project intervention area

- Local stakeholders: Health Unit, Social Security, Navy Force, Among others

- **DESCRIPTION OF THE MEETING**

The day will be carried out with the participation of local leaders, with the general population residing in the zone of influence of the project and local actors (representatives of local institutions: Municipal Council, Health Unit, Social Security, Navy Force), as well as local people from surrounding areas.

The population that participates in the activity can expose their comments, doubts, suggestions and different situations that they consider could result from the implementation of the project.

As for the Environmental Impact Assessment, they will be explained the components that comprise it, the studies that will be carried out and the development of a strategy of citizen or social communication for the population to be informed of the project.

On the other hand, they will be explained on the engineering components of the project so that they know the main activities that are going to be realized in the stage of construction of the way.

The activity will be developed as follows:

- **METHODOLOGICAL GUIDE TO ASSEMBLIES**

ACTIVITY	OBJECTIVE	CONTENT	RESOURCES	TIME
Attendance to the event and delivery of Informative triptych of the project.	Quantify people's attendance to the activity and provide project information	Complement: name, place of visits, sex and signature	Attendance lists and triptych	During the arrival of guests
Welcome and presentation of the Institutions involved in the Project	That the participants know about the representatives of the companies involved in the project	The representatives of the institutions present themselves and make mention of the objective of the activity	Computer and projector	5 min
Brief presentation of the Invited communities and Local institutions.	That the leaders feel part of the activity (Only the communities and their leaders will be mentioned)	Name of communities and representatives of each one that have attended the event	Computer and projector	5 min.
Presentation of the project (Through a presentation in Power Point)	That the participants get to know about the components of the project	Presentation of the components of the project, the Environmental Impact Assessment, the mechanism of citizen participation and the benefits of the project at local and national level.	Computer and projector	30 min.
Space time for question and answer	That the participants can present their comments, doubts, opinions or suggestions about the implementation of the project	Opinions, doubts, comments and suggestions on improving the road.	Microphone	30 min.
Snack				

METHODOLOGY FOR WORKSHOPS WITH REPRESENTATIVES OF THE DIRECTORATE OR ADESCOS OF THE MUNICIPALITY OF ACAJUTLA

The journey will be made based on the following important points to develop:

- **OBJECTIVE OF THE JOURNEY:**

Obtain information from local leaders regarding the execution of the Energy Generation project, located in the municipality of Acajutla, the activity will be developed with the purpose of obtaining ideas, opinions, concerns and comments from all the participants in the journey, this inquiry will allow to identify situations that the population considers should be taken with special interest by the company. This will allow to identify potential environmental and social impacts and proposals of prevention measures to the identified impacts.

- **PARTICIPATING POPULATION:**

- Representatives of Boards of Directors or local ADESCOS and groups of women

- **DESCRIPTION OF THE JOURNEY**

The journey will be realized with the participation of leaders that resides in the zone of influence of the project.

The population that participates in the activity can expose their comments, doubts, suggestions and different situations that they consider could result from the implementation of the project, through a dynamic and participatory methodology, in a group way.

Regarding the Environmental Impact Assessment, they will be explained the components that comprise it, the studies that will be carried out and the development of a strategy of citizen or social communication for the population to be informed of the project.

On the other hand, they will be explained about the engineering components of the project so that they know the main activities that are going to be realized in the stage of construction.

The activity will be developed as follows

- ✓ Date: June 9, 11 and 17, 2014
- ✓ Location: Project Communication Office
- ✓ Time: 1:30 p.m.

MEMORY SUPPORT FOR WORKSHOPS WITH OMMUNITY LEADERS

ACTIVITY	OBJECTIVE	CONTENT	RESOURCES	TIME
Attendance to the event	Quantify people's attendance to the activity	Complement: name, place of visits, sex and signature	Attendance lists	During the arrival of guests
Welcome and presentation of the people responsible for the journey	That the participants meet the heads of the workshop	Those responsible for the workshop Present and make mention of the objective of the activity	Computer and projector	10 min
Presentation of leaders in the workshop	That leaders can be Identify and feel confident	Name of communities and their representatives		
Presentation of the project (Through a presentation in Power Point)	That the participants get to know about the components of the project	Presentation of the components of the project, the Environmental Impact Assessment, the mechanism of citizen participation and the benefits of the project at local and national level.	Computer and projector	20 min.
Formation of groups, delivery of question guides and idea writing on paper	That the participants expose their ideas or concerns about the project openly and confidently	A question guide will be used developed in two or three groups, which will be written on paperboards and will be socialized	Paperboards, markers	20 min
Socialization of results obtained in each group	That the participants expose their comments, doubts, opinions or suggestions on the implementation of the project.	Reviews, doubts, comments and Suggestions on improving the road.	Paperboards, markers	30 min.
Snack				

Results of Workshops with The Directorate of the Communities

APPENDIX E 8J:

RESULTS OF WORKSHOPS WITH THE DIRECTORATE

SUMMARY OF WORKSHOPS CONDUCTED WITH THE COMMUNITIES LOCATED IN THE AREA OF INTERVENTION OF THE PROJECT

METHODOLOGICAL DESCRIPTION

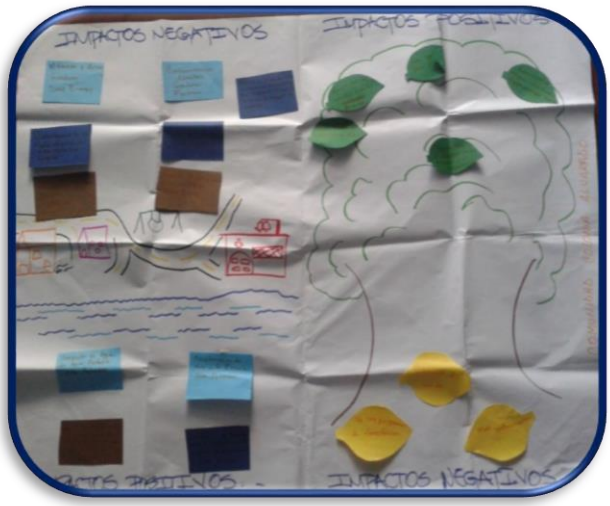
The methodology applied was as follows:

- **Presentation of the project**

The invited people were explained the components of the project of generation of energy and were solved questions and doubts.

- **Formation of groups**

Later each community met to work as a team. They were given a paperboard in which the community had been drawn, in the back they were asked to place the negative impacts of the projects installed in Acajutla, at the bottom would place the positive impacts generated by the companies. For this they are given cards to place. Then they socialized by group each of the results.



- **Perception about the project Generation of Energy**

On the right side of the paperboard the participants in the workshop were asked to put on the green leaves of color the positive impacts they consider to be generated by the project and on yellow leaves, they were asked to write down the negative impacts they perceived with this project.

IMPACT WEIGHTING

Each participant was asked by each community to place the impacts generated on cards that were previously given

Card color light blue= Big Impact

Card color Brown= Medium Impact

Card color Blue= Law Impact

It applied both to negative and positive impacts generated by the companies that are installed in the Municipality of Acajutla

WEIGHTING OF IMPACTS ACCORDING TO COLOR CARDS

1. **Card light blue for BIG impacts**

2. **Card Brown for MEDIUM impacts**

3. **Card Blue for LAW impacts**

SUMMARY TABLE OF RESULTS OBTAINED IN THE WORKSHOPS CONDUCTED WITH THE COMMUNITIES THAT ARE LOCATED IN THE AREA OF INTERVENTION OF THE PROJECT

OPINIONS ON PAST AND CURRENT EXPERIENCES WITH COMPANIES			PERCEPTION ON THE ENERGY GENERATION PROJECT	
COMMUNITY	**NEGATIVE IMPACTS**	**POSITIVE IMPACTS**	**POSITIVE IMPACTS**	**NEGATIVE IMPACTS**
BRISAS DE ACAJUTLA N° 1	**1- Auditory contamination of water and air** **1- Health infections**	**2-Opinions of the communities** **2-Introduction of water and light in communities close to the communities.** **3-Generation of employment in the short and medium term** 3-Public jet installation in the community	- Community Involvement -Care of natural resources of the municipality -Generation of jobs -Less environmental pollution	- Impact on natural resources - Risks in health -Noise pollution -Destruction of flora and fauna
OBELISCO	**1-Air Pollution** **1-Vibration** **1-Allergies on the skin** **1-Noise** **2-Pollution of smoke** **2-Cracks in houses by vibrations**	**NO IDENTIFIES POSITIVE IMPACT FOR COMMUNITY**	- Generation of jobs -The prices of electric power will fall -Help communities in some projects	- Environmental pollution

LA OBRERA	**1-Noise** **1-Contaminated water** **1-Nasty odor**	**3- Generation of jobs**	- Cheapest energy cost -Generation of more jobs -Citizen participation	- More pollution from residual waste -Max air pollution -More noise and vibration
RASA N° 1	**1-Air pollution from the engines** **1-Noise and vibrations (Generated by DUKE ENERGY)** **1-Contamination of the water, by the waste water that throw in the sea** **2-Perception of the community by high pollution** **2-Air pollutant odors**	**NO IDENTIFIES POSITIVE IMPACT FOR COMMUNITY**	- Generation of jobs -Enhanced investment in energy infrastructure -Generation of cleaner energy	- More pollution from residual waste -Max air pollution -More noise and vibration
ADESCO MAR	**1-Companies that generate noise, especially at dawn** **2-Nasty smells in the air**	**NO IDENTIFIES POSITIVE IMPACT FOR COMMUNITY**	- Less pollution will occur -Employment generation -Help in trade	NO IDENTIFIES NEGATIVE IMPACTS
LA PLAYA	**1-ALBA PETROLEO has not collaborated with the community and generated pollution** 2-The hotel DECAMERON has generated pollution	**1- Give support to communities with projects**	- More development to the municipality -Opportunity in works to the community	

	3-Rasa has generated gas pollution.		- Citizen participation -Sources of employment	- Air pollution
SAN ROQUE	**1-Not support from ALBA PETROLEO** 2-The hotel DECAMERON has generated pollution 3-Rasa has generated gas pollution.	**1- Rasa has given support to communities in social work**	- Sources of employment -Opportunity in works to the community -Citizen participation	- Air pollution
COMUNIDAD ALVARADO	**1-Vibration and noise generated by DUKE ENERGY** **1-Environmental contamination generated by ALMAPAC, GRADECA and FERTICA** **2-Contamination of the environment by ALBA PETROLEO, GASOHOL AND DUKE ENERGY** 2-Employment of labor of people who do not live in the municipality and do all companies 3-Dust in the streets- ALMAPAC	**1-Drinking water project, ALBA PETROLEO** **1-Construction of wall in school ALBA PETROLEO** **2-Donation of school supplies and summer programs for students, FERTICA** **3-Donation of computers and construction of school management, DUKE ENERGY**	-Generation of taxes for the mayor's office -More investment for the country -Generation of cleaner energy -Social responsibility -Generation of jobs in the municipality -Lower operating hours per day	- Vibration and noise -No afforestation program More pollution
BENDICIÓN DE DIOS	**1- Spill in the ocean from DUKE ENERGY**	**NO IDENTIFIES POSITIVE IMPACT FOR COMMUNITY**	- Planting trees to respond to deforestation	- Affection of vibration to communities

	1- Emission of gases by DUKE ENERGY		- Generation of employment for citizens -Collaboration with different colonies for development	- Possible impacts on fishing -Drawings in the ocean
CIUDADELA CEPA	**1- Spill in the ocean from DUKE ENERGY** **1-Emission of gases by DUKE ENERGY**	**NO IDENTIFIES POSITIVE IMPACT FOR COMMUNITY**	- Planting trees to respond to deforestation -The generation of employment for citizens -Collaboration with different colonies for development	- Affection of vibration to communities - Possible impacts on fishing -Drawings in the ocean

RECOMMENDATIONS GIVEN BY PEOPLE PARTICIPATING IN THE WORKSHOP, FOR THE ENFORCEMENT OF THE PROJECT OF ENERGY GENERATION

COMMUNITIES	RECOMMENDATION
BRIZAS DE ACAJUTLA N° 1 **OBELISCO** **LA OBRERA**	- Take our community into account as a priority - A good payment according to the capacity of each employee - Measuring the capacity of the noises - Evaluate air pollution
	- The company must be oriented to the welfare of the community and the municipality - To socialize with the communities (To help them in projects) - To generate stable jobs for local people

	- Support to the needs of different communities requesting their help
	- The company must avoid that the impact on the fishing zones is of less impact for fishermen
RASA N° 1, ADESCO MAR, LA PLAYA, SAN ROQUE, COMUNIDAD ALVARADO, BENDICIÓN DE DIOS Y CIUDADELA CEPA	- That they consider the communities when they start to generate employment and do not bring people from elsewhere and we can work together - That they consider all the communities - That they verify that all the equipment to be used is given regularly to minimize the impacts
	- In future meetings talk about technical aspects of the project - Once implemented the project has social responsibility for the communities of the municipality
	- Ability to reduce vibration, noise and smoke - Be careful when discharging the gas to avoid spills - Verify that all the equipment to be used is of quality to diminish the environmental impact - Support to the communities
	- Employment for people in the municipality - Afforestation program - Social responsibility with the whole municipality of Acajutla - Construction and repair of the power plant complies with all construction and environmental standards.

Acajutla LNG to Power Project

LISTA DE ASISTENCIA

Tipo de reunión: Taller con Juntas Directivas locales, en referencia al proyecto: "Generación de Energía"
Fecha: Miércoles 09 de julio de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
1	Evelin Carolina Rodriguez	F	Urb. Brisas Rey N°1	7762-0034	
2	Susana Jeanete Ruiz	F	" " " "	74370326	
3	Dora Alicia Ramirez Guzmán	F	colonia Obrera	74502577	
4	Vanetth Sarahi Portillo	F	colonia el obelisco	76960731	
5	Maura Guevarra	F	caserio el obelisco	24118276	
6	Maria Julia Cerna	F	caserio el obelisco	24166841	
7	Yesenia Carolina Zelaya	F	caserio el obelisco	73-27-78-32	
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Acajutla LNG to Power Project

LISTA DE ASISTENCIA

Tipo de reunión: Taller con Juntas Directivas locales, en referencia al proyecto: "Generación de Energía"
Fecha: Viernes 11 de julio de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
1	maria de Jesus Galeas	femenino	ADESCOmar	77107354	mdeJG
2	Juan Carlos Mejia	Masc	ADESCO Casa 1	7039-0337	
3	Yolanda Isabel adalos		CASA #1	77421959	
4	Jessica Elizabeth Marroquin	femenino	Bendicion de Dios	70420862	
5	Blanca Lilian Lopez Asencio	femenino	Bendicion de Dios	61435937	
6	Romeo Alonso Argueta A.	masculino	CIUDADela CEPA	76957741	
7	ANA Ruth Flores de R.	Femenino	comunidad San Roque	03024976-5	A.R.F.d.R
8	Reina Rodriguez Cortez	femenino	" " San Roque	77643841	
9	Marlene Campura	F	ADESCOplaya	7032.6843	
10	Noe Mauricio Guerrero	M	comunidad Olvondo	7744-9164	
11	Lorena Antonia Flores de Lara	F	Comunidad Alvarado	76535978	
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Results of Workshop with Women

APPENDIX 8J:

RESULTS OF WORKSHOP WITH WOMEN

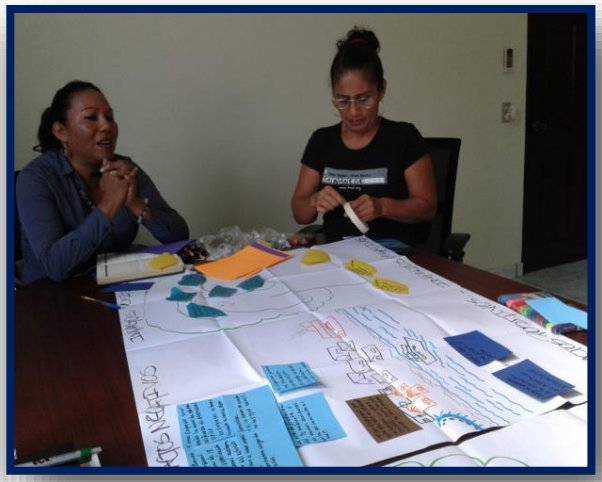
SUMMARY OF WORKSHOPS CONDUCTED WITH WOMEN ORGANIZED IN THE MUNICIPALITY OF WOMEN

- **METHODOLOGICAL DESCRIPTION**

The methodology applied was as follows:

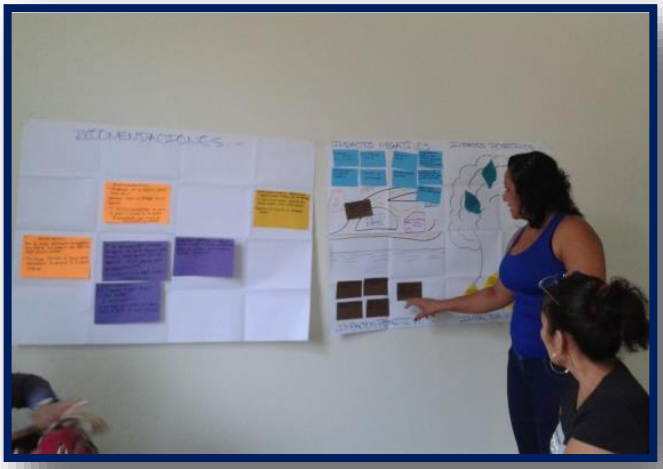
- **The methodology applied was as follows**

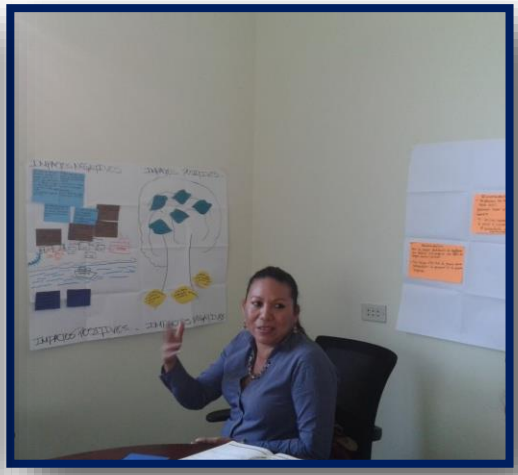
The women participating in the activity were explained the components of the power generation project and questions and doubts were solved.



- **Formation of groups**

Later the women formed pairs. They were given a paperboard in which the community was drawn, in the back they were asked to place the negative impacts of the projects installed in Acajutla, at the bottom would place the positive impacts generated by the companies from the gender perspective. For this they are given cards to place. Then they socialized by group each of the results.





- **Perception about the project Generation of Energy**

In the right part of the paperboard the women participating in the workshop were asked to place on positive green leaves of color the positive impacts they considered to be generated by the project and on yellow leaves, they were asked to write the negative impacts they perceived with this project.

