

ASEA BILINGUAL GLOSSARY FOR E&P

Definitions from 3 ASEA documents sorted in Spanish & English

FROM 1938 TO THE PRESENT, industrial and environmental safety in Mexico’s oil and gas sector has largely been a regime of self-regulation. The Macondo incident in the U.S. Gulf of Mexico in 2010 violently shook safety paradigms around the world; but in official Mexico, things remained quiet and the Macondo calamity was muted in Pemex public comments and the Mexican press as well.

Mexico created the Ministry for the Environment and Natural Resources (SEMARNAT) in 2000. Not until 2014 did the government conceive of a subordinate agency within the Environmental Ministry that would provide public oversight of industrial, occupation and environmental safety in the hydrocarbon value-chain.

The senior staff of the new Petroleum Safety Agency (ASEA) includes career professionals from Pemex, starting with its executive director, Carlos de Regules, who transferred laterally from a position where he supervised the preparation of the company’s environmental reports.

The agency is developing a regime that incorporates the model of a Safety and Environmental Management System (SEMS), as used in the U.S. and other jurisdictions. The vision is for each regulated party to develop its own safety regime that adheres to government guidelines and the compliance of which will be assured by the employment of third-party inspectors.

Despite the four-year delay in getting a regulatory regime in place, the agency is moving quickly to catch up. The agency has the moral support of regulators in other jurisdictions and of industry groups. There are memoranda of understanding with international agencies and organizations, including the Bureau of Ocean Energy Management (BOEM) and the Center for Offshore Safety (COS), among others. On January 24, 2017, there was workshop on the safety framework for the winners of the lease auctions of deep-water blocks that were the previous December 5.

The present bilingual glossary lists more than 100 terms that are defined in the ASEA law of 2014 and

in the two guidelines that were issued in 2016. The terms are sorted both in Spanish (Tables 1-4, 6-7) and English (Table 5), giving translations of terms and official definitions.

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ASEA BILINGUAL GLOSSARY FOR E&P

Definitions from 3 ASEA documents sorted in Spanish & English

INTRODUCTION

TABLES 1-3 allow for the review of terms within a specific document. In Table 4, all terms are listed in alphabetical order in Spanish with references to the source document and place, while in Table 5 terms are sorted by their English translation and include a translation of the official definition. Table 6 provides the definitions in English. Table 7 provides the original Spanish and the English translation of the terms and definitions.

DISCUSSION

THE SCOPE OF THIS GLOSSARY permits only a few comments on the ASEA framework, which, in a general way echoes that in place on U.S. federal oil and gas leases and which requires that each operator and service company have in place a Safety and Environmental Management System (SEMS) that conforms to the nature of relevant safety hazards.

The framework also replicates the vision of the post-Macondo Center for Offshore Safety, which contemplates the emergence of a new certification profession, the exercise of which would be conducted by persons who would successfully complete a course of instruction that would impart a curriculum developed by the Center. The COS vision is itself a work-in-progress, and COS-trained certifiers are not yet in the field.

ASEA notionally embraces the COS solution to regulatory compliance by proposing that verification be undertaken by authorized third parties. The awkward detail is that the qualifications for being thus authorized are not yet in place; so, at present, as in U.S. federal waters, there are no authorized certifiers in the field.

OBSERVATIONS

THE GUIDELINES FOR UPSTREAM OPERATIONS are generic and aspirational, perhaps to a fault. Regulated Parties are required to contemplate all aspects of safety, but without indications as to which safety issues take priority over others.

The primary lessons of the Macondo blowout are three:

- 1) The negative pressure test (NPT), which verifies that the wellbore is isolated from the surrounding reservoir, must be performed accurately by experienced crews and with redundancy in data analysis from onshore support facilities.

- 2) Open communication between the rig and the cement in the wellbore must be maintained during the entire curing period (18-24 hours).
- 3) A capping stack must be available in the event of a deep-water blowout.

The most relevant safety guidelines for deep-water operations are API 96 and API 65 Part 2. These two documents are referenced with their titles in Spanish translation at the end of a four-page list of standards, but they are not given any more weight than the other 90-plus titles (see insert at right).

As for the NPT, we see no particular

Diseño del Pozo	
93	API 96 Diseño y Construcción de Pozo de Aguas Profundas, Primera Edición, Marzo 2013.
94	API 5CT Especificaciones para Tuberías de Revestimiento y Producción, Novena Edición Julio 2011.
95	API Estándar 65-Parte 2 Aislamiento de Zonas de Flujo Potencial Durante Construcción de Pozos, Segunda Edición, Diciembre 2010.
96	NORSOK D-10 Integridad del Pozo en la Perforación y operaciones del Pozo. Rev. 4, Junio 2013.

attention in ASEA’s guidelines to requiring close public oversight regarding this critical step.

Regarding the capping stack, the availability is limited. The **Marine Well Containment Company** was established as a Post-Macondo non-profit, membership-based organization with a mandate to assist its members in case of a deep-water blowout. Companies that won in the deep-water lease auctions of December 5 are **ExxonMobil, Chevron, Statoil, BHP-Billiton** and **BP** are members; but the charter of the company is restricted to U.S. federal waters.

CONCLUSIONS

INDUSTRIAL AND ENVIRONMENTAL SAFETY in the Mexican upstream is at greater risk today than it would be had the government not waited four years (2010-14) before making an institutional commitment to offshore safety. By virtue of law and public policy, Mexico is no safer today from the risk of a Macondo-scale accident than it was in 2010. Whatever additional layers of safety may exist should be attributed to advances in technology and best practices that were developed by the oil and service companies themselves.