IMPACT WEIGHTING

Each participant was asked by each community to place the impacts generated on cards that were previously given

Card color light blue= Big Impact

Card color Brown= Medium Impact

Card color Blue= Law Impact

It applied both to negative and positive impacts generated by the companies that are installed in the Municipality of Acajutla

WEIGHTING OF IMPACTS ACCORDING TO COLOR CARDS

1. **Card light blue for BIG impacts**

2. **Card Brown for MEDIUM impacts**

3. **Card Blue for LAW impacts**

SUMMARY TABLE OF RESULTS OBTAINED IN THE WORKSHOP CARRIED OUT WITH WOMEN ORGANIZED IN THE MUNICIPAL GENDER UNITY

OPINIONS ON PAST AND CURRENT EXPERIENCES WITH COMPANIES WITH A GENDER APPROACH			PERCEPTION ON THE GENERATION OF ENERGY PROJECT WITH GENDER APPROACH	
GROUP OF WOMEN	**NEGATIVE IMPACTS**	**POSITIVE IMPACTS**	**POSITIVE IMPACTS**	**NEGATIVE IMPACTS**
GROUP OF WOMEN OPINIONS N° 1	1- Strong vibrations in homes 1- Too much dust and noise 1-Contamination of aquifers 1-Maritime Pollution 1-Roads are in poor condition due to heavy freight exit and no maintenance 1-Most companies do not consider the women of the communities 1-Sexual harassment within companies 2-The companies promise to the inhabitants that there will be no pollution and always it gives, but they do nothing to diminish the impact	2- ALBA PETROLEO support in scholarships and sports. Also, built streets in the community Alvarado 2-Installation of drinking water and sport support by DUKE ENERGY 2-Electric lighting in communities near businesses.	- That the women's sector be considered throughout the project Cheaper energy -Building of roads -Low pollution to the environment	- Noise Generation - Risks in health - That it does not have the capacity to treat an emergency in time and to suffer a catastrophe
GROUP OF WOMEN OPINIONS N° 2	1-The companies when they hire staff always ask for 18 years with experience and if the young people just leave the studio how will they have experience? 1-Do not hire women and men over 35	3- Support for sports and education with ALBA BECAS Y ALBA PETRÓLEO 3-Support to sport and employment- DISAGRO Y FERTICA	- Less costs are expected in electric power -What to consider the skilled workforce of the female sector	- Environmental pollution -Affection on artisanal fisherman

	1-Other companies have brought skilled labor from other municipalities, having in Acajutla 1-The companies do not consider the female labor and to which they contract the wages are not equal to the one of the men 1-High contamination of aquifers, the environment and the sea 1-The Companies formed a foundation FUNDA-ACAJUTLA and do not support the population at all is just for evading taxes 2-Companies already stabilized in the Municipality do not support social works, they promise only when they are going to install 2-There have been no opportunities for women, we have always been discriminated against for being women 2-In the companies there has been sexual and labor harassment 2-For the lack of employment many people emigrated to other countries		-That the recruitment of personnel is with gender equity -What they consider the capacity of Do the work of The women of the municipality - That the new company hire staff who knows how to perform even if he has not attended university.	

RECOMMENDATIONS GIVEN BY PEOPLE PARTICIPATING IN THE WORKSHOP, FOR THE ENFORCEMENT OF THE PROJECT OF ENERGY GENERATION

GROUP OF WOMEN	RECOMMENDATIONS
RECOMMENDATIONS OF GROUP OF WOMEN N° 1	- That companies do not think that women are the weak sex, we can perform the same work as men - That the contractors do not see the profile and silhouette of the woman (Only to be given the opportunity to work)
	- That the municipality by means of the contribution of the company considers social works for the population, that do not think only in infrastructure - That it thinks about giving support to the woman, childhood and adolescence
	- If they employ women that is equal work, equal remuneration
RECOMMENDATIONS OF GROUP OF WOMEN N° 2	- What we consider for the recruitment of employment to the female sector - When hiring women who do not consider the physical, age, or academic study - To have a fair wage based on our abilities
	- Women are trained to do the same job as men - Being working in the company, to be able to promote by own merits and not by sexual harassment - Respect women in their work performance

Acajutla LNG to Power Project

LISTA DE ASISTENCIA

Tipo de reunión: Taller a realizar con organizaciones de mujeres, en referencia al proyecto: "Generación de Energía"
Fecha: Jueves 17 de julio de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
1	Maritza Elizabeth Hernandez	F.	Red de Mujeres de Acajutla	76970741	
2	Vilma Noemy Santos	F	Encargada de Unidad de G	75061025	
3	Maria Maura Castro	F	Red de mujeres de Acaj.	7299-6525	
4	Dayssi Beatriz Espinoza	F	Red de mujeres de Acaj.	79539499	
5	DELSY Noemi Ramirez	F.	Red de mujeres acajutla	70871624	
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Fishermen Workshop Results

APPENDIX 8J:

MEETING WITH FISHERY COOPERATIVES

MEETING WITH ACAJUTLA FISHERY COOPERATIVES

MEETING AGENDA

1. **Taking of assistance for people attending the meeting**
2. **Welcome and presentation of attendees**
3. **Short presentation of the representatives of the fishermen's cooperatives.**
4. **Purpose of the meeting**
   Monitor and respond to the concerns of stakeholders, in this case fishermen's cooperatives, on the activities included in the power generation project to be installed in the municipality of Acajutla.
5. **Development of the meeting: (Briefly listen to the concerns of the cooperatives and the assistant community)**
6. **Solve doubts on the part of the assistants by explaining some components of the project**
7. **Appreciation for attendance**

Attendance:
Fishery Cooperatives:

- **ACOOPPAC**

Ricardo Napoleón Jovel: President

Silvia Estela Henríquez

- **Cooperativa Rederos y langosteros (Cooperative of fishing nets users and lobsters' fisher)**

José Antonio Cordero: president

Wilber Alberto C.: Fisherman

José María González: Fisherman

- **ECO INGENIEROS**

Lisbia Jarquin

Erika Rodríguez

Oscar Molina

- **Energía del Pacifico (Energy of the Pacific)**

Brenda Lovato

Among the concerns that the representatives of the cooperatives expressed are:

Cooperativa Rederos y langosteros

- According to the representatives of this cooperative there is a company SOLUMAR that has won a tender to provide the services of transfer to the company Energy of the Pacific, the cooperative offered a subcontract. In this sense, the request is framed in that it is contracted directly to the cooperative to carry out the work that the company requires, not through subcontracting, because they have fishermen who know about different areas. In addition, they consider that cooperatives are most affected by the project that any other sector of the municipality, therefore, consider that the company responsible must prioritize in the needs of fishermen and their families.
- Another request made by the Cooperative of fishing nets users and lobster's fisher is that the responsible company compensates them with other forms of employment generation to the associated fishermen, because according to them, with the construction of the project the fishing will decrease and they must travel distances Longer to be able to fish. They said: "***We do not expect to work on the project because we do not have the necessary studies to join us, some of us do not know how to read or write and the company have requirements, we want to be given new sources of work within fishing"*** José María González: Fisherman
- The fishermen request that the social programs directed to the cooperatives, be carried out of direct way between Energy of the Pacific and the fishermen's cooperatives, without another intermediary institution.

- For its part, the cooperative ACOOPPAC, requests as a measure of compensation the generation of 50 to 100 places in the project for the fishermen and that were affected by the project. In addition, they request boats equipped to promote local tourism, as an alternative source of work for fishermen.

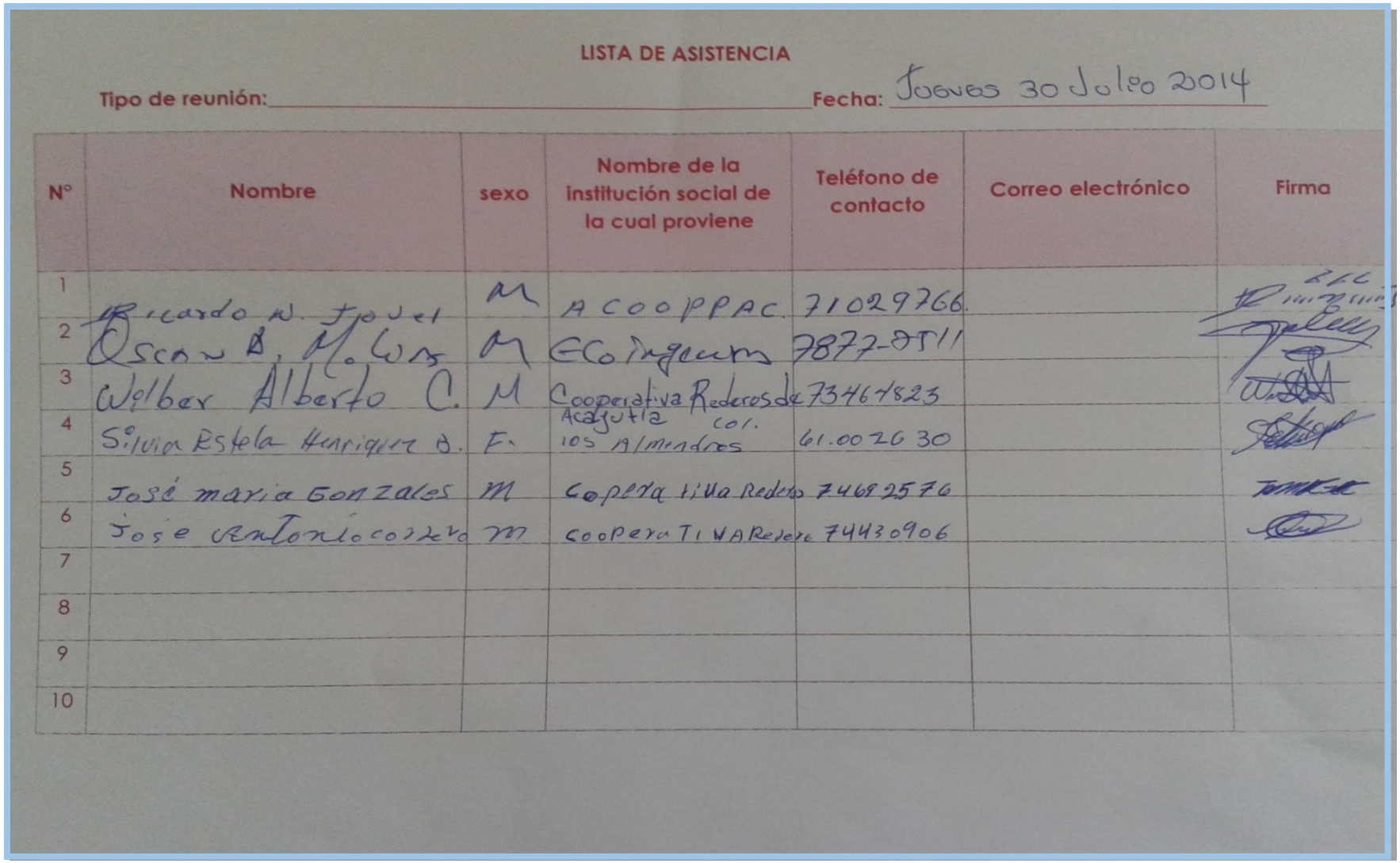
- They are explained each of the questions or doubts raised, because they were unaware of the social program that Energy of the Pacific will execute. Likewise, they are clarified that there is only one database by Pacific Energy for people who take their Curricula to the Communication Office of the project. In addition, they are explained that when initiating the hiring process employees would be informed to the population so that it can participate in the process according to the requirements that Pacific Energy determines.

The concerns were solved and the current conditions of the project were explained

Agreements:

It was agreed to bring the following information to the Project Communication Office as soon as possible:

- How much is the distance that they are currently going to be able to fish and how much it will increase, with the execution of the project.
- How much fuel expenditure is currently going up and what do you think would increase when the new dock and the ship installed
- How much is the daily fishery and its current sale
- They will present detailed the costs and the affectations that will be generated to the cooperatives.
- They will issue to the Communication Office a letter requesting that the projects destined for the cooperatives be carried out directly by the company. To do this, they will develop project profiles, according to the needs of the cooperatives, which will present in detail the specifications of each project.



LISTA DE ASISTENCIA

Tipo de reunión: _____ Fecha: Jueves 30 Julio 2014

N°	Nombre	sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Correo electrónico	Firma
1	Ricardo N. Figueroa	M	ACOOPPAC	71029766		
2	Oscar A. Morales	M	Ecoingenium	7877-0511		
3	Wolber Alberto C.	M	Cooperativa Redores de Acajutla	73464823		
4	Silvia Estela Henriquez A.	F.	Los Almendros col.	61.00 26 30		
5	José maria Gonzales	M	Cooperativa Redores	74682576		
6	Jose Antonio cortez	M	cooperaTIVA Redores	74430906		
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Appendix 8K–

Complete Public Assembly Material 2014

Meeting for Presentation to the Council

MEETING TO PRESENT TO THE COUNCIL IN ACAJUTLA, EIA PROGRESS:

"LNG TO POWER"

Prepared for:
ENERGÍA DEL PACÍFICO S.A. DE C.V.

Elaborated by:
ECO INGENIEROS S.A. DE C.V.
EL SALVADOR

SAN SALVADOR, EL SALVADOR, C.A. OCTOBER 2014

I N D E X

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1.2. OBJETIVES OF THE JOURNEY..... 3

1.3. PARTICIPANTS 3

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3. SPACE OF COMMENTS, DOUBTS, OPINIONS AND SUGGESTIONS..... 4

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1. EIA RESULTS PRESENTATION ASSEMBLY

As part of the requirements requested by the Energy Generation project, the results of the Environmental Impact Study were presented, and the Municipal Council of the Municipality of Acajutla and staff working at the institution participated in this event.

The following is a description of the methodology that was implemented in the assembly held with the Municipal Office:

1.2. OBJECTIVES OF THE JOURNEY

- Address the progress of the Environmental Impact Study, related to the Energy Generation project.

1.3. PARTICIPANTS

- Municipal Council of Acajutla and working staff of the institution
- Energía del Pacifico
- ECO Ingenieros

2. DESCRIPTION OF THE JOURNEY

The participants submitted their comments, doubts and suggestions regarding the preliminary results obtained in the EIA related to the project.

Regarding the Environmental Impact Study, they were explained the identified impacts, as well as the compensation measures established to minimize the damages generated with the implementation of the project.

- Place: Municipal Hall of Acajutla

- Time: 9:00 AM

- Date: October 13, 2014

The agenda developed in the day was as follows:

1. **Taking of assistance of the people attending the event.**
2. **Welcome and presentation of the attending institutions**
3. **Presentation of the project (through a presentation in Power Point)**
4. **Presentation of identified impacts and defined compensation measures**
5. **Space of comments, doubts, opinions and suggestions**

3. SPACE OF COMMENTS, DOUBTS, OPINIONS AND SUGGESTIONS

Participants openly shared their views, comments, proposals and consultations on the actions of the project.

Opinions and suggestions were made on the following aspects of the project:

- What measures will be implemented to solve the problem faced by fishermen with the project, not being able to fish in the areas destined for such activity.
- It is appropriate to hold briefings with all fishermen, not only with the representatives of the cooperatives, to explain to them the conditions under which the project will be carried out and the solution mechanisms to be implemented so as not to be highly affected.
- Explain to the fishermen about the projects that will be implemented in the subject of social responsibility of the company Energy of the Pacific and the compensation measures that will be executed as part of the results of the EIA.

- Train fishermen on the various mechanisms to be implemented as part of the compensation measures in this sector.

- In the meetings that are suggested to be carried out with the fishermen, the councilors of the city council consider it pertinent that both the Social Investment Fund for Local Development (FISDL) and Municipal City Hall be present, to carry out the relevant coordination between institutions.

- As far as the social investment fund is concerned, it is important to carry out a joint work among the public institutions involved, because the procedures in FISDL are characterized by being bureaucratic or complex by all the requirements that are requested for the execution of Projects, which will streamline each of the actions to be carried out.

- The City Council suggests the involvement of the Mayor's Environment Unit to follow up on each of the projects that will be carried out.

Some of the responses provided by **ECO INGENIEROS** regarding compensation measures for fishermen's cooperatives were (Intervention by marine biologist Oscar Molina):

- Information and consultative meetings have been held with cooperatives and independent fishermen, options have been presented on the compensation measures to be implemented within the framework of the project, which include:
  - ✓ Elaboration of project profiles, suggested by fishermen's cooperatives.
  - ✓ Tilapia breeding grounds
  - ✓ Cultivation of shrimp near the river Sensunapán
  - ✓ Improvement of the "Winche"
  - ✓ Restoration of the salt forest (Suggested by Environmental Unit)

Responses given by **Energías del Pacifico** (Mario Ayala)

- In the area of implementation of projects that will be carried out as part of the company's social responsibility, the Municipal City Hall is the one that prioritizes in the project profiles relevant to the needs of the population and in the case, for the cooperatives of fishermen.
- The implementation of projects will not only be carried out through works reflected in infrastructure, but in scholarships, training and others.

- The participation of the various institutions in the meetings that will be carried out in the process will be considered, for which there will be several mechanisms of communication and citizen participation during the various stages of the project.

Below is a photographic record of the activity developed:

IN THE PHOTOGRAPHS CAN BE OBSERVED THE DEVELOPMENT OF THE ACTIVITY, IN WHICH THE PROJECT WAS PRESENTED

THE SPACE OF QUESTIONS AND COMMENTS BY THE MUNICIPAL COUNCIL OF ACAJUTLA AND OTHERS PARTICIPANTS IN THE ACTIVITY

4. ATTENDANCE LIST

LISTA DE ASISTENCIA

Tipo de reunión: Consulta pública previa, en referencia al proyecto: "Generación de Energía"
Fecha: Fecha: Lunes 13 de octubre de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
1	Wilber Alexander Paz C.	M	Alcaldia de Acajutla	7744-9481	
2	Edith Beatriz Lemus Pubil	F	Alcaldia de Acajutla	77443944	
3	Edwin Antonio Arevalo Garcia	M	Alcaldia Acajutla.	7744 3082	
4	Wilber Hernan Soriano Mena	M	Alcaldia Municipal	77444343	
5	Dinora Guadalupe Mejia.	F	Alcaldia de Acajutla	77441576	
6	Zoeira Elvira Cruz Dojano	F	Alcaldia	77449753	
7	Francisco Antonio Tovar Cuellar	M	Alcaldia unidad Ambiental	74688098	
8	Walter Montoya Castro.	M	Alcaldia Acajutla	2429-7328	
9	JOSÉ A. ORTEGA MEJIA	M	AMA	77440235	
10	Jesús Ernesto Romero	M	Alcaldia de Acajutla	77490583	
11	JUAN CARLOS CARCAMO QUIJANO	M	ALCALDIA DE ACAJUTLA	77440146	
12					
13					
14					
15					

Summary Assembly of Presentation of the Draft of the EIA at Audience and Attendance List

PRESENTATION ASSEMBLY OF THE EIA DRAFT

PROYECT:

"LNG TO POWER"

Prepare by:
ENERGÍA DEL PACÍFICO S.A. DE C.V.

Elaborated by:
ECO INGENIEROS S.A. DE C.V.
EL SALVADOR

SAN SALVADOR, EL SALVADOR, C.A. OCTUBER 2014

003041

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1. EIA RESULTS PRESENTATION ASSEMBLY

As part of the requirements requested by the Energy Generation project, the preliminary results obtained in the Environmental Impact Study were carried out, through a public consultation in which different local actors of the municipality of Acajutla participated among these communities, Public Institutions, schools, fishermen's cooperatives, among others.

The methodology that was implemented in the development of the public consultation is described below.

1.2. OBJECTIVES OF THE JOURNEY

- Address the progress of the Environmental Impact assessment, related to the Energy Generation project.

1.3. PARTICIPANTS

- Municipal Hall
- Communities involved in the project
- Public health centers
- Schools
- Fire brigades
- Civil National Police
- Churches
- Fishermen's cooperatives
- Among other stakeholders involved

2. DESCRIPTION OF THE JOURNEY

The participants submitted their comments, doubts and suggestions regarding the preliminary results obtained in the EIA related to the project.

Regarding the Environmental Impact Study, they were explained the identified impacts, as well as the compensation measures established for minimize the effects generated by the implementation of the project.

- Place: Catholic School of Acajutla
- Time: 9:00 AM
- Date: October 18, 2014

The agenda developed in the journey was as follow:

1. **Reception and registration of guests**
2. **Introduction. Objectives of the meeting**
3. **Presentation on generalities of the project and timeline, process to obtain environmental permit, presentation of environmental baseline in Acajutla, potential impacts and mitigation measures, Project Benefits and Social Projection.**
4. **Questions / Answers**
5. **Open House – presentation of the layout and images of the plant**
6. **Snack**

3. SPACE FOR COMMENTS, QUESTIONS AND SUGGESTIONS

Participants openly shared their views, comments, proposals and consultations on the actions of the Project.

Opinions and suggestions were made on the following aspects of the project:

N°	Question or Comment	Institution or place of visit	Answers provided
	Fishing Sector		
1	What will happen with the artisanal fishermen of the sector, mainly with the lobsters fisher	Acajutla	It is working with all fishermen productive projects; it is even said that you can implement jobs within the plant to be directly affected by the project. Train them in productive projects, lobster and tilapia crops. All this is working and has not yet defined the type of project to be implemented, but that is the objective not to affect them and if there are some independent fishermen can approach the office of social communication.
2	We as oyster fisher of the zone of Acajutla have a certain restlessness because we hoped that the project will be constructed in field of work that we realize, since we do not have cooperative, nor anything because we are independent, because we are few and we work in the place, we are Only 5 and we are afraid that we will not be able to work there, hopefully they will take us into account for the development of the project. Excellent for the industry of our city.		
3	We are the oyster fisher, we live there, we need a job to survive, we have problems with this project, we hope it does not affect us. I'm just talking about the oyster fisher		
	Social projects		
4	We need a bigger Social Security to give more attention to the insured people. Also, a public hospital for the entire population, to give them medical attention closer not to travel to Sonsonate	Col. Los Laureles, calle principal	The projects will not only be annual, they will be implemented in two three years, they will benefit diverse sectors, for example if they have needs some cooperative or community with service of water or electricity or any other basic service or construction of park or something. They can approach the mayoralty they are already working on that, the needs can
5	Education projects are for government institutions, as for private institutions, such as the school of Acajutla	Col. San Emilio	

6	In an emergency of seriousness, in which they would help each community		be incorporated into the strategic plan and so they are going to be approved, energy from the pacific will oversee implementing programs that can also be educational, I understand that the mayor already has a scholarship program, then we can also contribute to this Thus ensuring that the personnel hired in Acajutla will have the technical academic knowledge to be able to be part of the stage of construction or operation of the plant. Regarding the female sector, of course they will be considered, as long as they take the respective channels in this case, the mayor's office and the FISDL, as we will execute the works that they will approve, these benefits are during the 23 years that have begun to 2015.
7	The project is very good, excellent. In case of a major emergency, what organization will support Energías del Pacífico		
8	Since we have the mayor at this time, I want to ask what possibility there is with a bridge that unites El Milagro, with the neighborhood Los Laureles.	Acajutla, col. El Milagro	
9	There is a Strategic Plan for the Port of Acajutla	Fire Department of El Salvador, Sonsonate	
10	What benefits will we of the elderly		
11	How much is or will be the social reach for the population	Neighborhood Las Peñas y col.	
12	There will be social projects aimed at supporting schools and the community in general	School center "Col. Alvarado"	
13	If the plant is established, it will have a shocking and direct investment in the communities of the Port of Acajutla, considering that Acajutla is very poor, although there are other plants	Baptist Church "Tabernáculo de Dios con los hombres"	
14	To present the projects, there is some format how The Culture House can present projects, projects will be infrastructure or intangible culture	Culture House	
15	For approval of projects in the municipality, with the resources of Energy Pacific, they must only be seen by the City Council and FISDL, because they do not include members of the ADESCOS to discuss these projects	ADESCOMAR	
16	All projects are good for our country	Industrial Zone	
17	How will the education of the city of Acajutla be	Col. San Emilio	

	benefit		
18	The municipality of Acajutla has much to do, such as street repair of the municipality. There are colonies that need introduction of drinking water	Col. Ciudadela CEPA, Acajutla	
19	The projects we need: introduction of drinking water, mini park, communal house, electric lighting	Com. Zona Industrial	
20	What will be the social relationship with the communities surrounding the project	Neighborhood La Playa, Communal commission of Civil Protection	
21	Seeing the future, after the 20 years of the contract won by Energías del Pacífico, the benefits that have been raised today, will continue or until there reached those benefits		
22	What benefits does Pacífico Energías offer when the plant is in operations in the communities of Acajutla	ADESCO MAR	
	Cost of electric energy		
23	Energy is one of the most expensive things we have. Lower costs with new power generation plant	ADESCO MAR	The entity that puts the prices is the SIGET, it does not depend on EDP, however, as government entities say, a lower energy cost is expected, but as I explained, it does not depend on EDP. The energy will be delivered to the national network, they will be in charge of delivering them throughout El Salvador, it is expected that the costs will be reduced. As one of the benefits, natural gas is cheaper than other fuels that exist in the market. It is expected that the cost of generation is cheaper and translates this price into invoices. One of the objectives of the project is the reduction of energy.
24	The use of natural gas will influence the rate of electric energy		
25	how much is projected will be the percentage of decrease in the electric bill	Neighborhood La Playa, Communal commission of Civil	
	Operation of the Power Plant		
26	When does the project start?	Col. El milagro	
27	n what part of the world does this type of plant work and what has happened against it and in favor	Col. Los laureles	
28	When the start of the plant construction.	Community Alvarado	

	Green areas will be reforested around the industrial zone		
	Mitigation and risks		
29	If our homes will end up damaging who will respond	Brisas de Acajutla	Energías del Pacifico is interested in safeguarding the safety of its employees, it will install a plan against accidents and the handling of the same, both in the construction stage and in the operation phase. Safety plan, we, regardless of internal manuals That we have for operation, there are other manuals that do not depend on us, I think that is already the responsibility of CEPA. The communication office for the damage that the project could cause to the dwellings, the corresponding compensation will be given if that is the case, work is also held meetings with the fire brigades for any situation that may be generated, which we hope will not happen for all security measures to be implemented at the plant. Plant requirements have been investigated to ensure that they have all the security mechanisms before any emergency. This study is the one in process, but if one is considering all the international requirements that apply for this type of projects. The study is being carried out to ensure that there are the smallest impacts on Communities, if a natural event occurs that is outside the activities of the Company, of course we have a liability policy with third parties for events, we will compensate the people who are affected.
30	What is the plan of work and security that they must the workers and the benefits that the company offers	Col. San Julian	
31	What will they do to minimize noise in neighboring communities and how will they ensure that this will not have an environmental impact in the future and what will happen with us	ACOOPPAC- Acajutla	
32	The communities close to the project, in case of deterioration in their homes, Energías del Pacífico will act on their problems	Col. Brisas de Acajutla	
33	We need a fire station to serve communities always, as well as factories	Com. Zona Industrial	
34	Apart from planting 10 trees for a felled tree, many trees will be planted regardless of how many trees are felled and according to the capacity of the land. They will only sow the trees or give them protection and the necessary care until their roots	Fire Department of Sonsonate	
35	If in the future, a worker or citizen will develop a disease, what would you do to help	Col. El barquito	
36	In case of fire, the chain reaction with other companies is considered. They will have a fire system, they will have fire trucks	Col. Rasa	
37	How to control whether the methods designed for the development and construction will be as presented, example if the trucks will not go through	Catholic Ministry of Communications and Evangelization	

	the city		The measures that have been taken to measure the effects of noise, are the installation of Mufflers of our equipment, also the design of the plant I consider putting the engines, which are the ones that produce more noise In the southern area of the land, as far away as possible from the dwellings, by doing so it has been achieved that the levels of annoying noises do not enter The area of housing, but remain in the industrial area. In relation to the trees we are required to plant and care for the trees, we must give the proper maintenance and is required by the Ministry of Environment. It will be implement a planting plan, in case someone wants to plant trees
38	In case of a natural disaster preventive measures are taken so that the project and workers are not affected		
	Natural Gas		
39	Which home appliances can be used with natural gas and in which arrangements are to be sold		Natural gas is found in deposits in the earth, is associated with the same oil deposits. It is composed mainly of methane gas, the benefits are related that it is a cleaner gas, the equipment gets dirty less, they last longer, they generate less emissions to the atmosphere, it does not have particles that generate smoke, it is economic, to be able to transport it compressed or Frozen can be stored large quantities on ships, then that helps to lower its price for the operation and this material has been used all around the world. In others countries, it is used not only as an energy generator but used in kitchens, used in kitchens
40	the natural gas will be exported or will be exploited in the country in the future		
41	Natural gas from which material is	Col. El Milagro	

			in heating as heaters
	Job		
42	We want women to be given the opportunity to work, if we can work. We want to work to get the family keep going		Within the job opportunities, everyone can participate and approach our office to be considered based on the profiles required by the project. Opportunities open to people of all ages; the most important thing is to know the skills of each of the candidates for the places they open. The recruitment process will be communicated the requirements and the conditions so that they can apply to these opportunities and properly present the information that is required. The operation of the project is January 1,2018, the contracting stage for construction will be carried out the other year. The operation stage will be in the year 2018. No contracting percentages are being handled for this municipality or another, however, it will be prioritized in the inhabitants of the area and contribute to the economic development of the municipality. Jobs for young people, of course may have opportunity, but you must consider the requirements of law to be hired according to the needs of the project, for example staff will be hired for earthworks. Will be contracted for the part of execution and operation. Also, mention that academic training programs will be included and some agreements can be made for projects focused on young people, to prepare them and become part of the operation.
43	From what has been heard so far, this project will be an employment opportunity only for the municipality of Acajutla. What percentage of employment opportunity will exist for the other municipalities, in this case Sonsonate specifically	Sonsonate Centro	
44	What types of workers will they have on board the ship anchored at the pier	Col. Los Laureles, calle principal	
45	They will give job opportunities to young people who have not had experience in any company	Col. San Julián	
46	After three years, how many people will be left with a fixed job or all will be		
47	Opens opportunities for people over 45, open jobs		
48	To work inside the plant, they will ask for some type of experience	Col. Linda Vista, Acajutla	
49	Open opportunity for people who own a metal structures workshop and do not have a tax credit to work	Col. Alvarado	
50	How will the hiring be able to work in the construction of the project	Nahuizalco, Sonsonate	
51	The plant should have more than 60% of the permanent jobs, only this would raise the economic Acajutla	Col. Acaxual	
52	Provide us with contractors and bidders who do not profit from our sweat, work and family support		

53	As they will verify that the contractors will fulfill in hiring people of the zone and what support they will offer to churches	Church Santuario del Dios de Elías	The professions, we will have an administrative area and a technical part, would be engineers as Electrical, mechanical, civil, technical in these areas. Or any other professions and administrative staff, human resources, accounting, but these are needs that we are going to make arrive at its moment. Possible employment shall be during part of construction of the project, the operation part will begin in January 20018, then the squares that are needed will be called and will be considered to the residents of the municipality of Acajutla, always prioritizing the needs of the local people. As far as the contractors will be a special care, will be prioritized in the needs of the worker. We give them our commitment that this situation will be sought in the best way and that the conditions are the best.
54	How much will the salary of the workers	Neighborhood los coquitos, Acajutla	
55	What would be the curriculum presentation period. Will have work opportunities for people whose ages are over 30 and up	School Liceo de Acajutla	
56	I think everything is excellent, work will be done regardless of age		
57	I hope they give employment to all the unemployed. people of Acajutla. Let them be fair wages, not like those of private enterprise, which are very small		
58	Anyone applying for a job will have it		
59	In addition to the 60 permanent jobs, they will have more temporary jobs during the generator's operations	Izalco, Sonsonate	
60	The benefits of work will be fixed or temporary	Col. Las Tablas, Acajutla	
61	When will the project start and when will they hire employees	Col. Ciudadela CEPA	
62	Work will be done on both the plant and the pier. What is needed to get the job	Col. Nueva Acajutla	
63	They will be given the opportunity to work for people residing outside the city of Acajutla, but from the same municipality	Punta Remedio, Los Cóbanos	
64	I would like to know if they will give opportunity to young people from 15 to 17 years to work in this	School Liceo de Acajutla	
65	When will the project start and when will they hire employees	Community el Obelisco	
66	What professions are needed to work in Energías del Pacífico	School Liceo de Acajutla	

67	They will be flexible for people who are working on local generators, noting that many people are prepared, even if they have not worked in this area	Sonsonate	
68	How will the female sector benefit and whether fixed jobs will be provided		

Project Comments

Some of the comments made by the people participating in the public consultation, regarding the implementation of the power plant, are related to the following opinions

Opinions of the habitants of Col. El Milagro municipality of Acajutla:

- We hope that everything they offer will be fulfilled. As we have experience of companies that have come to do their projects, when they are already installed they forget what they have promised. I hope it's true what they promise.

- The project is excellent because it allows us a development for our country, both for Acajutla and for the communities. The project is excellent

The leader of the Industrial Zone community expressed:

- As president of the Industrial Zone community I congratulate Energías del Pacífico for considering all communities of our Acajutla, thanks for the support

The participants also expressed:

- The electoral contests will not affect the project

- See priorities, as a company. We are all important, however little knowledge, we are all worth both the first and the last. Do not politicize the project.

“OPEN HOUSE”

As part of the methodology the "**OPEN HOUSE**" was carried out, with which the population was given an open space to expose the engineering of the project and to resolve doubts or comments on the part of the attendees.

The questions and comments were as follows:

- **How much will be the distance of the pipeline with the fishing zone and the residential area, what happens is that I have for a period requesting an environmental permit from the ministry for oyster farming, I would like to know how it will affect me?**

It is approximately 500 meters away to the residential area where the ship is located. The pier is 1.25 kilometers.

- **And the area that will be security, will be delimited by buoys, because otherwise they signal appropriately people do not understand?**

So far, the relevant risk studies and risk mitigation are being carried out, the most adequate way of signaling is being sought, in fact the MP must approve all these mechanisms and what is going to be proposed for the subject.

- **Would fishermen have to give a true longer spin to fish?**

Yes, we have done the relevant studies and are approximately 40 meters more than those who walk, do not go straight but in return.

- **Do not listen that there are projects of these, then do not listen that you say that they already have the restriction of the zone of risk, I feel that there are no alternatives to solve risks, for example the gas is volatile and it stays in the industrial zone?**

- **Are plans being drawn up at this time, based on local and international safety standards?**

The advantage of this type of project is that it has chimneys, which are high, and the gas does not stay down, but the hot one makes it go up, that is the advantage that does not cause damage to the people, that is what Is being sought, crude oil is more volatile.

- **The entrance for the personnel who contract where will be?**

3 entries will be enabled and displayed in the model.

- **A refinery project that was installed in Acajutla carried hydrosulfide, what it did was burn it, it was a sub product of the generation, this same thing will happen with this project?**

There will be a part where a flame burns any type of leak, there it burns and no problem occurs.

- **When implementing the project, we will lose our source of work, we are independent oysters fisher and with the construction of the pier we will be affected, what can you do for you to support us?**

We have a social communication office, you can approach and provide your data, we have a marine biologist who is monitoring the fishermen's cooperatives.

- **Where do trucks come in?**

We only have access by two places, the heavy traffic of trucks only we will do it by the "24 de Octubre" street. The third entrance is on the boulevard. For regasification, we have two inputs, for the energy generation we have one.

Final considerations of the public consultation event

- The people attending the event participated openly in the activity, expressing their opinions and comments on the project, which enriches the process of preparation of the Environmental Impact Assessment.

- In a positive way, it was attended by actors who were part of the process of citizen participation. On this occasion, we reaffirm the interest of community leaders, churches, schools, fire brigades, fishermen's cooperatives, among others, on the activities to be carried out in the execution of the power generation project in the Port of Acajutla.

- The population assistance was massive, with the participation of people residing outside the area of influence of the project (Acajutla), from the center of Sonsonate, Izalco and Nahuizalco, which becomes a sample of the interest that the population Has on the implementation of the project.

- The population perceives in a positive way the social responsibility that EDP develops and the sources of employment that are generated in the construction and execution phase of the project, mainly because it will be prioritized in the people living in the zone of influence of the project (Acajutla).

- It was a total of 128 people, among these 22 women who attended the event and 106 men. The women as a vulnerable group consulted in the process of citizen participation, again expressed the interest of being part of the process of hiring employees that will require the project, in addition, to request the support of EDP for the execution of social projects of its benefits.

- The execution of social projects, as part of the social responsibility of EDP, obtained positive opinions by the different sectors of the municipality, requesting the support for the implementation of activities for the benefit of communities, schools, churches, health centers, among others.

Below is a photographic record of the activity:

IN THE PHOTOGRAPHS, IT CAN BE OBSERVE THE ASSISTANCE OF PEOPLE TO THE EVENT AND DIVERSE STAKEHOLDERS INVOLVED IN THE PROJECT, WHICH WAS REQUESTED THE GENERAL DATA

THE PRESENTATION OF THE PUBLIC CONSULTATION WAS CARRIED OUT WITH THE PARTICIPATION OF DIVERSE STAKEHOLDERS INVOLVED IN THE PROJECT AND POPULATION IN GENERAL

IT WAS PRESENTED THE PRELIMINARY RESULTS OF THE ENVIRONMENTAL IMPACT ASSESSMENT

THE SPACE FOR QUESTIONS AND COMMENTS IS DEVELOPED BY THE PEOPLE ATTENDING THE EVENT, IT WAS GIVEN RESPONSES TO THE QUESTIONS

THE ASSISTANTS TO THE JOURNEY PARTICIPATE IN THE OPEN HAUSE IMPLEMENTED AS PART OF THE EVENT METHODOLOGY

4. LISTA DE ASISTENCIA

LISTA DE ASISTENCIA

Tipo de reunión: Consulta pública previa, en referencia al proyecto: "Generación de Energía"
Fecha: Fecha: Sábado 18 de octubre de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
1	[redacted]	hombre	Col. Alvarado	[redacted]	
2	[redacted]	M	Ciudadela	[redacted]	
3	[redacted]	M	Col. Central #4	[redacted]	
4	[redacted]	M	Col. Ciudadela Cepa	[redacted]	
5	[redacted]	M	col. Palmeras, Sonsonate	[redacted]	
6	[redacted]	F	Col. El Milagro	[redacted]	
7	[redacted]	M	Col. el obelisco	[redacted]	
8	[redacted]	M	Acajutla.	[redacted]	
9	[redacted]	M	San Pedro	[redacted]	
10	[redacted]	M	Kl 2	[redacted]	
11	[redacted]	F	B° Los Atorrayos	[redacted]	
12	[redacted]	M	LA COQUERA	[redacted]	
13	[redacted]		CEPA	[redacted]	
14	[redacted]	M	San Salvador	[redacted]	
15	[redacted]	M	Col. 15 de octubre	[redacted]	

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Fecha: Fecha: Sábado 18 de octubre de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
		M	Ciudadela cepa		
		M	Barrio la playa		
		M	Sonsonate		
		M	san julian		
		M	San Julian		
		F	B° los coquitos.		
		F	B° los coquitos.		
		F	Colonia R A . S . A		
		M	Acajutla		
		M	Rosarios de acajutla		
		M	Cuerpo de Bomberos Sonsol		
		M	Grupo de Bomberos		
		M.	[illegible]		
		F.	ciudadela cepa		
		M	PAN x VIDA		

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N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
	[redacted]	M	Blas co Chi Tas	[redacted]	
		F	cera de la vellieca, a.		
		M	San Julian		
		F			
		M	San Emilio		
		M	el Barquito		
		M	Col. El barquito		
		M	B. Los Coquitos		J.P.H.A
		M	Col. San Julian.		
		M	Cl. los cauches		
		M	Bomberos		
		M	SON SONOTE		
		M	Cuerpo de Bomberos		
		M	Iglesia Catolica		
		F.	I&P.		