There is every reason, however, to believe that better safety days are ahead on both side of the US-Mexico boundary in the Gulf of Mexico. Much depends on the speed at which certification regimes are established in each country, as well as the speed at which public agencies in the upstream are able to coordinate their approval and review processes.

George Baker
Publisher

About this report

This report draws on our Lexical Database of Mexico’s Energy Sector and on a prior report (MEI 832) on the ASEA safety regime. Translations are preliminary.

Exhibit A

Legal framework of industrial and environmental safety

Issued Amended Total: 8

LAWS

5

CÁMARA DE DIPUTADOS

- | | | | |
|---|---|--------------|---------|
| 1 | Ley General del Equilibrio Ecológico y la Protección al Ambiente | Jan 28, 1988 | 1/24/17 |
| 2 | Ley General desarrollo Forestal Sustentable | Feb 25, 2003 | 1/24/17 |
| 3 | Ley General para la Prevención y Gestión Integral de los Residuos | Oct 08, 2003 | 5/22/15 |
| 4 | Ley de Bioseguridad de Organismos Genéticamente Modificados | Mar 18, 2005 | |
| 5 | Ley de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos | Aug 11, 2014 | |

INSTITUTIONAL DOCUMENT

3

ASEA

- | | | | |
|---|--|--------------|--|
| 6 | REGLAMENTO Interior de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos | Oct 31, 2014 | |
| 7 | Lineamientos para la conformación, implementación y autorización de los Sistemas de Administración de Seguridad Industrial, Seguridad Operativa y protección del medio ambiente aplicables a las actividades del sector de hidrocarburos que se indican. | May 13, 2016 | |
| 8 | DISPOSICIONES administrativas de carácter general que establecen los Lineamientos en materia de Seguridad Industrial, Seguridad Operativa y protección al medio ambiente para realizar las actividades de Reconocimiento y Exploración Superficial, Exploración y Extracción de Hidrocarburos. | Dec 05, 2016 | |

Bilingual glossary of ASEA Safety Guidelines

Table 1

ASEA Establishment Act of 2014

Issued Aug. 11, 2014

	Lexical Entry	Translation (trial)	Source ID 7
			Lexical ID
1	Agencia	Agency	2653
2	Consecuencia	Consequence	2654
3	Contingencia	Safety or environmental contingency	169
4	Emergencia	Emergency	2655
5	Evaluación estratégica	Strategic evaluation	2656
6	Externalidades	Externalities	2657
7	Instalación	Installation	2658
8	Regulados	Regulated Parties	2659
9	Riesgo	Risk	2660
10	Riesgo crítico	Critical risk	2661
11	Secretaría	Ministry [SEMARNAT]	2663
12	Sector Hidrocarburos o Sector	Hydrocarbon sector, or Sector	2662
13	Seguridad Industrial	Industrial safety	2664
14	Seguridad Operativa	Operational safety	2665
15	Sistema de Administración	[Safety] Management system	2666
16	Supervisión	Public oversight	2667

Source: Decreto (DOF) Ley de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos

Table 2

ASEA's General Safety Guidelines for the Hydrocarbon Sector

Issued May 2016

	Lexical Entry	Translation (trial)	Source ID 157 Lexical ID
1	Accidente	Accident	2621
2	Análisis de Riesgo	Risk analysis	2622
3	Aspecto Ambiental	Environmental aspect	2624
4	Auditoría	Audit	2626
5	Autorización	Authorization	2627
6	Clave Única de Registro del Regulado (CURR):	Regulated Party ID Code	2631
7	Competencia del Personal	Personnel competency	2628
8	Confidencial	Confidential	2651
9	Conformación del Sistema de Administración	Elements of a [Safety] Management System	2629
10	Criterios de Auditoría	Audit criteria	2630
11	Desempeño	Performance	2632
12	Documento Puente	Compliance report	2633
13	Equipo crítico	Critical equipment	2634
14	Etapas de Desarrollo	Stages of development	2636
15	Evaluación de Riesgos	Evaluation of risk	2637
16	Hallazgo	Finding, discovery	2638
17	Implementación del Sistema de Administración	Implementation of a [safety] management system	2639

Source: ASEA Lineamientos para la conformación, implementación y autorización de los Sistemas de Administración de Seguridad Industrial, Seguridad Operativa y protección del medio ambiente aplicables a las actividades del sector de hidrocarburos que se indican

Table 2
ASEA's General Safety Guidelines for the Hydrocarbon Sector

Issued May 2016

	Lexical Entry	Translation (trial)	Lexical ID
18	Incidente	Incident	2640
19	Ley	ASEA Act of 2014	2641
20	Mecanismo	Mechanism	2642
21	Peligro	Risk	2643
22	Procedimiento	Procedure	2644
23	Programa de Auditoría	Auditing program	2645
24	Programa de Implementación	Implementation program	2646
25	Proyecto	Project	2647
26	Registro	Registry	2648
27	Riesgo	Risk	2649
28	Sistema de Administración	Management system	2650

Table 3

ASEA General Safety Guidelines for the Hydrocarbon Sector

Terms from E&P Guidelines (December 2016)

	Lexical Entry	Translation (trial)	Source ID 155
			Lexical ID
1	Abandono	Abandonment	2548
2	Acuífero	Acquifer	2550
3	Aguas Profundas	Deep water	2551
4	Aguas Someras	Shallow water	2552
5	Aguas Ultraprofundas	Ultra-deep water	2553
6	Ambiente de cuestionamiento y aprendizaje	Atmosphere of Questioning and apprenticeship	2599
7	Áreas Ambientalmente Sensibles	Sensitive environmental areas	2554
8	Barrera	Barrier	2555
9	Campo	Field	2556
10	Cierre	Closing / decommissioning	2557
11	Comisión	Commission [CNH]	2558
12	Conjunto de Preventores	Blowout preventor [BOP]	2559
13	Costa afuera	Offshore	2614
14	Cultura	Culture	2598
15	Cultura de administración del Riesgo	Culture of risk management	2652
16	dB re 1 [GK: μ]Pa	dB re 1 [μ]Pa	2560
17	Desmantelamiento	Decommissioning	2561

Source: ASEA DISPOSICIONES administrativas de carácter general que establecen los Lineamientos en materia de Seguridad Industrial, Seguridad Operativa y protección al medio ambiente para realizar las actividades de Reconocimiento y Exploración Superficial, Exploración y Extracción de Hidrocarburos.

Table 3

ASEA General Safety Guidelines for the Hydrocarbon Sector

Terms from E&P Guidelines (December 2016)

Lexical Entry	Translation (trial)	Lexical ID
18 Destrucción Controlada	Flaring	2562
19 Dictamen Técnico	Technical [compliance] report	2563
20 Disparo	Perforation [of well casing]	2564
21 EERA	Escape, Evacuation and Rescue Analysis	2611
22 ENVID	Environmental Impact Identification	2612
23 Estimulación	Stimulation	2565
24 Estudio de Geotecnia	Geotechnical study	2566
25 ETA	Event Tree Analysis	2607
26 Evaluación Técnica	Technical evaluation	2567
27 FMEA	Failure Modes and Effects Analysis	2609
28 FPSO	Floating Production Storage Offloading	2568
29 Fracturamiento	Fracturing	2569
30 FTA	Fault Tree Analysis	2606
31 Fuente de Energía Sísmica	Seismic energy source	2570
32 HAZID	Hazard Identification	2603
33 HAZOP	Hazard And Operability Analysis	2608
34 Incidente	Incident	2571
35 Informe geológico	Geological report	2601
36 Infraestructura	Infrastructure	2572
37 Integridad	Integrity	2600
38 Integridad mecánica	Mechanical integrity	2573

Table 3

ASEA General Safety Guidelines for the Hydrocarbon Sector

Terms from E&P Guidelines (December 2016)

Lexical Entry	Translation (trial)	Lexical ID
39 JHA	Job Hazard Analysis	2605
40 Ley	Law [ASEA]	2574
41 Línea de Descarga	Flow line	2575
42 Monitoreo Acústico Pasivo	Passive Acoustic Monitoring	2576
43 [Narrow safety window]	Narrow safety window	2620
44 Operaciones Simultáneas	Simultaneous operations	2577
45 Peligro	Hazard	2617
46 PEM	Physical Effects Modelling	2610
47 Peor Escenario	Worse-case scenario	2578
48 Perforación	Drilling, well bore	2579
49 PHA	Preliminary Hazard Analysis	2604
50 Plan de trabajo	Work plan	2613
51 Pozo	Well	2580
52 Pozo de Alivio	Relief well	2581
53 Pozo de Disposición	Disposal well	2583
54 Pozo Exploratorio	Exploratory well	2584
55 Pozos de Alta Presión/Alta Temperatura	High pressure / high temperature wells [HPHT]	2582
56 Prueba de goteo	Negative pressure test (NPT)	2618
57 Prueba de Producción	Drill stem test, production test	2585
58 PSO	Protected Species Observer	2586
59 Regulado	Regulated Party	2615

Table 3
ASEA General Safety Guidelines for the Hydrocarbon Sector

Terms from E&P Guidelines (December 2016)

Lexical Entry	Translation (trial)	Lexical ID
60 Riesgos Someros	Shallow, subsurface risks	2587
61 Sociedad Clasificadora	Corporate member of IACS	2595
62 Tan Bajo Como Sea Razonablemente Factible	As low as may be reasonably feasible	2588
63 Taponamiento	Plugging	2589
64 Tercero autorizado	Authorized third party	2602
65 Terminación	Completion	2590
66 Tuberías de Revestimiento	Casing pipe, casing	2591
67 Yacimiento	Deposit / Reservoir	2592
68 Yacimiento No Convencional	Non-conventional reservoir	2593
69 Yacimiento No Convencional /2	Non-conventional reservoir	2597
70 Zona de Exclusión	Exclusion zone	2594