LISTA DE ASISTENCIA

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Fecha: Fecha: Sábado 18 de octubre de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
1		H	Comunidad Santa Adela		
2		M	ACOOPPAC.		
3		M	RASA H2TDD		
4		M	SUBA Petroleo.com		
5		M	Comunidad los laureles		
6		F	UDP Ciencias Neotropicales		
7.		M.	Cantaro, Pta. Remedio. L.		
8		M.	Sonsonato. -		
9		M	Com. Llanadu		
10		M	COOPASAN-1 Medico		
11		M	Iglesia Santuario		
12		M	Acajutla milagro		
13		M	Nahuizalco - Sonsonate		
14		M	Kilo - 5		
15		M	colo linda vista		

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Tipo de reunión: Consulta pública previa, en referencia al proyecto: "Generación de Energía"
Fecha: Fecha: Sábado 18 de octubre de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
1	[redacted]	M	Ciudadela Clpa	[redacted]	
2	[redacted]	M	Acajutla	[redacted]	
	[redacted]	M.	cm. El Weisco.	[redacted]	
	[redacted]	m.	col- OBRERA	[redacted]	
	[redacted]	M	col. playa	[redacted]	
	[redacted]	m	Acajutla	[redacted]	
	[redacted]	F	Urb. Brisas de Acaj. Nº1	[redacted]	
	[redacted]	F	Urb. Brisas de Acaj #1	[redacted]	
	[redacted]	M	Col. MAGDALENA	[redacted]	
	[redacted]	M	SD PNC ACAJUTLA	[redacted]	
	[redacted]	M.	SD. PNC Acajutla.	[redacted]	
	[redacted]		st agueda	[redacted]	
	[redacted]	F	Comandari	[redacted]	
	[redacted]	M	Santa Agueda	[redacted]	
	[redacted]	M		[redacted]	

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Tipo de reunión: Consulta pública previa, en referencia al proyecto: "Generación de Energía"
Fecha: Fecha: Sábado 18 de octubre de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
1	[redacted]	M	Ahuachapan	[redacted]	[redacted]
		M	Acajutla		
		M	ACAJUTLA		
		M	"		
		M	Acajutla		
		M	WARTSILA		
		M	EDP		
		M	Grupo GM		
		M	IFC		
		M	B. Atarvayas, Acajutla		
		M			
		F	Col. El Barquito		
		F	C.E.Col. Alvarado		
		M	zona Industrial		
		F	ADESCOMAR		

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Tipo de reunión: Consulta pública previa, en referencia al proyecto: "Generación de Energía"
Fecha: Fecha: Sábado 18 de octubre de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
	[redacted]	F	Alcaldía Acajutla	[redacted]	
		F			
		M	B. las Atarrayas		
		M	B. El Componedo		
		M	ACOOOPAC		
		M			
		M	Acajutla		
		M	5 de		
		M	Los laureles		
		M	Nueva acajutla		
		M	Kilo 5		
		M	Linda Bista		
		M	B° la playa		
		m	col. Acaxual #2		
		m	col. Acaxual #2		

LISTA DE ASISTENCIA

Tipo de reunión: Consulta pública previa, en referencia al proyecto: "Generación de Energía"
Fecha: Fecha: Sábado 18 de octubre de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
	[redacted]	B.Masculi	Col. El Milagro	7nC1279 82	
		Masculino	Asentamiento Campesino		
		Masculino	Canton San Julia Caserio Colima		
		M	Col. Obrera		
		M	ADESCOMAR		
		F	Col. Sta. Emilia, Izalco		
		M	Col. Los Laureles.		
		M	UDP Cuscatlan Norte Izalco		
		M	UDP		
		F	Sonsonate		
		M	Sonsonate		
		M	Nahuizalco, Sonsonate		
		M	Acajutla		
		M	Santuario Iglecia		
		M	ADESCOMAR		

LISTA DE ASISTENCIA

Tipo de reunión: Consulta pública previa, en referencia al proyecto: "Generación de Energía"
Fecha: Fecha: Sábado 18 de octubre de 2014

N°	Nombre	Sexo	Nombre de la institución social de la cual proviene	Teléfono de contacto	Firma
	[redacted]	M	Asociación Obrera	[redacted]	
		M	ACPETAMAR		
		M	Col Acaxual		
		M	col milagro		
		M	Col. ciudadela		
		M	Km² Acajutla		
		M	colonia Lue. 5		
		M	colonia. Sn. emilio		

Copies of Delivered Material

QUESTIONS OR COMMENTS SHEET

QUESTION/ COMMENT	
NAME OF PLACE OR INSTITUTION WHICH COMES	

Energía del Pacífico, S.A. de C.V.

QUESTIONS OR COMMENTS SHEET

QUESTION/ COMMENT	
NAME OF PLACE OR INSTITUTION WHICH COMES	

P R O G R A M

SCHEDULE	ACTIVITY
9:00 a 9:30	⇒ Reception and registration of guests.
9:30 a 9:35	⇒ Introduction & meeting objective
9:35 a 9:55	⇒ Presentation on generalities of the ⇒ Project and Timeline
9:55 a 10:25	⇒ Process to obtain environmental permission. ⇒ Environmental baseline presentation found in Acajutla. ⇒ Potential impacts and mitigation measures.
10:25 a 10:35	⇒ Project Benefits ⇒ Social Projects. ⇒ Next Steps (Work Program)
10:35 a 11:00	⇒ Questions / answers. *(PLEASE WRITE YOUR QUESTION ON THE SHEET GIVEN TO THE START AND DELIVER TO SOME OF THE HOSTESSING IN THE TRANSCURSION OF EVENT.)*
11:00 – 11:45	⇒ Space Open to the Public- A tour of the model and images of the plant. ⇒ Refreshment

PROCESO DE EVALUACIÓN DE IMPACTO AMBIENTAL :

El estudio de Impacto Ambiental en elaboración incluye la evaluación de los efectos potenciales del proyecto sobre el medio en el área de influencia del mismo, e identificará las medidas de mitigación y acciones de manejo que pueden ser implementadas para limitar los efectos negativos y aumentar los beneficios. Se están analizando:

ASPECTOS FISICOS

- Calidad del aire.
- Ruido y vibraciones.
- Riesgos geológicos (sismicidad, incluyendo el riesgo de tsunami).
- Suelos.
- Aguas superficiales y subterráneas, incluida la calidad del agua marina.
- Transporte de sedimentos costeros.

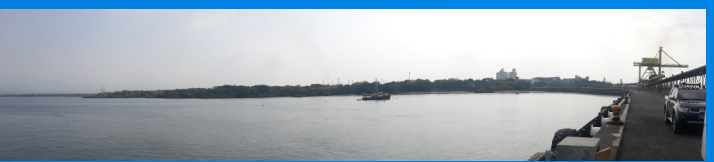
ASPECTOS BIOLOGICOS

- Ecosistemas, áreas protegidas y sensibles.
- Flora y fauna terrestre.
- Flora y fauna marina.
- Vectores de enfermedades

ASPECTOS SOCIOECONOMICOS

- Uso existente y planificado de la tierra.
- Demografía y población
- Actividades económicas, como la pesca.
- Salud y seguridad de la comunidad.
- Cultural: recursos arqueológicos, ceremoniales e históricos.
- Salud y seguridad de los trabajadores.

Se desarrollará un sistema de gestión ambiental y social, a implementar durante la construcción y operación del Proyecto.



PARTICIPACIÓN CIUDADANA :

Las actividades de participación de las partes interesadas se han diseñado para ayudar a EDP a conocer sobre las preocupaciones que particulares u organizaciones pudieran tener, para recopilar información de antecedentes y obtener conocimiento sobre los efectos potenciales y las medidas de gestión propuestas.

Las principales actividades de participación que se llevarán a cabo son:

- Publicación de anuncios sobre el proyecto, incluida la notificación de la disponibilidad de los documentos y las oportunidades para hacer aportes al Estudio de Impacto Ambiental (EIA)
- Reuniones de consulta con agencias gubernamentales y organizaciones no gubernamentales.
- Apertura de un Centro de Información Pública en Acajutla, donde los interesados puedan obtener información sobre el proyecto y proporcionar comentarios y aportaciones.
- Entrevistas y reuniones de consulta con el público en general para presentar el proyecto y las conclusiones del proceso de evaluación de impacto ambiental.

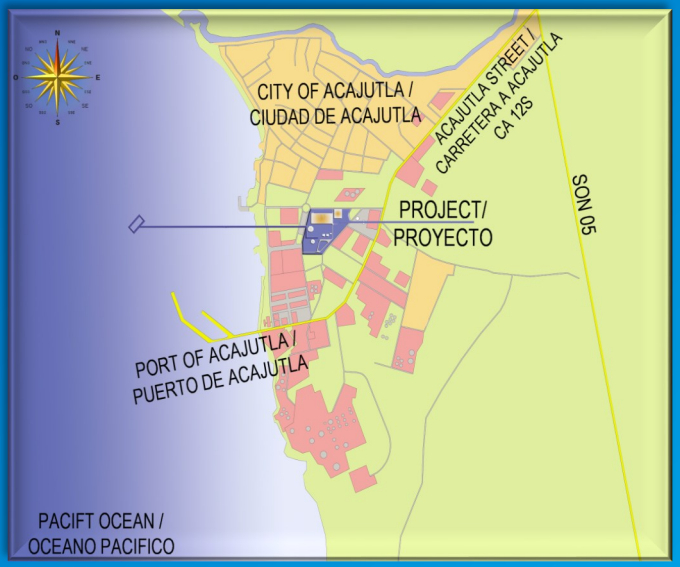
EDP dará un seguimiento a los comentarios e inquietudes, y se contará con un mecanismo para hacer frente a cualquier consulta específica que pueda presentarse.

Para obtener mas información, pueden ponerse en contacto con:

Departamento de comunicaciones de Energía del Pacifico S.A. de C.V.
Col. RASA 1, calle circunvalación casa #44, ACAJUTLA, Sonsonate.
Teléfono: 2452-6313
E-mail: blovato@edp.com.sv

PROYECTO
GENERACIÓN DE ENERGÍA ELÉCTRICA
LNG TO POWER

"UNA NUEVA ENERGÍA PARA EL SALVADOR"



UBICACIÓN:

El proyecto se ubicará dentro de terrenos de la COMISIÓN EJECUTIVA PORTUARIA AUTÓNOMA, en el PUERTO DE ACAJUTLA , rodeado de terrenos de uso industrial.

Este emprendimiento brinda la oportunidad de introducir gas natural, un combustible limpio, abundante y económico, en la matriz energética de El Salvador.

CONSTRUCCIÓN Y OPERACIÓN PROGRAMACIÓN Y FUERZA DE TRABAJO:

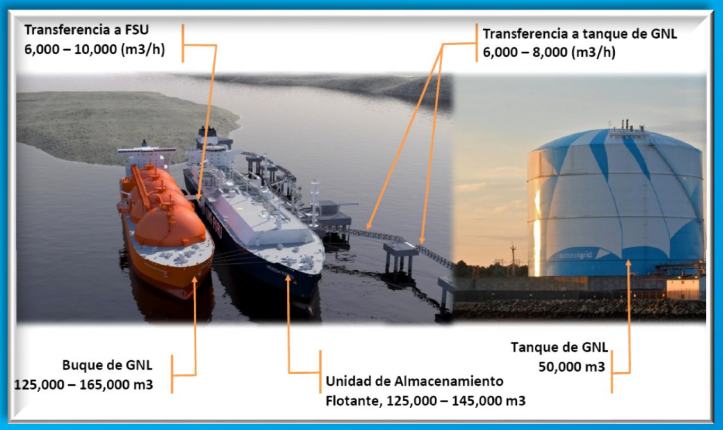
Se espera contar con aproximadamente 60 empleados permanentes para las operaciones, y la fuerza laboral a emplear para la construcción será de 1000 empleados aproximadamente. La construcción iniciara en 2015 y tomará alrededor de 3 años.

Con el mantenimiento adecuado y reparaciones, la planta será capaz de funcionar durante varias décadas.

"El Gas Natural es un combustible más limpió, seguro y económico que otros combustibles fósiles"

EL PROYECTO QUE SE INSTALARÁ EN EL PUERTO DE ACAJUTLA CONSTA DE:

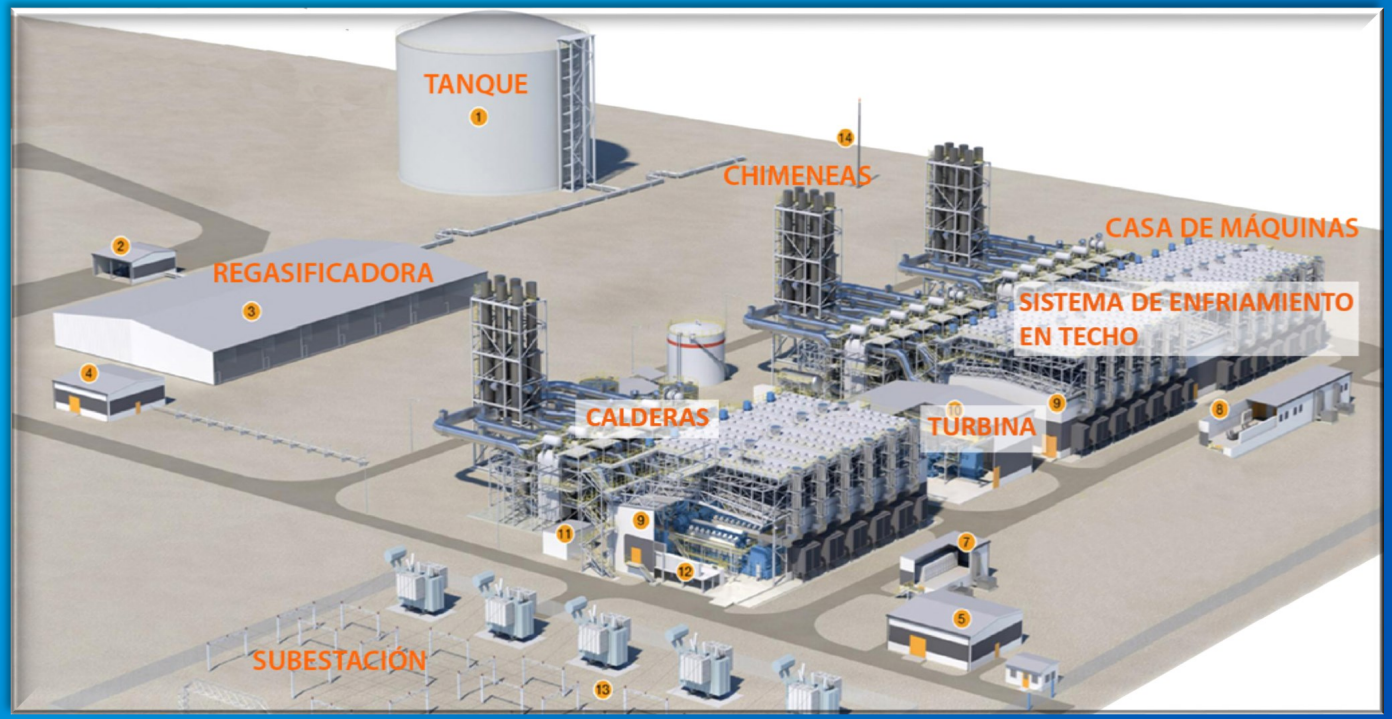
Una TERMINAL PARA LA RECEPCIÓN DE GAS NATURAL LICUADO (GNL), adecuadamente dimensionada para la recepción de buques tanques y almacenamiento del producto.



Lo principales componentes de la terminal son:

- Una unidad de almacenamiento flotante (buque tanque) que permanecerá anclada a un nuevo muelle a construir para el proyecto, cerca del actual muelle del puerto de Acajutla.
- Un tanque de almacenamiento de GNL en tierra, para complementar el almacenamiento del GNL.
- Una tubería para transportar el GNL de la unidad flotante a la unidad en tierra.
- Una planta de regasificación, para convertir el gas natural licuado a gas natural.

Una PLANTA DE GENERACIÓN ELÉCTRICA de ciclo combinado con una potencia de 380 MW que operará con gas natural como combustible.



Presentación Hecha al Público en Relación a Los Avances del EsIA

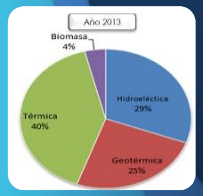
THERMAL POWER PLANT

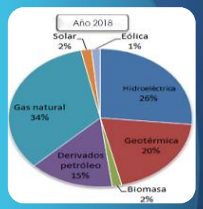
ENERGÍA DEL PACÍFICO

PROJECT OVERVIEW

- A **380 MW capacit power plant** will be installed in the port of **Acajutla**, Sonsonate.
- The plant wil supply electricity to the seven distribution companies throughout the country.
- Natural gas will be used, the cleanest source available for generating electricity in thermal plants.

PROJECT NECESSITY



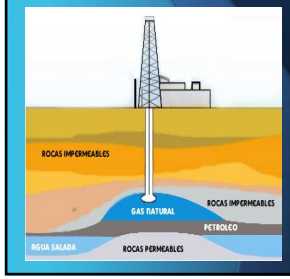


- El Salvador needs to expand its production of electricity to be able to contribute to the economic and social development that the country's growth and population demand
- Energía del Pacífico won a contract to generate electricity of 355 MW for 20 years. This will help El Salvador expand its electricity generation (energy matrix) and guarantee a supply of energy to the country and its inhabitants

NATURAL GAS ADVANTAGES

Natural gas is a fossil fuel found in nature. It is extracted from the earth.

- **Its safe**
  - **Natural gas is lighter than air and easily diluted in the environment.**
  - **It is easily regulated, so less quantity is required to generate more electricity.**



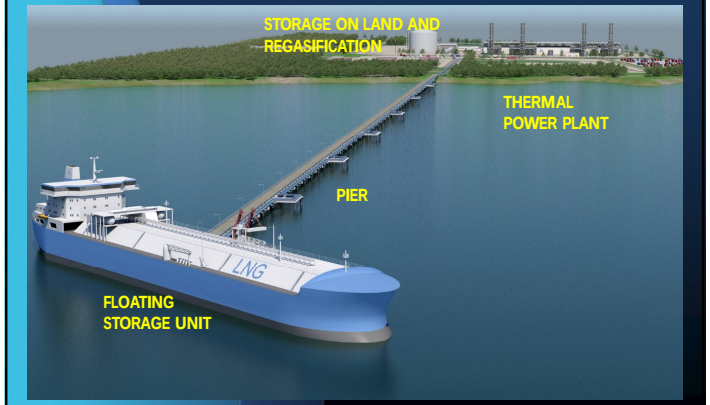
- **Its clean**
  - **Natural gas burns faster, has less carbon, generating less CO2 into the environment**
  - **It is stored easily and its use does not leave residues in the equipment**
- **Its cheap**
  - **I costs less than LPG, bunker, diesel and other fossil fuels used for power generation**

THE PROJECT

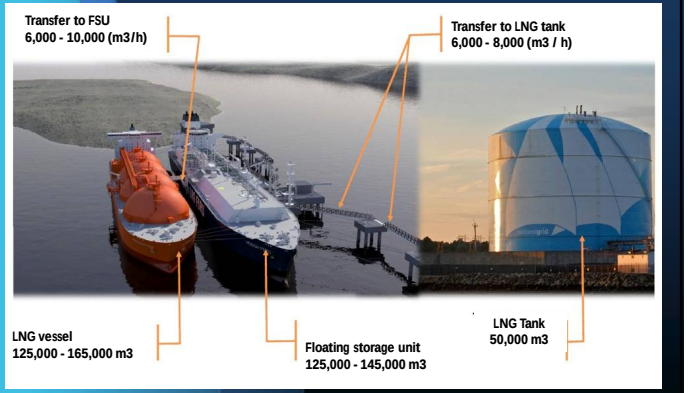
The project is located in land of the industrial zone of the Port of Acajutla.