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
A			
1 ▶ Abandono	Abandonment	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
2 ▶ Accidente	Accident	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
3 ▶ Acuífero	Acquifer	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
4 ▶ Agencia	Agency	Ley de ASEA (8/2014)	3
5 ▶ Aguas Profundas	Deep water	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
6 ▶ Aguas Someras	Shallow water	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
7 ▶ Aguas Ultraprofundas	Ultra-deep water	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
8 ▶ Ambiente de cuestionamiento y aprendizaje	Atmosphere of Questioning and apprenticeship	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	9
9 ▶ Análisis de Riesgo	Risk analysis	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
10 ▶ Áreas Ambientalmente Sensibles	Sensitive environmental areas	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
11 ▶ Aspecto Ambiental	Environmental aspect	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
12 ▶ Auditoría	Audit	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
13 ▶ Autorización	Authorization	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
B			
14 ▶ Barrera	Barrier	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 7
C			
15 ▶ Campo	Field	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
16 ▶ Cierre	Closing / decommissioning	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
17 ▶ Clave Única de Registro del Regulado (CURR):	Regulated Party ID Code	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
18 ▶ Comisión	Commission [CNH]	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
19 ▶ Competencia del Personal	Personnel competency	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
20 ▶ Confidencial	Confidential	ASEA - Lineamientos de Seguridad Industrial (5/2016)	5
21 ▶ Conformación del Sistema de Administración	Elements of a [Safety] Management System	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
22 ▶ Conjunto de Preventores	Blowout preventor [BOP]	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
23 ▶ Consecuencia	Consequence	Ley de ASEA (8/2014)	3
24 ▶ Contingencia	Safety or environmental contingency	Ley de ASEA (8/2014)	3
25 ▶ Costa afuera	Offshore	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
26 ▶ Criterios de Auditoría	Audit criteria	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
27 ▶ Cultura	Culture	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	7
28 ▶ Cultura de administración del Riesgo	Culture of risk management	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	9
d			
29 ▶ dB re 1 [GK: mu]Pa	dB re 1 [mu]Pa	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
30 ▶ Desempeño	Performance	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
31 ▶ Desmantelamiento	Decommissioning	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
32 ▶ Destrucción Controlada	Flaring	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
33 ▶ Dictamen Técnico	Technical [compliance] report	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 6, 17, 180
34 ▶ Disparo	Perforation [of well casing]	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
35 ▶ Documento Puente	Compliance report	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
E			
36 ▶ EERA	Escape, Evacuation and Rescue Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
37 ▶ Emergencia	Emergency	Ley de ASEA (8/2014)	3
38 ▶ ENVID	Environmental Impact Identification	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
39 ▶ Equipo crítico	Critical equipment	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
40 ▶ Estimulación	Stimulation	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
41 ▶ Estudio de Geotecnia	Geotechnical study	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
42 ▶ ETA	Event Tree Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
43 ▶ Etapas de Desarrollo	Stages of development	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
44 ▶ Evaluación de Riesgos	Evaluation of risk	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
45 ▶ Evaluación estratégica	Strategic evaluation	Ley de ASEA (8/2014)	3
46 ▶ Evaluación Técnica	Technical evaluation	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
47 ▶ Externalidades	Externalities	Ley de ASEA (8/2014)	3
F			
48 ▶ FMEA	Failure Modes and Effects Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
49 ▶ FPSO	Floating Production Storage Offloading	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
50 ▶ Fracturamiento	Fracturing	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
51 ▶ FTA	Fault Tree Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
52 ▶ Fuente de Energía Sísmica	Seismic energy source	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
H			
53 ▶ Hallazgo	Finding, discovery	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
54 ▶ HAZID	Hazard Identification	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
55 ▶ HAZOP	Hazard And Operability Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
I			
56 ▶ Implementación del Sistema de Administración	Implementation of a [safety] management system	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
57 ▶ Incidente	Incident	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
58 ▶ Incidente	Incident	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
59 ▶ Informe geológico	Geological report	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	15
60 ▶ Infraestructura	Infrastructure	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
61 ▶ Instalación	Installation	Ley de ASEA (8/2014)	3
62 ▶ Integridad	Integrity	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	8
63 ▶ Integridad mecánica	Mechanical integrity	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 21
J			
64 ▶ JHA	Job Hazard Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
L			
65 ▶ Ley	Law [ASEA]	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
66 ▶ Ley	ASEA Act of 2014	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
67 ▶ Línea de Descarga	Flow line	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
M			
68 ▶ Mecanismo	Mechanism	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
69 ▶ Monitoreo Acústico Pasivo	Passive Acoustic Monitoring	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
O			
70 ▶ Operaciones Simultáneas	Simultaneous operations	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
P			
71 ▶ Peligro	Hazard	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
72 ▶ Peligro	Risk	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
73 ▶ PEM	Physical Effects Modelling	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
74 ▶ Peor Escenario	Worse-case scenario	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
75 ▶ Perforación	Drilling, well bore	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
76 ▶ PHA	Preliminary Hazard Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
77 ▶ Plan de trabajo	Work plan	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	27, 86, 169
78 ▶ Pozo	Well	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
79 ▶ Pozo de Alivio	Relief well	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
80 ▶ Pozo de Disposición	Disposal well	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
81 ▶ Pozo Exploratorio	Exploratory well	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
82 ▶ Pozos de Alta Presión/Alta Temperatura	High pressure / high temperature wells [HPHT]	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 15
83 ▶ Procedimiento	Procedure	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
84 ▶ Programa de Auditoría	Auditing program	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
85 ▶ Programa de Implementación	Implementation program	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
86 ▶ Proyecto	Project	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
87 ▶ Prueba de goteo	Negative pressure test (NPT)	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	
88 ▶ Prueba de Producción	Drill stem test, production test	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
89 ▶ PSO	Protected Species Observer	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 37
R			
90 ▶ Registro	Registry	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
91 ▶ Regulado	Regulated Party	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	Preamble
92 ▶ Regulados	Regulated Parties	Ley de ASEA (8/2014)	3
93 ▶ Riesgo	Risk	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
94 ▶ Riesgo	Risk	Ley de ASEA (8/2014)	3
95 ▶ Riesgo crítico	Critical risk	Ley de ASEA (8/2014)	3
96 ▶ Riesgos Someros	Shallow, subsurface risks	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 15

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
S			
97 ▶ Secretaría	Ministry [SEMARNAT]	Ley de ASEA (8/2014)	3
98 ▶ Sector Hidrocarburos o Sector	Hydrocarbon sector, or Sector	Ley de ASEA (8/2014)	3
99 ▶ Seguridad Industrial	Industrial safety	Ley de ASEA (8/2014)	3
100 ▶ Seguridad Operativa	Operational safety	Ley de ASEA (8/2014)	3
101 ▶ Sistema de Administración	Management system	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
102 ▶ Sistema de Administración	[Safety] Management system	Ley de ASEA (8/2014)	3
103 ▶ Sociedad Clasificadora	Corporate member of IACS	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
104 ▶ Supervisión	Public oversight	Ley de ASEA (8/2014)	3
T			
105 ▶ Tan Bajo Como Sea Razonablemente Factible	As low as may be reasonably feasible	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
106 ▶ Taponamiento	Plugging	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
107 ▶ Tercero autorizado	Authorized third party	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	17, 18, 181

Table 4

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical Entry	Translation	Source	Article
108 ▶ Terminación	Completion	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
109 ▶ Tuberías de Revestimiento	Casing pipe, casing	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
Y			
110 ▶ Yacimiento	Deposit / Reservoir	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
111 ▶ Yacimiento No Convencional	Non-conventional reservoir	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
112 ▶ Yacimiento No Convencional /2	Non-conventional reservoir	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
Z			
113 ▶ Zona de Exclusión	Exclusion zone	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 35

Table 5

ASEA's safety and environmental guidelines pertaining to E&P

Incorporates entries from Tables 1-3

	Translation	Lexical Entry
1	▶ Abandonment	Abandono
2	▶ Accident	Accidente
3	▶ Acquifer	Acuífero
4	▶ Agency	Agencia
5	▶ As low as may be reasonably feasible	Tan Bajo Como Sea Razonablemente Factible
6	▶ ASEA Act of 2014	Ley
7	▶ Atmosphere of Questioning and apprenticeship	Ambiente de cuestionamiento y aprendizaje
8	▶ Audit	Auditoría
9	▶ Audit criteria	Criterios de Auditoría
10	▶ Auditing program	Programa de Auditoría
11	▶ Authorization	Autorización
12	▶ Authorized third party	Tercero autorizado
13	▶ Barrier	Barrera
14	▶ Blowout preventor [BOP]	Conjunto de Preventores
15	▶ Casing pipe, casing	Tuberías de Revestimiento
16	▶ Closing / decommissioning	Cierre
17	▶ Commission [CNH]	Comisión
18	▶ Completion	Terminación
19	▶ Compliance report	Documento Puente
20	▶ Confidential	Confidencial

Table 5

ASEA's safety and environmental guidelines pertaining to E&P

Incorporates entries from Tables 1-3

	Translation	Lexical Entry
21	▶ Consequence	Consecuencia
22	▶ Corporate member of IACS	Sociedad Clasificadora
23	▶ Critical equipment	Equipo crítico
24	▶ Critical risk	Riesgo crítico
25	▶ Culture	Cultura
26	▶ Culture of risk management	Cultura de administración del Riesgo
27	▶ dB re 1 [mu]Pa	dB re 1 [GK: mu]Pa
28	▶ Decommissioning	Desmantelamiento
29	▶ Deep water	Aguas Profundas
30	▶ Deposit / Reservoir	Yacimiento
31	▶ Disposal well	Pozo de Disposición
32	▶ Drill stem test, production test	Prueba de Producción
33	▶ Drilling, well bore	Perforación
34	▶ Elements of a [Safety] Management System	Conformación del Sistema de Administración
35	▶ Emergency	Emergencia
36	▶ Environmental aspect	Aspecto Ambiental
37	▶ Environmental Impact Identification	ENVID
38	▶ Escape, Evacuation and Rescue Analysis	EERA
39	▶ Evaluation of risk	Evaluación de Riesgos
40	▶ Event Tree Analysis	ETA
41	▶ Exclusion zone	Zona de Exclusión
42	▶ Exploratory well	Pozo Exploratorio

Table 5

ASEA's safety and environmental guidelines pertaining to E&P

Incorporates entries from Tables 1-3

	Translation	Lexical Entry
43	Externalities	Externalidades
44	Failure Modes and Effects Analysis	FMEA
45	Fault Tree Analysis	FTA
46	Field	Campo
47	Finding, discovery	Hallazgo
48	Flaring	Destrucción Controlada
49	Floating Production Storage Offloading	FPSO
50	Flow line	Línea de Descarga
51	Fracturing	Fracturamiento
52	Geological report	Informe geológico
53	Geotechnical study	Estudio de Geotecnia
54	Hazard	Peligro
55	Hazard And Operability Analysis	HAZOP
56	Hazard Identification	HAZID
57	High pressure / high temperature wells [HPHT]	Pozos de Alta Presión/Alta Temperatura
58	Hydrocarbon sector, or Sector	Sector Hidrocarburos o Sector
59	Implementation of a [safety] management system	Implementación del Sistema de Administración
60	Implementation program	Programa de Implementación
61	Incident	Incidente
62	Incident	Incidente
63	Industrial safety	Seguridad Industrial
64	Infrastructure	Infraestructura

Table 5

ASEA's safety and environmental guidelines pertaining to E&P

Incorporates entries from Tables 1-3

	Translation	Lexical Entry
65 ▶	Installation	Instalación
66 ▶	Integrity	Integridad
67 ▶	Job Hazard Analysis	JHA
68 ▶	Law [ASEA]	Ley
69 ▶	Management system	Sistema de Administración
70 ▶	Mechanical integrity	Integridad mecánica
71 ▶	Mechanism	Mecanismo
72 ▶	Ministry [SEMARNAT]	Secretaría
73 ▶	Negative pressure test (NPT)	Prueba de goteo
74 ▶	Non-conventional reservoir	Yacimiento No Convencional
75 ▶	Non-conventional reservoir	Yacimiento No Convencional /2
76 ▶	Offshore	Costa afuera
77 ▶	Operational safety	Seguridad Operativa
78 ▶	Passive Acoustic Monitoring	Monitoreo Acústico Pasivo
79 ▶	Perforation [of well casing]	Disparo
80 ▶	Performance	Desempeño
81 ▶	Personnel competency	Competencia del Personal
82 ▶	Physical Effects Modelling	PEM
83 ▶	Plugging	Taponamiento
84 ▶	Preliminary Hazard Analysis	PHA
85 ▶	Procedure	Procedimiento
86 ▶	Project	Proyecto