It is located adjacent to other plants and vacant land for industrial use

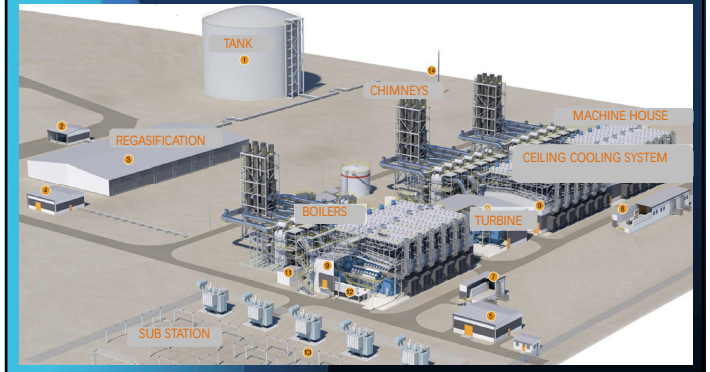
THE PROJECT, ELEMENTS



Natural Gas Storage



THERMAL POWER PLANT



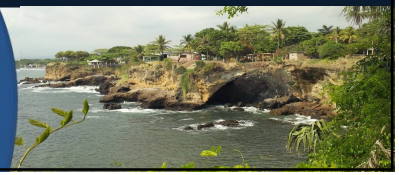
Thermal Power Plant Project

Energía del pacífico

ENVIRONMENTAL PERMIT PROCESS

Why an Environmental Impact Study is Needed

- Comply with the requirements of the Environmental Law for this type of projects
- Comply with the requirements of the project's financial agencies.
- Be able to make the project integrate into the environment where it will be located, in its natural (air, soil and water) and socio-economic aspects



Completed Activities

Air Quality Studies.

Noise Studies.

Water quality analysis, on land and at sea.

Biological studies: trees, shrubs, herbs and fauna present on the land.

Socio-economic studies of the city of Acajutla and Citizen consultation activities

Consultation and meetings with institutions: MARN, ANDA, MINISTRY OF ECONOMY, among others.

Environmental Impact Study

This impact study will be presented to:

- MINISTRY OF ENVIRONMENT
- INTERNATIONAL FINANCIAL CORPORATION (WORLD BANK)

To give their comments and subsequently their approval

A summary document will be available at the project communication office for anyone wishing to consult it

Thermal Power Plant Project
Energía del pacífico

POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES

Construction Stage Noise

During construction, typical noise sources are:

- ✓ Machinery, generators, traffic

To avoid disturbing the population by noise, the following prevention measures will be applied:

- ✓ Carry out the noisiest activities during the day
- ✓ Use of mufflers in equipment
- ✓ Restrict the passage of trucks in residental areas
- ✓ Locate noisy equipment away from residential areas and barriers will be used if necessary.

Most construction noises are not heard because there are high noise levels in the area, given that it is an industrial zone

Operation Stage: Noise

- When the existing thermal power station is operating the noise of the new Thermal Power Station will not be heard.
- The noise generated by the plant will be less than the established standard, when only the plant is operating.
- Low-frequency noise (which causes vibration) will be below normative levels and will be below the levels that make walls and windows vibrate.
- Noise levels will be measured at the when operations begin and annually.

The noise is reduced due to the installation of mufflers and because engines have been located in the southern part of the land, away from the dwellings

Air quality - Dust in the construction stage

To prevent dust discomfort, a dust control plan will be implemented, including:

- Speed limits will be set
- Trucks will be covered
- Irrigation will be used
- Tire cleaning will be done before exit
- Material that is dragged and dropped on roads will be cleaned.

Air quality during operations

- Natural Gas is the cleanest compared to oil and coal (less sulfur, nitrogen dioxide and particulates) so the emissions from the plant will be below the norm
- The chimneys have been grouped to improve the dispersion in groups of four chimneys, each with a height of 50 m
- Emissions were estimated using methods of the United States Environmental Protection Agency, which indicate that they will be below the norm.

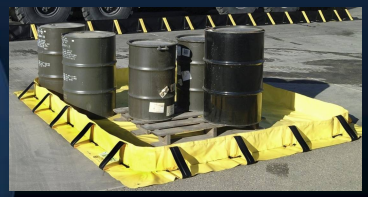
EDP will monitor emissions and ambient air quality during operations

Construction stage Spills and wastewater

Paints, oil, fuels, and other building materials will be used.

- A spill prevention and wastewater treatment plan will be implemented
- Emergency procedures will be available in case of accidental spills to protect soil and water

All wastewater will be treated in compliance with the regulations



Example of prevention measure

Operation Stage Spills and wastewater

During operations, lubricating oils are used in the for engines and equipment. And in less quantity other chemicals in the workshop: solvents, paints, chemicals to treat water, among others.

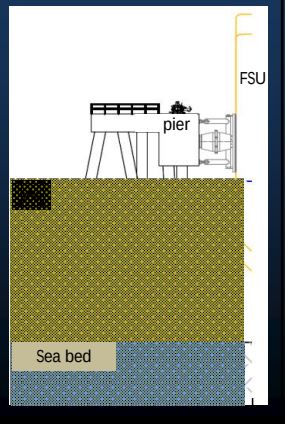
- Spill prevention measures and cleaning plans will be implemented in case of accidental spills, to protect soil and water.
- All wastewater will be treated to comply with current regulations

Water Supply

- Water consumption will be minimal because radiators will be installed instead of cooling towers on the roof of the engine room, with water recirculation.
- The water will be obtained from wells within the land, both for the construction and for the operation stages of the Project
- The aquifer has enough water to provide the Project without affecting other wells in the area.

Sea water and sediments

- The pier will be built on piles, so it will not have major effects on the currents and sediments on the coast.
- The construction of piles will cause the dispersion of sediment, for a very short period and limited to the near area of the construction.
- The pier will be located in deep water, 1,250 m from the coast, not producing effects by the movement of the ships



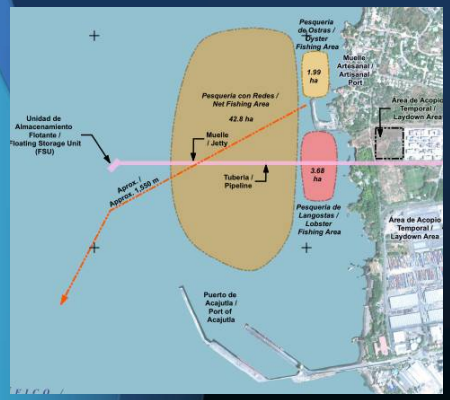
Terrestrial Flora and Fauna

- The project is located in an industrial area with very little vegetation.
- A study of flora and fauna has been carried out.
- Ten tress will be planted for each tree removed.
- For the fauna measures to rescue the fauna that is found during the construction will be proposed, and plantation of fruit species that feed the present fauna will be done.

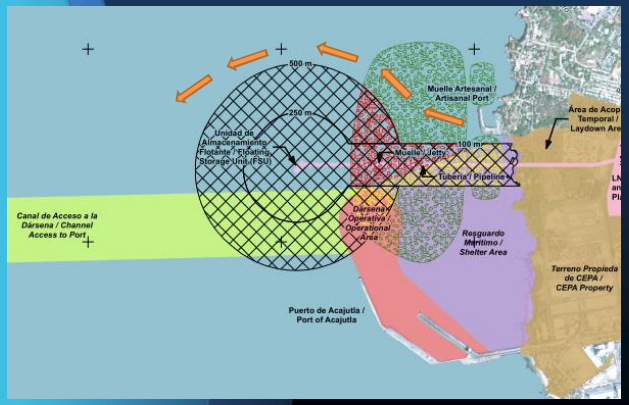
Effects on fishing and passage of boats

- To protect the Fishermen and people in boats a restriction zone is established around the pier and storage vessel.
- Some fishing areas are reduced, so further distances for open sea fishing is necessary.
- EDP has held several meetings with local fishermen's cooperatives (ACOOPPAC & ACPPRA) and independent fishermen.
- EDP is committed to properly compensate those affected - Future meetings will be held with the Fishermen to define the compensation plan.

Current fishing areas



Restriction zones

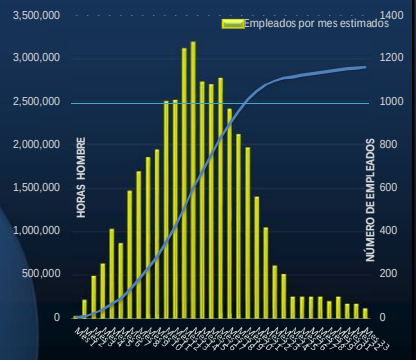


Public Health and Safety

- EDP is aware of the concerns of the community regarding the effects of health.
- Studies of noise and air quality show that the effects will be under the norm so no effect on the health of the population is expected.
- Construction traffic will use designated roads and will not pass through residential areas.
- A complete risk study of the Project is being carried out to guarantee security, through preventive measures and good practices of operation.

Employment

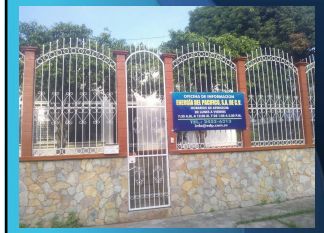
- An approximate maximum of about 1,000 construction workers will be required - and about 60 workers for operations.
- Buses will transport workers from outside the area on site.
- EDP is committed to hiring local people who have the right skills.
- EDP will facilitate local contracting



Public consultation

- The comments of the communities have been documented and are being considered in the development of the Project.
- EDP will continue to inform and listen to local communities during the development of the Project.
- More information on the projects is available at the Project's communications office and anyone who wishes to leave comments can leave it there.

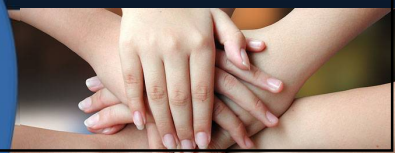
Public Consultation

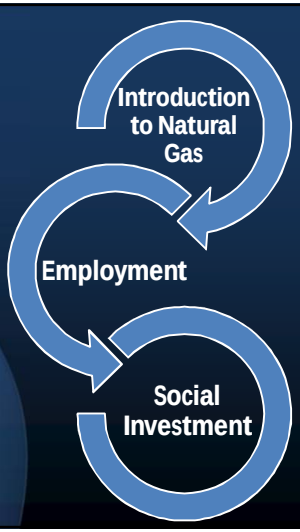


- EDP has opened a communications office in Acajutla and has established a website with information on the Project.
- Anyone can come to leave their comments or report complaints regarding the execution of the Project, in the office, by phone, email or written.
- EDP will document, review and respond to any concerns received by any means and will attempt to resolve any complaints as soon as possible.

Benefits of the Project

The Project will transmit benefits that will be presented at national, regional and local level in our country. A description of the key benefits is outlined below:





Introduction to Natural Gas

The project will introduce natural gas (GN) to the Salvadoran market, thus reducing the country's dependence on petroleum.

Natural gas is recognized as the preferred fuel for the environment for the generation of electric energy, compared to oil and coal.

In addition, the investment of the project in an LNG receiving terminal may allow other industries to convert their fuel to natural gas. Such conversion can bring greater environmental and economic benefits.

Employement

Most of the workforce required for the development of the Project is expected to be in a high percentage, obtained from local and regional communities,depending on technical and academic requirements.

The construction phase will provide temporary employment to approximately 1,000 people during the peak period.

These jobs will be required in stages because construction will extend for approximately 3 years

Employement

The operating phase will create around 60 permanent jobs, prioritizing all employees to be nationals.

Details on job profiles will be available in the second half of 2015.

Indirect employment will rise in the area as a result of the demand created by the Project for goods and services that could include housing and the food and beverage industries.

Social Investment

Energía del Pacífico (EDP) is committed to contribute to the social development of the municipality of Acajutla.

The communities can present their proposals for social development projects to the Mayor of Acajutla, who, supported by FISDL, will approve and submit all projects to EDP for execution.

Social Investment

The following are the steps for the approval and execution of Social Investment Projects :

1. EVALUATION OF PROJECTS
The works will be proposed, evaluated and prioritized, taking into account the needs of the communities, the Social Investment Fund for Local Development (FISDL) and the Mayor's Office of Acajutla

2. PROJECT APPROVAL
The works that are agreed by the FISDL and the Mayor's Office will pass to the approval of the MUNICIPAL COUNCIL

3. EXECUTION OF THE WORKS
Energía del Pacífico will carry out the authorized works. Investing approximately $ 530,000 each year

Social Investment

EDP will invest the amount of$ 532,500.00, annually for a period of 23 years, in SOCIAL DEVELOPMENT WORKS in the MUNICIPALITY OF ACAJUTLA, beginning in 2015

Other Benefits

The electric energy injection generated by the Project represents about 1/3 of the current installed capacity in the country.

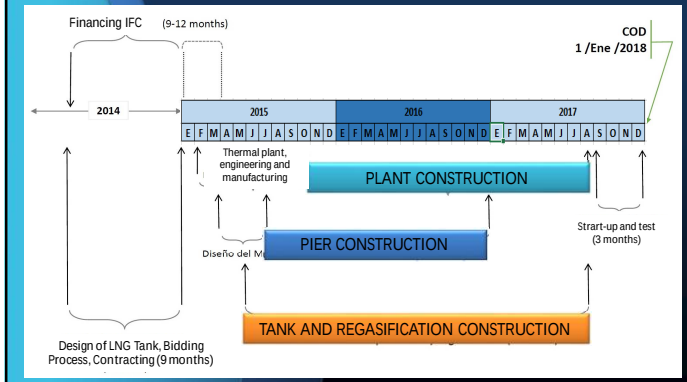
e project will have foreign investment. One of the benefits of foreign direct investment is that it helps in the economic development of the country where the investment is made.

The project will make capacity available to meet the expected increase in energy demand, so that the country will not suffer from shortages and blackouts in the near future.

Next Steps

The Project is composed of several stages, the following is a summary of the Work Program and the next steps to begin:

Work Program



Means to Obtain more information

Project Communications Office:
Colonia RASA 1, Calle Circunvalación, casa #44, Acajutla, Sonsonate

Telephone Attention Line:
2452-6313

email: info@edp.com.sv
website:
http://www.energiadelpacifico.com/

THANK YOU FOR YOUR ATTENTION

Copias de Comentarios y Preguntas Recibidas

COMENTARIOS GENERALES ACERCA DEL PROYECTO

Cumplir lo ofrecido

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Todo lo que ofrescan que lo cumplan. Como tenemos experiencia de empresas que han venido a hacer sus proyectos a realizar cuando ya estan instaladas se olvidan de lo que han prometido. Que sea cierto lo que prometen
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	El Milagro.

Politica

No Politizar Proyecto

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	1) Las contiendas electorales no afectara al proyecto 2)
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

No politizar el proyecto.

Comentarios

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	* OJO * Ver Proridades como Empresa todos somos importantes Por muy Poco el subir todos somos importante tanto el Primero como el ultimo y no Politizar el Proyecto.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Col. Loxual. Acojutla

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	El Proyecto es excelente porque nos permite un desarrollo en nuestro país para mejorar. Tanto en Acajutla los permite en pocos para nuestro comunidades. el Proyecto es excelente.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Colonia el milagro · Acajutla ·

Felicitación

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Como Presidente de la comunidad zona: industrial: felicito A Energia Del Pacifico Por tomar En cuenta a todas Las comunidades De todo Nuestro Acajutla gracias Por el APOYO:
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	zona industrial De Acajutla

PREGUNTAS PARA TEMA:
“EMPLEO”

Empleo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Queremos que se le de oportunidad a la mujeres si podemos trabajar Queremos trabajar para sacar adelante la familia
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Empleo para otros municipio

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Por lo escuchado hasta el momento Sera este proyecto una oportunidad de empleo Solo para el municipio de acajutla? Que porcentaje de oportunidad de empleo existiria para los demas municipios.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	en este caso Sonsonate especificamente. SONSONATE CENTRO

Trabajo en bug!

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	*Que tipos de trabajadores van atener abordo del bugue anclado en el muelle. * abra un hospital en el municipio de Acajutla para darles asistencia a la población en casos de emergencia por cualquier peligro de la planta.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	col. los laures calle principal

Trabajo

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Va ver oportunidad de trabajo para Jovenes q no han tenido experiencia en alguna empresa alguna?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Col. San Judian

Energía del Pacífico, S.A. de C.V.

Empleo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	despues de los tres años cuantas personas que daran con plasa o que daran todos
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Energía del Pacífico, S.A. de C.V. | Empleo Mayores

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	hopuertunidades mayores de 45 anos abera plasas
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Energía del Pacífico, S.A. de C.V. | Empleo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Para trabajar dentro de la empresa pediran algun tipo de experiencia.??
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Colonia linda vista - Arayutla

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Trabajo

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Habra o portunida para las parsonas que posean un taller de estructoras qua no posean cradito fiscal para laborar
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Colo Alvarado

Empleo

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Como será la contratación para poder trabajar en la Construccion del proyecto.-
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Nahuizalco, Sonsonate.

Inversión social

 Empleo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	La planta debería de tener mas del 60 % de los Empleados permentes Solo Así levantaría la economía Acajutla
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Col. Acaxual #2, Casa #10 Acajutla

Prevernos

 Empleo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Prevernos de contratista y licitadores que se lacraran (llevaran) de nuestro sudor y trabajo y nuestro sustento de familia por muy Poco son los salario mínimo
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Acajutla

Verificar Contratar gente de la zona

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	como van a verificar que los contratista si cumplirán en emplear a la gente de la zona y que apoyo brindaran a Iglesias
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Iglesia santuario del Dios de Elias

Empleo

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	CUANTO SERA EL SUELDO DE LOS TRABAJADORES
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	B LOS COQUITOS ACAJUTLA

Empleo

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Cual sería el período para presentar curriculos. Tendran oportunidades de Trabajo las personas cuyas edades pasan de los 30 en adelante
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Colegio Liceo de Acajutla

Energía del Pacífico, S.A. de C.V. Empleo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Meparese todo excelente sedara Trabajo atodos sin importar la edad
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	OJALA LES DEN empleO A TODOS LAS PERSONAS DE ACAJUTLA LOS DESEMPLEADOS.— Y QUE SEAN SALARIOS JUSTO NO COMO LA EMPRESA PRIVADA. SALARIOS MUY BAJOS.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Trabajo

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	cualquiera que salisste trabajo. la fuente aquí es el gobierno Nacional o de parte municipal
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Empleos Eventuales Operaciones

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Además de los 60 empleados permanentes, ¿Tendrán mas empleados eventuales durante los operaciones de la generadora?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Izalco

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Los banaficios de travajo seran Con plaza Fija o abentuales
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Colonia las tablas municipio Acajotla

Empleo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Cuando iniciara el proyecto y cuando contrataran a empleados?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	CIUDAD DELA SEPA

Empleo

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	¿Se trabajara tanto en la planta como el muelle? Que es necesario para obtener el trabajo?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	colonia Nueva Acajutla Somisonate Acajutla

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	pregunto. se les dará la oportunidad de trabajar. Personas que residan fuera de la ciudad de Acajutla. pero del mismo municipio.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	pta. Remedio - Los cóbanos

Energía del Pacífico, S.A. de C.V. | Empleo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Quisiera saber si daran Oportonidad a jovenes de 15 a 17 años a trabajar en este proyecto 7015-7052
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Colegio Liceo de Acajutla

Empleo

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Cuando Iniciara el proyecto Cuando Contrataran a empleados?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	comunidad el museo

Tipo de preparación para trabajar en el proyecto

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	¿Que profesiones son necesarias para trabajar en Energía del Pacífico.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Liceo de Acajuta

Empleo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	① COMO TOMARAN PARA LAS PERSONAS EN EL ÁREA DE AGRICULTURA Y SONSONATE SOBRE EL EMPLEO ② SERAN FLEXIBLE A PERSONAS QUE ESTAN TRABAJANDO EN LAS GENERADORAS LOCALES OBSERVANDO QUE HAY PERSONAS PREPARADAS AUNQUE NO HAYAN TRABAJADO EN ESTA ÁREA
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	SONSONATE

Energía del Pacífico, S.A. de C.V. Empleo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	De que manera será beneficiado el sector femenino y si se brindaran plazas fijas.?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

PREGUNTAS PARA TEMA:
“GAS NATURAL”

Gas natural

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	QUE EQUIPOS DEL HOGAR PUEDEN USAR EL GAS NATURAL Y CUALES DISPOSITIVOS SE USA A VENDER. MENCIONE PRECIOS APROXIMADOS
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Gas natural.

Energía del Pacífico, S.A. de C.V. | Técnicas Proyectos

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Si el gas natural será importado o se explotara del país a futuro.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Gas natural

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	El Gas natural de que materiales
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Acajutla Col. El milagro

PREGUNTAS PARA TEMA:
“MITIGACIÓN DE RIESGOS”

Daño a Casas cercanas

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Soy Representante de Colonias de Acayúca estamos ubicados frente al proyecto sí nuestras casas Si nos terminan de dañar quien nos responderaz
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Energía del Pacífico, S.A. de C.V. Seguridad

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Cual es el plan de trabajo y de seguridad q' tienen a los trabajadores y los beneficios q' la empresa ofrese
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Col. San Julian

- Ruido
Daño en las Costas

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	O"UAN hacer para minimizar el- RUIDO, EN las comunidades vecinos y como van A Garantizar O'esto No va a tener un impacto ambiental. para Nuestros Niños en un futuro, y en Nuestras costas. O' pasara.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	ACOOPPAC: ACAJUTLA..

Daño a viviendas cercanas

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Las comunidades cercanas al proyecto, en caso que se presenten deterioro a sus viviendas. Energía del Pacífico actuara en sus problemas
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Urb. Brisas de Acajutla #21

Puesto de Bomberos.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Como Comunidad - zona Industrial = y Para todo Acajutla Necesitamos un Puesto - De bomberos para Atender a toda Hora Alas comunidades como tanbien alas fabricas
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Presidente De la zona Industrial : De Acajutla

Medidas mitigación

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	A parte de Sembrar, 10 Arboles por 1 Un Arbol Talado, Sembrar Muchos Arboles Independiente de Cuantos Arboles sean Talados. y segun capacidad del terreno. - ¿ Solo Sembraran los Arboles ó les daran la proteccion, y cuido Necesario hasta su Segura Enraizada
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Bombros Sonsonate

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	# Si en un futuro un trabajador ó algun ciudadano llegara à desarrollar una enfermedad. ¿Que harian ustedes para ayudar.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Col. El Barquito.

Daño a peces

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	NO PERJUDICA A LOS PECES DEL MAR SERÍA MAS COMODO LA ENERGÍA O-MASCARO
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Se sabe q' como todo proyecto como este trae beneficios a la comunidad ... pero mismo - pregunta- Se ha tomado en cuenta la brigada de seguridad contra incendio desde el inicio del proyecto tomando en cuenta q' esta brigada trae ...
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Pemex

Seguridad y Riesgo

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	EN CASO de INCENDIO, Se CONSIDERA LA REACCIÓN EN CADENA CON OTRAS EMPRESAS? TENDRAN UN SISTEMA CONTRA INCENDIOS? CAMIONES de BOMBEROS E.T.C.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	COLONIA RASA.

Camiones en la ciudad.

Seguridad y Riesgo

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	- COMO CONTROLAR SI LOS METODOS PENSADOS PARA EL DESARROLLO Y CONSTRUCCIÓN SERÁN COMO SE HA PRESENTADO EJE: SI LOS CAMIONES NO ENSUCIARAN LA CIUDAD. - SI DENTRO DE LA CONSTRUCCIÓN DEL MUELLE NO DAÑARAN ARRECIFES.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	KAROL MEDIA MINISTERIO CATÓLICO DE COMUNICACIONES Y EVANGELIZACIÓN

Medidas desastres natural

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	¿En Caso de algún desastre Natural que medidas preventivas se tienen para que el proyecto, y trabajadores no se vean afectados?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

PREGUNTAS PARA TEMA:
“PLANTA DE GENERACIÓN DE ENERGÍA”

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	En que fecha empieza el proyecto
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Acajutla Col. el milagro

Planta
P

Planta

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	por que no vino mas Personal de medio ambiente. para corregir lo que usted. esta diciendo- ___ quiro saber en que parte funciona este tipo de planta y que a sucedido en contra, y a abien
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Representante col. Los Laureles

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Inicio
Reforestación

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	- Para cuando esta programado El inicio de la construccion. de la planta. - se van a reforestar zonas Verdes alrededor de toda la Zona industrial.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	comunidad. Alvarado.

PREGUNTAS PARA TEMA:
“PRECIO DE LA ENERGÍA”

Energía

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	La energía es de las cosas mas caras que tenemos. ¿Bajarán los costos con la nueva producción de energía?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	ADESCOMAR (Los Morritos) Acaxual-1. Col. Reina

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	El uso de Gas natural va influir en la tarifa de la Energia electrica
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Factura electricidad

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	¿Se tiene proyectado de cuanto sera el porcentaje de disminución en la factura electrica?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Bº la playa comisión comunal de Protección civil

PREGUNTAS PARA TEMA:
“PROYECTOS SOCIALES”

Atención médica

Energía del Pacífico, S.A. de C.V. | Proy. Sociales

por favor respondame esta pregunta gracias.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	* Necesitamos un seguro social mas grande para darles mas atención a la personas aseguradas. * Tambien un Hospital publico para Toda la población. para darles atencion medica mas cerca para no viajar a sonsonate.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	col. los laures calle principal

Educación

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Los Proyectos de Educación sea para las Instituciones de Gobierno como Instituciones Privadas, como lo es el Liceo de Acajutla.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Col. San Emilio

Ayuda a la comunidad

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	En una Emergencia de gravedad enque Ayudarían a la Comunidad?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Apoyo a comunidad

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	EL Proyecto esta muy bien excelente. EN CASO DE UNA EMERGENCIA. GRANDE QUE ORGANISACION DARA. APOYO A ENERGIA DEL PACIFICO?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Ya que tenemos Al Señor Alcalde en este momento Quiero preguntar que posibilidad Ay con un puente que una el milagro con la colonia los laureles
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Acajutla Col. El milagro

Plan estratégica puerto

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	*Que beneficios Trae la Generación de Energía Eléctrica. *Algún Plan estratégico para el puerto de Acajutla.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Cuerpo de Bomberos de El Salvador Sonsonate.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Que beneficio tendremos nosotros los de la tercera Edad
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Que tanto es o será el alcance Social para la población
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Barrio las peñas colonia el Barquito

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	#1 Habrán Progamas destinados a apoyar a los Centros Escolares y Comunidad en general? #2 Habrá disminución en el costó a Nivel Nacional?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Centro Escolar "Colonia Alvarado"

Inversión Social

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	* De estableserce la planta, tendran una Inversión social mas impactante, más directa, de hecho ya la población de Acajutla? - Porque como las demás plantas instaladas en el que Su Inversión Social entre la población de Acajutla es muy pobre casi nula?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	IGLESIA BAUTISTA EL TABERNÁCULO DE DIOS CON LOS HOMBRES. Tel. 24526523

Formato proyectos.
para que los haga EDP

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	para presentar los proyectos hay algun formato?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Celina Hernandez caso de la cultura

Energía del Pacífico, S.A. de C.V. Proy. Social

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Para aprobación de proyectos en el Municipio con los recursos de Energia del pacifico ¿Obligatoarimente solo tienen que ser vistos por el concejo Municipal y el FISDL? ¿por que razon no se incluyen a miembros de las ADESCOS para discutir estos proyectos?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	ADESCOMAR.

Cultura

Energía del Pacífico, S.A. de C.V. | Proyectos

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	1— Como cree d la cultura podemos prender proyectos? Los proyectos serán para infraestructura o cultura intangible.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Celina Alamonda caso de la colecta ecológica

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	todos los Proyecto son Buenos Para Nuestro Paiz
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	ΔCΔJΦ+IΔ Zona Industrial Fnte afircs

Cultura

Energía del Pacífico, S.A. de C.V. | Proyectos

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	1— Como esto de la cultura podemos presentar proyectos? Los proyectos serán para infraestructura o cultura intangible.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Celina Alarcon de Coso de la colleta ecojello-

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	todos los Proyecto son Buenos Para Nuestro Paiz
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	ΔCΔJΦ+IΔ Zona Industrial Frontaricas

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	De forma sera Beneficiada la educación en la ciudad de acajutla.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	COL. San Emilio

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	El municipio de Acajutla tiene mucho de acerca como Reparación de calles del municipio hay colonias que necesitan Introducción de agua potable.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Col. Ciudadela Copa Acajutla Sonsonate.

HOJA DE PREGUNTAS O COMENTARIOS

Trabajo para personas de mi comunidad:

PREGUNTA/ COMENTARIO	Proyectos - que necesitamos en la comunidad: zona industrial: 1) Proyecto de agua potable= 2) Un mini Parque= 3) Una casa comunal= 4) Alumbrado Electrico desde El ovelisco. Asta la Puerta N° Cepa:
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Zona Industrial De Acajutla Presidente= Nelson David Alvarado Rivera

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	¿Cúal será la relación social con las comunidades aledañas al proyecto?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Bº la playa comisión comunal de Protección Civil

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	Viendo a futuro ¿Despues de los 20 años del contrato ganado por Energia del pacifico los beneficios que se nos han planteado actualmente seguiran o hasta ahi llegaran esos beneficios!
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	¿Qué beneficios ofrece Energia del pacifico, cuando la planta se encuentre en operaciones a las comunidades de Acajutla?
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Asociación de Desarrollo Comunal colonia Los Morritos, Acaxual N°1 y colonia La Reina (ADESCOMAR)

PREGUNTAS PARA TEMA:
“SECTOR PESCA”

Pescadores Clangosteros

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	que VA A pasar con los pescadores Artesanales del sector, principalmente con los Langosteros
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	Aculutla

Precio Energía.
Trabajo pescadores

Energía del Pacífico, S.A. de C.V.

Pescadores

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	1) Será mas Barata la electricidad 2) para que departamento será 3) Dará mas plaza de trabajo a los Pescadores
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	JESUS Del Fijo Figueroa colonia el Barquito

Ostreros

Energía del Pacífico, S.A. de C.V.

Sector Pesca

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	nosotros como Ostreros de la zona de Acayutla tenemos una cierta inquietud porque apxerbamos q' el progecto estara construido. en campo de trabajo q' nosotros realizamos llaq' nosotros no tenemos cooperativa ni nada para' somos independientes porq' somos pocos y trabajamos en el lugar somos solo 5 y nuestro temor es q' ahy llanobamos apoder trabajar ojala nos tomenen cuenta, por el desarollo del proyecto exelente para la industria de nuestra ciudad.
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	

Ostreros

Energía del Pacífico, S.A. de C.V.

HOJA DE PREGUNTAS O COMENTARIOS

PREGUNTA/ COMENTARIO	nosotros somos Los Obreros que Vene Ficio. ocupamos nosotros porque de eso bivimos nese sitamos una trabajo para sobre vivir. nosotros Temos problema en este prollectos
NOMBRE DEL LUGAR O INSTITUCIÓN DE LA CUAL PROVIENE	esperamos que nos nos nos afecte

estoy ablando por Solo los ostreros→

Photographs and Interviews of the General Assembly

Photographic Documentation of Public Assembly Presentation of the EsIA Draft

Mr. Acajutla´s mayor signing his attendance to the event.

Energía del Pacífico Personnel, and Wärtsilä, with officials from the Municipality of Acajutla.

Acajutla´s head of the Delegation of the PNC present in the event.

Local Authorities appreciating the Model of the Project.

Images of the Registration of the Assistants and delivery of material

Images of the Conference

Development of the event

Development of "Open House" or "Open Space" questions, comments and answers

Different Actors participating in the Open Space

José Zorrilla, representative of the IFC verifying the proper development of the event.

Images of the models

Appendix 8L–

Attendance List at the Acajutla Office 2015

ENERGIA DEL PACIFICO SA DE CV

OFICINA DE INFORMACION

VISITANTES

FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	MOTIVO		CORREO ELECTRONICO	FIRMA
				CONSULTA	CV		
3/07/15	Juan Francisco Amaya Cu.	Sonsonate	——		—	Llamada	—
3/07/15.	Jose Mauricio Escobar	col. Luz	76479497	X		—	
6/07/15	Julia Cesa	Col. Alvarado	7999-7682	X		—	Llamada
6/07/15	William Gilberto Reyes	Col. Sn Julia	7697-0713	X		—	
6/07/15.	Ramon Quintanilla	Acacual #3.	7635-4539	X.		ranquintanilla@hotmail.com	
6/07/15	Milagro Guirola	Barrio las Peñas	6315-5921		X.	—	
7/07/15	Juan Carlos Estrada	Manotos.	76592033	X			
7/07/15	Carlos Ismael Reyes	B° El Campanario	2452-4147	X	—	—	
8/07/15.	Juan Antonio Garcia Perez	Jardines de Sonsonate	2427-4873		X	—	
8/07/2015	Salvador Nolasco	B° Milagro	—	X		Llamada	
9/07/15	Luis Alonso Lopez.	Sonsonate/Nahuizalco	6213-0086	X		Llamada	
9/07/15	Carlos Reoyo Gallardo	Ciudadela C.	73565527	X	—		
9/07/15	Miguel Moreno	Sonsonate/Sur.	7703-1410	X		Llamada.	
9/07/15	Denis Melgar	Cosucua	7756-3816	X		—	Llamada
9/07/15	Rufino Cruz.	San Antonio	—				Llamada
9/07/15	Rafael de Jesus Gonzalez	Los Laureles	7429-4564	X		—	Llamada
10/07/15	Oscar Armando Liena	Los Laureles	7449-4343		X	—	
10/07/15	Melvin Oswaldo	Sonsonate/San Antonio	71149088	X		—	Llamada
13/07/15	Ramon Aguila	Sonsonate/Santa Leticia	42139472			7955-8224	Llamada

ENERGIA DEL PACIFICO SA DE CV

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VISITANTES

FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	MOTIVO		CORREO ELECTRONICO	FIRMA
				CONSULTA	CV		
13/7/15	David Alexander Torres	Cton. Sonsonate.	7080-1562		X	Davidsalinas_1020@Hotmail.com	
13/7/15	Reynaldo Antonio Lopez.	Cton Moro G.	6188-3094		X	R.A.L.G	
13/7/15	Raul Antonio Perez	Cton El Sonsonate.	7149-8155		X.	—	R.A.P.M.
13/7/15	Joab Abisai Martinez.	Cton El Sonsonate	6185-8999		X	—	
13/7/15.	Pere Orlando de leon	Ciudadela. Nuevo	6185-4979	—	—	—	
14/7/15.	Tomas Enrique Mendoza	Sonsonate/El Comen.	7692-4091	X	—	—	
14/7/15	Carlos Alfredo Mendez	Sonsonate/Nahuiz	7672-2613	X		—	Ulonada
14/7/15	Juan Francisco Medrano.	Punta Remedios					Ulonada
14/7/15	Oscar David Ramos	Col. San Julian	2452-6576	X	—	—	
14/7/15	Odin Hugo Zamora	20 Las Peñas	7538-8261		7538-8261		
14/07/15	Edgar Antonio Cuellas.	Calle al campo.	7038-9025	X	—	—	
14/07/15	Pedro Antonio Ramirez	Armenia	7252-3836	X	—	—	
14/07/15	Osca Baltaca Escoto						
14/07/15.	Rodolfo Antonio Hernandez	Col. Montes.	7336-5837	X	—	—	Rodolfo
14/07/15.	Fernando Galicia Orellana	Col. San Julian	7618-5824	X		—	
14/7/15	Jose Ramirez	Nahuizalco	7384-0057	X	—	Ulonada	
14/07/15	Jose Mario Dueñas	Sonsonate	Ulonada				
14/07/15	Fabio Mayen. Molina	San Julian.	7107-8875	X	—	—	
14/07/15	Cesar Augusto Caseres	Apaneca	7017-0988	X			Ulonada.
15/07/15	Eli Adalberto Cruz Henriquez	CyH Constructores	7845-8442	✓		adalberto27cruz@yahoo.com	
15/07/15	Arnulfo Torres	CyH Constructores	61410485.	✓			

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VISITANTES

FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	MOTIVO		CORREO ELECTRONICO	FIRMA
				CONSULTA	CV		
15/7/15	Luis Roberto Perez	Guaymango	7482-1773	x	—	—	Llamada
17/7/15	Daniel Oliva	Col. Obrera	7047-2023	x	—	—	Llamada
17/7/15	Juan Carlos Reyes.	Santa Eugenia	7730-3391		x	—	
17/7/15	Rafael Anibal Peña	Sonsonate	7835-3776	x.	x	—	
17/7/15	Tadeo Antonio Pacheco	Sonsonate.	2450-4123	x		—	
17/7/15	Manuel de Jesus Coria	Sonsonate.	7815-6660	x	—	—	Llamada.
17/07/15	Melvin Reales	Pinturas SOR El Salv.	7854-3498	x		m.reales.m@grupasur.com melvinreales@gmail.com	
17/07/15	Isaac Pineda	Sonsonate - Loma M.	7686-7042	x.		—	Llamada
17/07/15	Shakarbek Osmanov	Director Gral. Gazprom do Brazil		sh.osmanov@brazil.gazprom.ru			
17/07/15	Javier Cruz Santos	Cpcecr. consulta sobre		cel Lic. cruzsj@cpcecr.com.			
17/07/15	Federico Sobrino	Repsol España		fsanz@repsol.com			
17/07/15	Salvador Caballero.	B° El Calvario	78499246	x		—	
20/07/15	Ever Rutelio Perez C.	Sonsonate	7166-6821	x		—	Llamado.
20/07/15	Dens Melara	Cruz Grande	7756-3816	x		—	Llamada
20/07/15	Salvador Nolasco.	Col. El Milagro	7024-9753	x	Cambio Tel		
20/07/15	Mariano Jeremias V.	Visitantes.	7328-4468	x.	—	—	mjvg
20/07/15.	Gabriel Antonio Guardado.	La Noria.	7110-1758	x	x	—	x
20/07/15	Edwin Mauricio Boga.	Ahuachapan	7003-9509	x	x	—	x
20/07/15.	Oscar Baltazar Escoto.	Sonsonate	7668-7052	x.			x
20/07/15.	Porfirio Pineda	Col. San Julian	2480-4723	x	x	—	
20/07/15	Equisa - Ofrecen estanterias		2510-5500	x	Manuel Garay.		
21/07/15	(Rafael) Juan Bautista.	Col. Tue	70229131	x			x