Table 5

ASEA's safety and environmental guidelines pertaining to E&P

Incorporates entries from Tables 1-3

	Translation	Lexical Entry
87	Protected Species Observer	PSO
88	Public oversight	Supervisión
89	Registry	Registro
90	Regulated Parties	Regulados
91	Regulated Party	Regulado
92	Regulated Party ID Code	Clave Única de Registro del Regulado (CURR):
93	Relief well	Pozo de Alivio
94	Risk	Peligro
95	Risk	Riesgo
96	Risk	Riesgo
97	Risk analysis	Análisis de Riesgo
98	[Safety] Management system	Sistema de Administración
99	Safety or environmental contingency	Contingencia
100	Seismic energy source	Fuente de Energía Sísmica
101	Sensitive environmental areas	Áreas Ambientalmente Sensibles
102	Shallow, subsurface risks	Riesgos Someros
103	Shallow waters	Aguas Someras
104	Simultaneous operations	Operaciones Simultáneas
105	Stages of development	Etapas de Desarrollo
106	Stimulation	Estimulación
107	Strategic evaluation	Evaluación estratégica
108	Technical [compliance] report	Dictamen Técnico

Table 5

ASEA's safety and environmental guidelines pertaining to E&P

Incorporates entries from Tables 1-3

	Translation	Lexical Entry
109 ▶	Technical evaluation	Evaluación Técnica
110 ▶	Ultra-deep water	Aguas Ultraprofundas
111 ▶	Well	Pozo
112 ▶	Work plan	Plan de trabajo
113 ▶	Worse-case scenario	Peor Escenario

Table 6

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation
A	
<p>1 Abandono</p> <p>Final stage of a Hydrocarbon Sector Project, subsequent to the Final Closure and Dismantling of an Installation in which the site is in safe condition and there are no remaining causes of environmental impact.</p>	<p>Abandonment</p>
<p>2 Accidente</p> <p>An event that causes damage or injury to personnel, population, public property, equipment and facilities, systems and/or operational processes and the environment.</p>	<p>Accident</p>
<p>3 Acuífero</p> <p>Any geological formation or set of geological formations that are hydraulically connected to each other, through which subsoil water is circulated or stored, which can be extracted for exploitation, use or use and whose lateral and vertical limits are conventionally defined for the purposes of evaluation, management and administration of subsurface water resources.</p>	<p>Acquifer</p>
<p>4 Agencia</p> <p>National Agency of Industrial Safety and Protection of the Environment of the Hydrocarbons Sector;</p>	<p>Agency</p>
<p>5 Aguas Profundas</p> <p>Geographical areas located offshore in water depths that are equal to or greater than 500 meters and less than 1,500 meters.</p>	<p>Deep water</p>
<p>6 Aguas Someras</p> <p>Geographical areas located offshore in water depths that are less than 500 meters.</p>	<p>Shallow water</p>
<p>7 Aguas Ultraprofundas</p> <p>Geographic areas located offshore whose water strata are equal to or greater than 1,500 meters.</p>	<p>Ultra-deep water</p>
<p>8 Ambiente de cuestionamiento y aprendizaje</p> <p>The culture of Industrial Safety, Operational Safety and protection of the environment should be encouraged by the Regulated Parties, taking into account the following principles: ...V.f) Establish an organizational environment of questioning and learning based on the safe behavior of processes;</p>	<p>Atmosphere of Questioning and apprenticeship</p>

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
---------------	-------------

- | | |
|----|---|
| 9 | <p>Análisis de Riesgo</p> <p>Risk analysis</p> <p>The application of one or more specific methods to identify, analyze, evaluate and generate alternatives for mitigation and control of significant risks associated with critical equipment and processes.</p> |
| 10 | <p>Áreas Ambientalmente Sensibles Sensitive environmental areas</p> <p>Areas that have a declaration of Protected Natural Areas, including Federal, State or Municipal, or that support ecosystems whose structure and function are characterized by their fragility, by the high quality of the environmental services they offer, due to the presence of primary vegetation or species subject to protection, such as mangroves, coral reefs, cloud forests, wetlands, among others identified in the Environmental Impact Assessment.</p> |
| 11 | <p>Aspecto Ambiental Environmental aspect</p> <p>Element of the activities, products or services of an organization that can interact with the environment.</p> |
| 12 | <p>Auditoría Audit</p> <p>Systematic review to determine whether certain activities and the outcome of these activities are in compliance with the plan and whether this has been effectively implemented, as well as whether it is adequate to achieve the organization's policy and objectives.</p> |
| 13 | <p>Autorización Authorization</p> <p>Administrative act issued by the Agency that establishes that the [Safety] Management System to be implemented in Projects to be developed by the Regulated Parties complies with the requirements of the Law and the present guidelines.</p> |

B

- | | |
|----|--|
| 14 | <p>Barrera Barrier</p> <p>Means utilized to prevent or mitigate unwanted events or accidents, through physical means or procedures to direct energy to desired channels and control their undesirable release. In the context of Wells, they will be the elements that prevent the unplanned flow of fluids or gases from formation to the surface or to another formation.</p> |
|----|--|