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	MOTIVO		CORREO ELECTRONICO	FIRMA
				CONSULTA	CV		
21/07/15	Erick Eliseo Arevalo	Col. Atalaya 2	71924986	X		76271642	
21/07/15	Rene Alcides Alvarado	San Salvador.	2273-1192.		X.	rchavarria-rend@hotmail.com	
21/07/15	Ing. Mario Marquez.	Alcaldia Sonsonate.	74693148			tobantonio7@gmail.com.	
21/07/15	Ismael Antonio Tutila	Coquerco	76133584			Consulta	
22/07/15	Juan Pablo Macaulla.	Barrio Las coqueta	72925512			consulta	
22/07/15	Josue Clemente Escante II		7832-6839.			consulta.	
22/07/15	Manuel Canas.	Sonso/ Sonsonate.	7815-7660			consulta	Llamada.
27/7/15.	Marco Tulio Urrutia	Acaxual #1.	7745-0446	X		Consulta.	
27/7/15	Juan Ramon Nuñez	Col. Las Laureles	78257926	X		Conso	
27/7/15	José Mauricio.	Col. Ive.	24005351. / 7847-9497 - Cons.				
28/7/15	Juan Carlos Estrada Torres	Los Mamotes	7659-2033			Consulta.	
28/7/15	Miguel Angel Chepite	Izalco	—			Llamada.	—
28/7/15	Rafael Cruz Sermeño	Santa Ana	79469059			Llamada	
28/7/15	Jose Luis Blanco Mora	Sonsonate	7188-8743			—	
29/7/15	Salvador Nolasco.	Kilo-5	7024-9753.			Consulta.	
29/7/15	Pedro Antonio Peralta	Sonso/Sauce	62088484.			consulta	Llamada
29/7/15	Luis Manuel Aragon.	Col. El Coracol	7751-6200			Consulta	
29/7/15	Edwin Alfredo Mora	Col. Sn Julia	24553000			consulta	
29/7/15	Cecilio Fidel Hernandez	Col. Sn Julia	24553000.			consulta	
29/7/15	Lazaro Antonio Molina	Alvarado.	7807-5663			Consulta CV.	

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OFICINA DE INFORMACION

VISITANTES

FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	MOTIVO		CORREO ELECTRONICO	FIRMA
				CONSULTA	CV		
10/8/15	Victor Manuel Cuellar.	Izalco/Sonsonate.	6131-5809		X	—	
10/8/15	Edwin Alberto Santos.	Bº El Campamento	76377995		X	—	
10/8/15	Manuel Antonio Delgado	Izalco	7170-1498	X		Llamada.	—
10/8/15	Pedro Antonio Pineda	Sonsonate/Sacacc	62087484	X			Llamada
10/8/15	Fernando Galeano Orellana	Col. San Julian	7618-5824	X			
10/8/15	Odin Hugo Zamora	Bº Las Peñas	7538-6261		X	—	
10/8/15	Edwin Alexander Rueda.	Bº El Campamento.	7097-8346		X	—	
10/08/15	Felicito Mata	Guaymango	6				
10/08/15	Rafael Sanchez	Santa Agueda	7172-4970		X	—	
10/08/15	Ing. Jesus Alberto Navarro	Lourdes Colon	78601999	X		Ing. Jesus Navarro @ live.com	
10/08/15	Manuel Antonio Delgado.	Izalco.	7207-9850		X		
10/08/15	Salvador Caballero	Bº El Campamento.	7849-2461		X		
11/08/15	Manuel Alberto Moran Cruz	Sisimiepec.	74541579	X			
11/08/15	Enrique Alexander Rodriguez	Juayua.	7390-3441		X		
11/08/15	Manuel de Jesus Ventura	Sonsonate.	75758401	X			
11/08/15	Juan de Jesus Ingueros	Sonsonate	71505678 77516206	X			
11/08/15	Luis Manuel Aragon	Acajutla/casa	73271709	X			Llamada.
11/08/15	Julio Adalberto Alas - Marino	Acajutla/—	2452-5083	X		7021-4367	
11/08/15	Rosa Amanda Rivas	Acajutla/Alcaldia	—	X			
11/08/15	Juan Francisco Amaya	Juayua	77844028	X	—	—	Llamada
11/08/15	David Antonio Serrano Franco	Col. Luz.	74568092	X		—	
11/08/15	Benjamin Mendoza	Col. Luz/Brasil	6007-4431	X			

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	MOTIVO		CORREO ELECTRONICO	FIRMA
				CONSULTA	CV		
28/08/15	Salvador Caballero.	Bº El Comparento	2407-0494	X		—	
29/08/15	Jose Antonio Morales	Ciudadela	61300422	X		—	
29/08/15	Juan Carlos Estrada	Morelos.	7659 2033	X			
29/08/15	Dionisio Hernandez	San Antonio del Mar	—	X		—	—
29/08/15	Salvador Nolasco	El Milagro	6302 6030.	X		—	
29/08/15	Marco Tulio Urrutia.	Col. Acacias 11	7745-0446	X		—	
29/08/15	Mario Alfonso Marquez	Ruaymango	2411-853 L.	X	Actualizo		+ M A MB
29/08/15	Eladio Elias Rocca	Ruaymango	7019-3682	X		—	
29/08/15	Fernando Galicia Orellana	Col. San Julian	7618-5824	X	—	—	
29/08/15	Edith Graciela Hernandez	Lomas/Sonsonate	2421-0255	X		edithhernández@hotmail.com	
29/08/15	Julio Cesar Bonilla.	Col. Candelas.	76115070	X		—	
30/08/15	Luis Rolando Barillas.	Guatemala.	40776552	X		luisbarillas-1960@Hotmail.com	
—	—	—	30553445	—	—		—
30/08/15	Wilfredo Antonio Erazo.	Santa Agueda	7132-4398		X	—	
30/08/15	Moises Campos	Taproes	24212020	✓		moiscampos1984@yahoo.com	
30/08/15	Roberto Campos	Taproes	24212020	✓			
2/09/15	Belarmino Rocca.	Sta Catarina M	2457-5098		✓		
2/09/15	Luis Miguel Santos	"	7008-8436		✓		
2/09/15	Vitelio Almendariz	"	2457-5139		✓		
2/09/15	Jose A. Perdomo	Col. Magdalena	74121091	✓		—	
2/09/15	Ulises Hernandez	Metalio	—		✓	Llamada	

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VISITANTES

FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	MOTIVO		CORREO ELECTRONICO	FIRMA
				CONSULTA	CV		
15/oo/15.	Carlos Alberto Silvan	Col. Alvarado	—	X		—	
15/oo/15.	Marcelino Belloso	Col. Acaxual.		X.		—	
16/oo/15	Noel Ramos Perez.	La Nueva	7848-9659	X		Actualizacion	
16/oo/15	William Amilcar Abarca	Com. Coqueras.	7421-7667	X	—	—	
18/09/15	Deny Audali Melara Nuevo	Casa Suca	7756-3816		X	—	
18/oo/15	Salvador Nolasco	Col. El Milagro	76169181	X		—	
18/oo/15	Jorge Blaolimer Barahona	Casa Suca.	7099-7724	X		—	
18/oo/15	Wilver Alfredo Guzman	Sonsonate Actualizacion	78429633			— Llamada	
18/oo/15.	Edwin Alexander Perez.	Nahuizalco Acajutla	73232605	2452-4099		@yahoo.es	
18/oo/15	Jonathan. Ernesto Contreras	El Jobo Sonsonate.	7847-9754	jcontreras-19			
19/oo/15	Rene Oswaldo	Acajutla	7897-5682			Llamada	
19/oo/15	Fernando Galicia Ortellano	Col. San Julian.			—	—	
19/oo/15	Salvadorissa Carlos Avelar	Salvadorisa	7740-7123				
19/oo/15	Jose Alberto Ramirez	Col. Magdalena	7857-1748.	X		jcalbert@gmail.com	
22/oo/15	Noe Escalante Ramos.	Com. La Coquera.	73404410	X			
23/oo/15	Rufino Cruz.	Metalio.		X			Rufino Cruz.
23/oo/13	Ricardo Leevison Castello	7965-9613 / Sonsonate.			X.		
23/oo/15.	Wilfredo Antonio Martinez	7113-7179 / Sonsonate.			X		
29/oo/15.	Ulises Hernandez Mejia	71353933 Metalio			X	—	
26/09/13	Edith Hernandez	Sonsonate. /	70128362	X	/	Llamada	—
29/09/15	Jolissa Alberto Flores.	Sonsonate. /	2451-5035		4/6	Ilss@gmail.com	

7027-4695.

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OFICINA DE INFORMACION

VISITANTES

FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	MOTIVO		CORREO ELECTRONICO	FIRMA
				CONSULTA	CV		
12/06/2015	Mauricio Antonio Arevalo.	Col. El Milagro	7723-3622		x	—	
12/06/2015	Dionisio Hernandez Hernadez	San Antonio del Mate	71876608		x		
12/06/2015	Douglas Ernesto Perez.	San Antonio	71979324		x.	Copia Doc.	x
12/06/2015	Alvaro Martinez	Monte Grandes	73077768	x		Llamada	—
12/06/2015	William Cabrera.	Km 5	70212839	x		—	Llamada
12/06/2015	Rene Polanco.	Ahuachapan.	78975682	x	—	—	Llamada
12/06/2015	Nelson Alirco Jemus.	Col. los Laureles.	7659-809		x	—	
15/06/2015	Daniel Oliva Chavez.	Col. Obrera.	2452-6052		x	—	
15/06/2015	Ramiro Arias Gonzalez	San Antonio Monte.	74368899	x		—	x
15/06/2015	Antonio Morales Ramos	Ciudadela 1.		x			x
15/06/2015	Rosa Lina Ordoñez	Santa Cruz Tasular		x		Entregan copia	x
15/06/2015	Ricardo de Jesus Arana	Santa Cruz Tasular.		x		de Doc.	x
15/06/2015	Osca Baltaler Escoto	Sonsonate / Salsona		x		—	Llamada.
15/06/2015	Isaac. Antonio Jacobo.	Ahuachapan.	76525999	x	x.	15aacjacobo84@gmail.com	x
15/06/2015	Manuel de Jesus Ventura.	Sonsonate / Nahuilingo	7575-6461	x	x	—	x
15/06/2015	Misael Nolasco.	Canton Sisimtepec	2430-2208	x	✓	—	
15/06/2015	Luis Angel Catalan	Bº La Playa	73788333		x	—	
15/06/2015	Jose Francisco Vargas.	Col. Acapulco II	63020234		x	—	x
15/06/2015	Jerson Vicente Torres.	Bº La Playa.	7052-3088		x	—	x
15/06/2015	Salvador Nolasco.	Col. El Milagro.	76691181		x	—	
* 15/06/2015	Julio Antonio Ramirez	Col. Alvarado	73357530	x.		—	

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VISITANTES

FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	MOTIVO		CORREO ELECTRONICO	FIRMA
				CONSULTA	CV		
09/06/2015	Ramon Quintanilla	Col. Acaxual #3	76354539	X		rangquintanilla@hotmail.com	
09/06/2015	Marco Tulio Urrutia	Col. Acaxual #1.	73056994	X		—	
9/06/2015	Luis Alonso Lopez	Nahuizalco.	—	X			Llamada
9/06/2015	Keven Alfredo Moran.	Col. Ponderosa	7815-5288	X		—	Llamada.
9/06/2015	Noe Elias Escalante	Coquera	7314-7565	X		—	Llamada.
9/06/2015	Jose Luis Garcia	Col. Alvarado.	63091956		X	—	
9/06/2015	Juan Pablo Morales A.	"	74331136		X	—	
9/06/2015	Anderson Jeovany Ramirez.	Ciudadela.	7957-720		X	—	
9/06/2015	Blademer Perez	Ciudadela	7800-3760		X	—	
9/6/2015	Carlos Antonio Ramirez	Calle El Barquito.	70320201	X			
10/6/2015	Juan Gilberto Martinez	Lot. El Milagro	78198255		X	—	
11/06/2015	Demetrio Burgos	Nueva Aceyo Tec	24525106	X		—	Llamada
11/06/2015	Evelin Fatima Velasquez.	Col. Jardines.	71357835		X	—	
11/06/2015	Marcelo Garcia.	Canton San Julian	71154119		X	—	
11/06/15	Fernando Galicia	Col. San Julián	76185824		X	Proteccion de personal.	
12/06/2015	Pedro Perez Martinez.	Canton El Almendro	71368414		X		
12/06/2015	Manuel Alberto Cruz.	Sisimetepec/Nahuiº	74541579		X		
12/06/2015	Marvin Adolfo Aguilar	Com. San Roque.	63115246		X		
12/06/2015	Nicolas Hernandez H.	Com. San Roque.	76073578		X		
12/06/2015	Cesar Vicente Torres Abrego.	Bª La Playa	2452-6725		X		
12/06/2015	Oscar Alberto Fuentes	Col. El Milagro.	63031944		X		

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
8/06/2015	José Antonio Morales Flores	Ciudadela	61300422	consulta Inicio	
8/06/2015	Armando Aguero.	Col. Alvarado.	Pte.	Consulta Inicio	
8/06/2015	Hector Armando Mansas.	Costa Brava.	61443532	Consulta Inicio	
8/06/2015	Mauricio Guadalupe	Col. Obrera -	74605237	Consulta - Inic.	
—	—	—	2457-4632	11	
8/06/2015.	Dionisio Hernandez	San Antonio del M.	No tiene	Dpto Capacidades	
8/06/2015.	Adolfo Inocencio.	Los Almendros.	7000-4833	CV - Empleo	
8/06/2015	Jorge Beleta Lopez	Los Almendros	7651-9918	CV - Empleo.	
9/06/2015	Erick Ricardo. Moreno	Balsamo/Sonsonate	7856-1755	CV - Empleo.	
9/06/2015.	Roberto Armando Vasquez	Sonsonate/Santa Emelia	70640151	Consulta - Inicio	Llamada.
9/06/2015	Julio Antonio Ramirez	Col. Alvarado.	7335-7530	Consulta - Inicio	
9/06/2015.	Alfredo Velasquez.	El Milagro.	7362-2087		A. V. A
9/06/2015	Pere Oswaldo Perez.	Ciudadela.	7354 - 6357	Consulta - Inicio	
9/06/2015	Vitelio Romero Escobar.	Col. San Julian.	7667-9052	CV - Empleo.	
9/06/2015	Eduardo Enrique Rivera	Acajutla.	7377-3701.	Consulta Inicio	
9/06/2015.	Juarez.	Bª La Playa	7050-2827	Consulta - Inicio	Llamada.
9/06/2015.	Ivan Orlando Crespin.	Sonsonate/Sonsonate	2430-1880	Consulta - Inic.	Llamada.
9/06/2015	Rodolfo Antonio Hernandez I.	Can. Los Manotos.	7067-4291	Consulta - Inicio.	R A H F.
9/06/2015.	Juan Carlos Estrada	Los Manotos.	2452-3646	Consulta - Inicio	

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
03/06/15	Samuel Ernesto Anaya	Los Cobanos.	2420-5084	Consulta-Inicio	
03/06/15.	Cesar Omar. Lario.	Acaxual #4.	2487-9575	Consulta-Inicio	
03/06/15.	Edwin Alfredo Moran.	Col. Sacbilia.	2455-3000.	Consulta-Inicio	
3/06/2015	Luis Angel Catala R.	Bº La Playa.	7061-4531	Consulta-Inicio	
3/06/2015	Claudia Marcela Rodriguez	Col. La Reina.	7600-2005	Consulta-Inicio	
3/06/2015	Jairo. Cesar Campos.	Kilo-5	7394-3611	CV-Empleo.	
3/06/2015	Karla Esmeralda Sermeño.	El Sunzitar.	7868-8199	CV-Empleo.	
3/06/2015	Sandra Arely Ruano Pleitez.	Com. El Boquito.	2452-6235	CV-Empleo	
3/06/2015	Jorge Alberto Canacas.	Col. Acaxual #4.	7398-5313	Consulta-Inicio	
5/06/2015	Oscar Orlando Martel Bolaños	Kilo-5	7128-2277.	Consulta-Inicio	Llamada
5/06/2015	Juan Carlos Estrada.	Col. Las Margaritas	2452-3648.	Consulta-Inicio	
5/06/2015.	Jonatha Brayan Burgos.	Col. Alvarado.	7941-1528	Consulta-Inicio	
5/06/2015	Julio Antonio Ramirez	Col. Alvarado.	7335-7530.	Consulta-Inicio	
5/06/2015.	Jorge Vladimir Barahona.	Col. El Milagro. Casaca	7099-7704	Consulta-Inicio	
5/06/2015.	Salvador. Nolasco.	Col. El Milagro.	7016-9181.	Consulta-Inicio	
5/06/2015	Miguel Angel Campos Cruz	Sonsonate/Talcomunca	7716-3968	Consulta-Inicio 3890	Llamada
5/06/2015	Luis Bonilla.	Guatemala.	4077-6552	Consulta-Inicio	Llamada
* 5/06/2015	Carlos Melvin Orellana	Cd. Campamento.	77439226	Consulta-Inicio	
5/06/2015	Saul Ernesto Cerna	Naturaleza	2453-0068	Consulta-Inicio	Llamada.
5/06/2015	Erick Alexander Flores.	Comunidad San Roque	71829364 / 24154388	CV-Empleo.	