C

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
<p>15 Campo</p> <p>Area consisting of one or more deposits, grouped or related according to certain geological, structural and stratigraphic conditions.</p>	<p>Field</p>
<p>In other jurisdictions, "field" refers to a reservoir that is in production.</p>	
<p>16 Cierre</p> <p>Stage of the life cycle of a hydrocarbon sector project in which an installation ceases to operate temporarily or definitively, in safe conditions and free of hydrocarbons, oil or any product resulting or inherent to the process.</p>	<p>Closing / decommissioning</p>
<p>17 Clave Única de Registro del Regulado (CURR):</p> <p>Identification code that is issued to individually identify the Regulated Party in the Registry of the Agency.</p>	<p>Regulated Party ID Code</p>
<p>18 Comisión</p> <p>National Hydrocarbon Commission</p>	<p>Commission [CNH]</p>
<p>19 Competencia del Personal</p> <p>Personnel qualification and demonstrated ability to apply knowledge and skills.</p>	<p>Personnel competency</p>
<p>20 Confidencial</p> <p>The Regulated Party must expressly indicate those documents that have the character of reserved or confidential, as well as the foundation on the basis of which it is classified.</p>	<p>Confidential</p>
<p>21 Conformación del Sistema de Administración</p> <p>Documentary set of minimum elements that should be contained in the [Safety] Management Systems of a Regulated Party, in accordance with the provisions of the Law and these guidelines.</p>	<p>Elements of a [Safety] Management System</p>
<p>22 Conjunto de Preventores</p> <p>System of valves and elements of cut and total seal of the well, generally operated remotely through hydraulic actuators, consisting of sealing elements of the annular spaces that are connected directly to the head of the Well and are used to avoid the uncontrolled flow of Well fluids to the surface and to prevent a blowout (BOP, Blowout Preventer);</p>	<p>Blowout preventor [BOP]</p>

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
23	<p>Consecuencia</p> <p>Consequence</p> <p>Actual or potential outcome of an undesired event, as measured by its effects on people, facilities and the environment;</p>
24	<p>Contingencia</p> <p>Safety or environmental contingency</p> <p>Risk situation, arising from human activities or natural phenomena, which may endanger the integrity of the population, the environment or industrial facilities.</p>
25	<p>Costa afuera</p> <p>Offshore</p> <p>Geographical areas located offshore in water depths of fewer than 500 meters.</p>
26	<p>Crterios de Auditoría</p> <p>Audit criteria</p> <p>Set of policies, procedures or requirements used as benchmarks against which the evidence of an audit is compared.</p>
27	<p>Cultura</p> <p>Culture</p> <p>A culture of protection of people should be fostered that protects the people involved in all the phases and areas of activity and [for which purpose] employs multidisciplinary personnel.</p>
28	<p>Cultura de administración del Riesgo</p> <p>Culture of risk management</p> <p>Emphasize the need to promote in the employees, the company and in its objectives a culture of operational risk management based on prevention, as well as the protection of people and the environment.</p>
d	
29	<p>dB re 1 [GK: mu]Pa</p> <p>dB re 1 [mu]Pa</p>
30	<p>Desempeño</p> <p>Performance</p> <p>Results of the operation and functioning of an organization of the Regulated Party with respect to its activities, processes and services.</p>
31	<p>Desmantelamiento</p> <p>Decommissioning</p> <p>Activity in which the total or partial removal is performed, the disassembly and dismantling on the site or the reuse and safe disposal of equipment and accessories of an Installation.</p>

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
32 Destrucción Controlada	Flaring
Ignition or incineration of natural gas, from exploration and extraction activities, that can not be conserved or exploited, for technical or economic reasons;	
33 Dictamen Técnico	Technical [compliance] report
Document issued by an Authorized Third Party, in which the result of the verification of compliance with the requirements established in a standard (regulatory document, code, standard, established design or national or international practice) is established;	
34 Disparo	Perforation [of well casing]
Action to detonate an explosive charge within a well, at a pre-established depth, in order to communicate to the reservoir with the well.	
35 Documento Puente	Compliance report
Report that shows that match the elements that make up the [Safety] Management System by the Regulated Party with each of the elements established Article 13 of the Law and in the provisions of these guidelines.	

E

36 EERA	Escape, Evacuation and Rescue Analysis
Escape, Evacuation and Rescue Analysis	
37 Emergencia	Emergency
A situation arising from human activities or natural phenomena that affects the integrity of the population, the environment or industrial facilities;	
38 ENVID	Environmental Impact Identification
Environmental Impact Identification	
39 Equipo crítico	Critical equipment
Systems, machinery, equipment, installations or components, the failure of which could lead to the release of energy or hazardous material, capable of causing [safety] incidents and accidents.	
40 Estimulación	Stimulation
Treatment performed to induce, restore or improve the productivity of a reservoir;	

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
41 Estudio de Geotecnia	Geotechnical study
<p>A study to obtain the physical and mechanical characteristics of the subsurface in order to design the placement of the casing and the wellhead, as well as the design of the riser to be used and its design. At the moment the Infrastructure land and offshore that you want to install.</p>	
42 ETA	Event Tree Analysis
<p>Event Tree Analysis</p>	
43 Etapas de Desarrollo	Stages of development
<p>Those that make up the life cycle of a Project and which include the design, construction, operation, closure, dismantling and abandonment, or their equivalents, of the facilities.</p>	
44 Evaluación de Riesgos	Evaluation of risk
<p>Process aimed at estimating the probability and magnitude of risks.</p>	
45 Evaluación estratégica	Strategic evaluation
<p>Systematic analysis process carried out by the Agency to issue observations and recommendations in the areas of Industrial Safety, Operational Safety and environmental protection in relation to public policies, plans or government programs in the Hydrocarbons Sector;</p>	
46 Evaluación Técnica	Technical evaluation
<p>Process by which an Authorized Third Party performs a comparative technical analysis of one or more requirements against a standard (dimensions, purposes, materials, results, limits, ranges), from which an evaluation report is derived;</p>	
47 Externalidades	Externalities
<p>Los impactos positivos o negativos que genera la provisión de un bien o servicio y que afectan o que pudieran afectar a una tercera persona o al medio ambiente. Las externalidades ocurren cuando el costo pagado por un bien o servicio es diferente del costo total de los daños y beneficios en términos económicos, sociales, ambientales y a la salud que involucran su producción y consumo;</p>	