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
1/06/2015.	Jaime Adelson Ordoñez	Juayua/Sonsonate.	61256850	Consulta Inicio	
1/06/2015	Marcelino. Bellosu.	Acaxual, XX2.	61685561	Consulta Inicio	
2/06/2015	Melvin Geovany Moran	El Flor.	7164-1472	CV-Empleo	
2/06/2015.	Rene Alfredo Polanco Perez	Ahuachapan	2401-4528.	CV-Empleo.	
2/06/2015	Mario Anibal Figueroa	Col. Alvarado.	7404-7181	CV-Empleo.	
2/06/2015	Rodolfo Antonio Escobar	Col. Mometos.	70674291	Consulta. Inicio	
2/06/2015	Jesus Antonio Alvarado.	Col. Acaxual XX2.	2452-3862	Consulta-Inicio	
2/06/2015	Melgui Duarte.	Metalio.	7848-0690	Consulta-Inicio.	
2/06/2015.	Fernando Galicia Orellana.	Col. San Julian.	7618-5824.	Consulta Inicio	
2/06/2015	Salvador Nolasco Echeverria	Col. El Milagro.	63026030	Consulta Inicio 7016 9181	
2/06/2015	Joel Baustista Lopez	Izalco-Sonso.	71688039	Llamada- Consulta Inicio	Llamada
2/06/2015.	Cristian Giovany Godinez	Sonzacate-Sonso.	7298-3762	1175378@gmail.com	
2/06/2015	Eloner Efrain (Mancia) Sandoval	Col. San Julian.	24525693	elonerjo145@gmail.com	
2/06/2015.	Anthony Francisco Barrera C.	Col. San Julian.	7813-0546.	anthony05911@hotmail.com	
2/06/2015.	Mauricio Isaias Figueroa	Col. Alvarado.	70645787	Consulta Inicio	
2/06/2015.	David Antonio Soriano Franco	Col. Jue.	7058 7040-	Consulta-Inicio	
2/06/2015.	Francisco Javier Avelar.	Col. Landa Vistas.	7480-4828.	CV-Empleo.	
2/06/2015	Poros y Bombas. //	S.S.	—	Llamada	
3/06/2015.	Arlet Flores.	Sonsonate/San Antonio	7821-0338	Llamada.	Llamada.
3/06/2015	Jose Luis Garcia.	Col. Alvarado	7433-1136.	Consulta-Inicio	
3/06/2015.	Juan Pablo Morales Alfaro	Col. Alvarado.	7433-1136	Consulta-Inicio	

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
1/06/2015	Juan Miguel Valencia	Santa Eugenia/S.	2450-1890	CV	
1/06/2015	Enrique Salomón Aguirre	col. montevideo	2450-4857	CV esalomonaguirre@gmail.	
1/06/2015	Cristina María Barrientos Aguirre	Barrio el Angel. Sonsonate	2451-0422	CV mariia-cmba@hotmail.com	
1/06/2015	Xavier Jonathan Chacón Villalta	col. Sensunapan. Sonsonate	24178135	CV xavierchacon7@hotmail.com	
1/06/2015	Pedro Antonio Ramirez	Armenia. /S.	7252-3836	Consulta-Inicio	
1/06/2015	Antonio Morales Ramos	Ciudadela Cepa	Cel 3050422	Consultar Inicio	
1/06/2015	Juan Carlos Estrada.	Col. las Morenas	2452-3646	" "	
1/06/2015	Rodolfo Antonio Hernandez	"	73365637	" "	RAHE
1/06/2015	Noe Escalante Ramos.	Col. las Cogueras	7340-4410	Consulta Inicio	
1/06/2015	Lazaro Ramos Hernandez.	San Antonio/Sonsonate.	7152-7993	CV-Empleo.	
1/06/2015	Hector Manuel Alvarado Lopez.	Col. Acacia/XX2.	2452-4572	CV-Empleo.	
1/06/2015	Moraes Alvio Moran.	Cas. Colonia.	7373-5628	CV-Empleo.	
1/06/2015	Jaime Alvarenga	Col. Los Morenos	7641-7268	Consulta Inicio	
1/06/2015	Bufano Cruz.	Metalio/Las Cadenas	— o —	Consulta-Inicio	
1/06/2015	Pedro Antonio Pineda Peralta.	Sonsonate/Sauce.	6208-7484	Consulta-Inicio	
1/06/2015	Jose Antonio Caballero.	Sonsonate/Col. El Carmen	72816293	Consultar-Inicio	
1/06/2015	Marvin Roberto Hernandez	Los Morenos.	70827100	CV-Empleo	
1/06/2015	José Geovany Rosales	Bº la Playa.	7252-5777	CV-Empleo	
1/06/2015	Manuel Edgardo Rosales.	"	7017-1470	CV-Empleo	
1/06/2015	Rafael Eduardo Rosales	"	7329-5448	CV-Empleo.	
1/06/2015	Luis Alonso Mora Fabian.	Col. Alvarado.	7384-9152	CV-Empleo.	

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
26/may/15	Salvador Caballero.	Bº Concepcion		Consulta - Inicio	
26/may/15	Roberto Amado Vasquez.	Izalco - Sonsonate	7064-0151	CV - Empleo	
26/may/15	Daniel Gonzalez.	Atonal - Sonsonate	7337-9468	CV Empleo.	
27/may/15	Julio Antonio Ramirez.	Col. Alvarado.	7335-7530	Consulta - Inicio	
27/may/15	Miguel Angel Alfredo Ponds.	Col. Brisas/Sonsonate	74981316	-CV Empleo.	
27/may/15	Rufino Cruz	Col. Metalio		Consulta - Inicio	
28/may/15.	Ernesto Antonio Pinedas.	San Antonio/Sonsonate	2450-2217	CV - Empleo.	
28/may/15.	Fabio Mayen.	Col. Brisas	71078875	Consulta Inicio	
28/may/15	Noel Ponce Perez	Nueva Acajutla	63097238	Llamada/Actualizacion con MTE	Llamada
28/may/15	William de Jesus Cabrera.	Col. El Milagro.	7021-2929	CV - Empleo.	
28/may/15	Rafael Willen Duran.	Cntn. Punta	7388-5902	CV - Empleo.	
28/may/15	Denis Balmore Serrano.	El Jobo. *Nuevo	79287744	Consulta Inicio	
28/may/15	Jose Antonio Perdomo	Magdalena	74121091	Consulta Inicio	
28/may/15	Benjamin Concepcion Mendoza	Col. Brisas.	7211-7164	CV.	
29/may/15	Jose Elmer Orellana.	Col. San Emelio #1	7027-3154	Consulta Inicio	
29/may/15	Dionisio Hernandez Hernandez.	San Antonio Mata		Consulta	

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
18-5/2015.	Henry Giovanni Barrientos	El Milagro.	2452-4087	—	
18-5/2015	Jorge Alberto Vides	Bº Componento.	2442-5937	/ Consulta.	
18/5/2015	José Antonio Cordero	Coop. Rederos.		Consulta s/ Inicio de Labores limpieza en zona Muelle.	
21/5/2015.	— " —	Sonsonate/			
21/5/2015.	Lazaro Panos Hernandez.	Sonsonate/	7152-7993.	Consulta Inicio	L.R.H.
21/5/2015	Miguel Angel Chavez	Sonsonate.	—	Consulta Inicio	
22/5/2015.	Daniel Enrique Cordova.	Ciudadela.	7094-2560	Consulta Inicio	
22/5/2015	Jorge Alberto Vides Campos	Bº El Componento	2442-5937	" "	
22/5/2015.	Miguel Angel Shenti	Izalco.	6124-0349	CV - Empleo.	
22/5/2015	Santos Victoriano Lue.	Sonsonate.	7836-2471	Obrero /	
22/5/2015	Julio Alberto Sanchez.	Sonsate	73564742	Consulta Empleo.	
22/5/2015	Jorge Ernesto Henriquez	Joboa.	7188-2010.	Consulta Inicio	
25/5/2015	Oscar Rodolfo Ramirez.	Col. El Paloma.	7818-5214	Consulta-Empl. CV	
25/5/2015	Salvador Nolasco	El Milagro.	7010-9181	Consulta, Inicio	
25/5/2015	Vanessa Elizabeth (Nolasco) Dominguez.	(Hija de Don Salvador)			
25/5/2015	William de Jesus Cabrera	El Milagro	7021-2839	Consulta - Empleo.	
25/5/2015.	Margarita Antonia Gonzalez	Cas. S. Pedro Belen	7096-9814	Consulta Empleo.	
25/5/2015	Jorge Alberto Vides Campos	Bº Componento	24425937 / 7192-5955	Acto X Tel	
		Actualizar en BD.	7192-7955	↗	
25/5/2015.	Juan Carlos Estrada.	Col. Los Maretos	2452-3646	Consulta Inicio	
25/5/2015.	Jose Mauricio. Escobar	(illegible) Canales	7647-9497	Consulta Inicio	
25/5/2015	Fernando Galicia Orellana.	Sndolia	76185824	Consulta Inicio	
25/5/2015	Marcelino Belloso	Acaxual #2	6188-5581	Consulta Inicio	

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	CORREO ELECTRONICO	FIRMA
12/5/2015	Kevin Alfredo Mora Sanchez	Sonzacate.	7815-5288.	CV - Empleo	
12/5/2015	José Alberto Cruz Mora	Nahuizalco	7714-2488.	CV - Verificar si esta	
12/5/2015	Eugenio Cruz Mora	" "	77-142488	CV - Empleo	
12/5/2015	Juan José Ayala Gálvez	San Salvador.	7201-3822.	CV - Empleo.	
12/5/2015	Moises Dura Mozo	Acajutla. Sta Isabel	7651215	CV - Empleo.	
12/5/2015	Oscar Alejandro. Cruz.	Quezaltepeque.	2457-5042	"	
12/5/2015	Joel Bautista Lopez	Sonsonate/Nahuizalco	2432-1388.	CV - Empleo	
12/5/2015	Jaime Mendoza Alfaro.	Acajutla/Los Laureles.	61694590.	Consulta.	
12/5/2015	Julio Antonio Ramirez	Col. Alvarado.	7335-7530	Consulta - Inicio	
13/5/2015	Oscar Alberto Fuentes	Col. El Milagro	6308-1741	Consulta - Inicio	
13/5/2015.	Hernan Evelio Aguino Ramos	Comacaran.	2484-8670.	Consulta - Inicio	
13/5/2015	Rufino Cruz	Cas. Las Cochigas	Metalio- 87897971	consulta inicio	
13/5/2015.	Luis Bartolome Agapio.	Col. Alvarado.	6124-6641	Consulta - Inicio	
14/5/2015	Wellian Gilberto Reyes	Col. San Julian	7697-0713	Consulta - Inicio	
15/5/2015	Victor Antonio Ramirez.	Sonzacate.	7110-4354	Consulta - CV.	
15/5/2015	Eduardo Ingoat.	" San Antonio.	76491076	Consulta - CV.	
15/5/2015	Brayan Alexander Flores	San Antonio.	7509-1582	Consulta - CV.	
18/5/2015	Fernando Timoteo Galicia	Col. San Julian	2452-5225.	CV - Inicio	
18/5/2015.	Victor Anibal Sanchez.	Brisas de Acy	7762-9392	Consulta - Inicio	
18/5/2015	Armando Alexander Pineda	Cd. Arce.	7687-9207	Actualizar	
	Actualizar XX Tel.		7614-4360.	Teléfono.	

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	E-MAIL	TIPO DE CONSULTA	FIRMA
28/4/15	Salama Tepas Eperfanio.	Nahuizalco.	6119-3549		Consulta-CV	ESE
28/4/15	Alberto Cortez	"	6145-2340		"	
28/4/15	Juan Antonio Cortez	"	7454-5580		"	
28/4/15	Jose Alberto Cruz	"	7714-2488		"	
28/4/15	Osca Hernandez Rivera	"	7693-8871		"	
28/4/15	Ana Ruth Romero Santos	Col. Acaxual #4	7348-2281		Consulta-Empleo	
29/4/15	Manuel Orlando Romero.	Santa Emelia.	7715-144-		CV-Consulta.	
29/4/15	Roberto Carlos Ceo Oliva.	Sensunapan.	7805-6077.		CV-Empleo.	
29/4/15	Deris Rigoberto Meren	San Ramon.	2451-8195		"	
29/4/15	Gerardo Antonio Quelnaca	Col. Santa Mata.	7084-8442		"	
29/4/15	Noe Escalante Ramos	La Cogüera	73404410		Consulta-Unico	
30/4/15	Joaquin Mazun,	Sonsonate.	79678009 / 61105107		Consulta-Unico	
30/4/15	Oswaldo Mazun.	Sonsonate.	7060-0376.		Consulta-Unico.	
30/4/15	Alvaro Orellana	Bº Concepcion	77760922		Consulta-Empleo	
30/4/15	Miguel A. Beltran Zavaleta.	"	76525903		Consulta-Empleo	
4/05/2015	Elias Ortiga Acevedo	San Pedro Belen.	2431-1835		Consulta-Unico	EAA
4/05/2015	Marcelo Bellosa	Acaxual	7807-8222.		Consulta-Unico	
4/05/2015	Cecilio Fidel Hernandez	Col. San Francisco.	73637162		Actualiza CV	
5/05/15	Samuel Ernesto Anaya	Col. Punta Remedio	2420-5084		Consulta-Unico	
5/05/2015	Sergio Ismael Rosales	Palmeras / S.	2411-2308.		CV.	
5/05/2015	Rufino Cruz.	Metalio			Consulta-Unico	

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	E-MAIL	TIPO DE CONSULTA	FIRMA
24/4/15	Alejandro Paniagua	San Antonio/Sonsonate.	61627152	—	Consulta-Inicio	—
27/4/15	Miguel Angel Chulo Moreno.	Sonzacate.	7703-1410	.	CV-Empleo	
27/4/15.	Antonio Morales Ramos	Ciudadela.	6130-0822		Consulta-Inicio	
27/4/15	Jose Armando Garcia.	Salano/Acajutla.	77041096		CV. Empleo	
27/4/15.	Justo Elias Garcia.	Salano/Acajutla	7515-3590		CV-Empleo	
27/4/15	Jorge Alonso Santos.	Com. La Cogpera	7439-1957	:	Consulta-Inicio	
27/4/15.	Elmer Garcia Monterroza	Col. Alvarado	7090-1734	.	Consulta-Inicio	
27/4/15.	Santos Perez	Caserio Sabana San Juan Arriba.			Consulta-Inicio	x
27/4/15.	Alfredo Velasquez Arias	Col. El milagro.	7369-2087		Consulta-Inicio	x A.V.A
27/4/15	Fernando Torres Amaya	Nueva Acajutla.	7316-2657.		" "	
27/4/15	Carlos Geovany Ballardo	Ciudadela.	73565627		Consulta-Inicio	x
27/4/15	Aristides Edenilson Fuentes	Col. Caracol	70174281		Consulta-Inicio	
28/4/15	Jose Ramirez.	Nahuizalco.	73840057		Consulta-Inicio	
28/4/15	Jose Alberto Isidro	Nahuizalco.	73585848.		Consulta-Inicio	
28/4/15	Pedro Angel Torrez.	Sonso/Izalco.	73999971.		Consulta-Inicio	
28/4/15	Pedro Antonio Pineda Peralta	Sonzacate/	60087480		Consulta-Inicio	
28/4/15	Daniel Isaias Ramos Arias	Alvarado	70662045.		Consulta-Inicio	
28/4/15.	Arcadio de Jesus.	Sonsonate	6145-9066.	—	Consulta-Inicio.	
28/4/15	Salvador. Aguilar.	Col. El Caracol.	7868-817		Consulta-Empleo.	
28/4/15	Pablo Escalante Arala	Col. El Caracol	7441-2952		Consulta Empleo	

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FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	E-MAIL	TIPO DE CONSULTA	FIRMA
14/4/15	Maria Teresa. Ayala.	Acaxual I Acj	24526196	ayalafernandez.	CV-Empleo.	
15/4/15	Rufino Cruz Valdanez.	Casenolas Codicas/Metalio.	79023517	Consulta Inicio		
16/4/15	Alvaro Matenez Rueda	Guaymago.	70062295.	Consulta-Inicio		
16/4/15	Douglas Adrian Morales	Los Cobanos.	7010-6087	Consulta-Inicio		
16/4/15	Carlos Alberto Zelidon	Los cobanos	7399-8377	Consulta-Inicio		
20/4/15	Jose Luis Garcia.	Canton el Salamo.	6138-2892	Consulta-CV.		
20/4/15	Cindy Elizabeth Mejia	Metalio.	7161-1220	cindybabe@hotmail.com		
20/4/15	Pablo Gonzalez Cortez.	Col. San Emelio.	2452-6580	CV-Empleo.		
20/4/15	Obdulio Enrique Mora.	Canton Sisimiepec	7133-5193.	CV-Empleo		
20/4/15	Misael Nolasco	C 11 11	7110-1476	Consulta CV.		
20/4/2015	Yamira Cuellar	Campamento.	62007001	Consulta-Inicio		
21/4/2015	Marco Tulio	Col. Acaxual.	77450446	Consulta-Inicio		
22/4/2015	Jose Mauricio Escobar Figueroa	Col. Corales.	2400-5351	Consulta-Inicio		
22/4/2015	Hebert. Chavez Brenes	Pasaque 2.	7379-9278	Consulta-Inicio		
22/4/2015	Noel Panos	Caserio La Nueva	7842-3535	Consulta-Inicio		
22/4/2015	Juan Francisco Medrano.	Puntadenegros	643-6886	Consulta-Inicio		
22/4/2015	Sergio Ismael Tobar.	Sonsonate / Sauce.	2421-3434	Consulta-Inicio		
22/4/2015	Hector Mauricio Rosales.	11 11	2421-3434 / 2421-3270	CV-Empleo.		
22/4/2015	David. Antonio Serrano	Col. Luz / Acj.	7456-8892	CV-Consulta Inicio		
22/4/2015	Alvin Alejandro Canales	Col. San John.	7660-7383	Consulta-Inicio		
24/4/2015	Jorge Alberto Campos	Bo Campamento	7525-2724	Consulta-Inicio		

LNG TO POWER

OFICINA DE INFORMACION

VISITANTES

FECHA	NOMBRE	RESIDENCIA/INSTITUCION	TELEFONO	E-MAIL	TIPO DE CONSULTA	FIRMA
7/4/15	Jose Efrain Gonzalez.	Acaxual 2/Ag.	2452-4572	-	CV-Empleo.	
8/4/15	Salvador Nolasco	Milagro.	7016-9181	—	Consulta Inicio	
8/4/15	Victor Anibal Sanchez.	Brisas del Pac.	77629392	—	Consulta-Inicio	
8/4/15	Roberto Calzadilla T.	Acaxual/H	7420-6291	—	Consulta Inicio	
8/4/15.	Jose Antonio Perdomo.	Col. Magdalena	7412-1091	—	Consulta-Inicio	
9/4/15	Arturo Armando Hernandez	Cd. Brisas Ag	7965-2687	—	Consulta-Inicio	
10/4/15.	Carlos Avelar.	Galvanissa.	77407123	—	Proveedor.	
13/4/15	Pony Alfredo Paredes	Sonsonate	61057019	—	CV.	
13/4/15	Jose Aguilar	Sonsonate.	72816275	—	CV.	
13/4/15	Hector Rosales.	Sonsonate/Sauce.	6140-5262.		Consulta-Empleo.	
13/4/15	Misael Nolasco.	Nahuizalco/Sisimil.	7110-1426		Consulta-Inicio	
3/04/15	Francisco Antonio Cholo.	Nahuizalco.	6104-0745		Consulta-Inicio	
13/4/15	Regino Chul	Nahuizalco	6104-0745.		Consulta-Inicio	
13/4/15	Jose Antonio Moran Perdomo.	K:0-5/Ctan.Sur.	2420-7528	8/7958-0530	Consulta.	
13/4/15	Bores Alfonso Herrera Ruiz.	Brisas de Acajutla	2452-3562	—CV./	Consulta-Empleo.	
13/4/15	Juan Gilberto Martinez.	El Milagro	7819-6250	—	Consulta-Inicio	
13/4/15	Marcelino Bellaso.	Acaxual #2.	En Base.		Consulta-Inicio	
14/4/15	Angel Eugenio Aguilar-	Col. El Caracol.	2452-5689.		Consulta.-Inicio	
14/4/15	Edgar Antonio Cuellar.	Componente.	2452-4063	—	Consulta-Empleo	
14/4/15	Edwin Alfredo Moran.	Col. San Francisco.	2455-3000.	—	Consulta-Inicio.	
14/4/15	Brayan Roberto.	Arag. /IVU.	70630818	—	Consulta-Inicio	