F

48 FMEA	Failure Modes and Effects Analysis
<p>Failure Modes and Effects Analysis</p>	

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
---------------	-------------

49	FPSO	Floating Production Storage Offloading Floating Production Storage Off-loading vessel.
50	Fracturamiento	Fracturing Operation focused on increasing the productivity or injectivity of the wells through the generation of a fracture in the rock that facilitates the flow of fluids from the production formation to the well or vice versa; Injectivity index: The number of barrels per day of gross liquid pumped into an injection well per psi (pound per square inch) pressure differential between the mean injection pressure and the mean formation pressure.
51	FTA	Fault Tree Analysis Fault Tree Analysis
52	Fuente de Energía Sísmica	Seismic energy source High energy pulse used for the acquisition of seismic data, including the use of high pressure air, explosive charges or vibrations;

H

53	Hallazgo	Finding, discovery The result of evaluating the evidence by reference to a criterion.
54	HAZID	Hazard Identification Hazard Identification
55	HAZOP	Hazard And Operability Analysis Hazard And Operability Analysis

I

56	Implementación del Sistema de Administración	Implementation of a [safety] management system The gradual implementation by the Regulated Party of the elements of its [Safety] Management System in the execution of Projects of the Hydrocarbons Sector during each of the Development Stages, according to the corresponding Implementation Programs.
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Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
57 Incidente	Incident
<p>Event or combination of unexpected and unwanted events that disrupt the normal operation of the Facilities, process or industry; regardless of any effect on the Environment, Facilities, Population and / or personnel of the Regulated Party, or on contractors, subcontractors, suppliers and service providers;</p> <p>Event or combination of unexpected unwanted events that disrupt the normal operation of the facility, process or industry that may or may not affect the environment, facilities, population and/or personnel of the Regulated Personnel, as well as the personnel of contractors, subcontractors, suppliers and service providers.</p>	
59 Informe geológico	Geological report
<p>The Regulated Parties must keep the documentary information regarding the elaboration of the Risk Analysis ... including at least the following elements:</p> <p>...</p> <p>Geological Report to evaluate: A) Seismic activity in the proposed location; (B) Geological fault zones, and C) For platforms located in production areas, the possibility and potential effects of subsidence.</p>	
60 Infraestructura	Infrastructure
<p>Set of Facilities, structures, machinery, equipment, pipelines, among others, necessary to carry out the operational processes, for the activities of Surveying and Surface Exploration, Exploration and Extraction;</p>	
61 Instalación	Installation
<p>The set of structures, industrial plants, equipment, process piping circuits and auxiliary services, as well as instrumented systems, arranged for a specific production or commercial process; these include (but are not limited to) wells for exploration and extraction of hydrocarbons, platforms, plants Storage, refining and processing of hydrocarbons on land and at sea, hydrocarbon compression and decompression plants, transport and distribution systems in any form, as well as stations for sale to the public;</p>	
62 Integridad	Integrity
<p>[Physical] Integrity</p>	
63 Integridad mecánica	Mechanical integrity
<p>Situation or mechanical state of the facilities and systems that together contribute to the optimal functionality of the Infrastructure and its parts through the systematic application of general guidelines, to ensure that the equipment or systems are in operating conditions, according to to the specifications of the manufacturer and in accordance with the demand of each process, in order to prevent failures, accidents or potential risks to people, facilities and the environment;</p>	

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry

Translation

J

- 64 **JHA** Job Hazard Analysis
Job Hazard Analysis

L

- 65 **Ley** Law [ASEA]
Law of the National Agency of Industrial Safety and Protection of the Environment of the Hydrocarbons Sector;
Law of the National Agency of Industrial Safety and Protection of the Environment of the Hydrocarbons Sector.
- 67 **Línea de Descarga** Flow line
Pipe system with different components such as: valves, flanges, accessories, safety devices or relief, among others, through which the hydrocarbons and their derivatives from the well are transported to the tank batteries.

M

- 68 **Mecanismo** Mechanism
A set of elements and a combination of its parts that, adjusted to each other in an orderly manner, allow a job or function to be satisfactorily fulfilled.
- 69 **Monitoreo Acústico Pasivo** Passive Acoustic Monitoring
A technique for the detection of marine mammals that uses hydrophones and software to detect their vocalizations and is used to locate them in the surroundings of the power source (PAM);

O

- 70 **Operaciones Simultáneas** Simultaneous operations
Two or more independent operations such as drilling, repairing, wiring, facility construction, well testing, maintenance, movement of equipment and materials, etc., under common operational control in which the activities of an operation may affect safety Personnel, equipment and / or environment;

P

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
71 Peligro	Hazard
<p>HAZID - A technique of identification of all the significant hazards associated with a particular activity (Hazard Identification)</p> <p>Source or situation of potential injury to human health, property, the workplace environment, the environment, or a combination of these.</p>	
73 PEM	Physical Effects Modelling
<p>Physical Effects Modelling</p>	
74 Peor Escenario	Worse-case scenario
<p>Scenario derived from the Risk Analysis, which corresponds to the higher estimated volume of the material, energy or hazardous substance resulting from an accidental release, and which could result in the affectation to people, the environment or the Facilities;</p>	
75 Perforación	Drilling, well bore
<p>Scenario derived from the Risk Analysis, which corresponds to the higher estimated volume of the material, energy or hazardous substance resulting from an accidental release, and which could result in the damage to people, the environment or the facilities;</p>	
76 PHA	Preliminary Hazard Analysis
<p>Preliminary Hazard Analysis</p>	
77 Plan de trabajo	Work plan
<p>Prior to the start of surveying and surface Exploration activities, Regulated parties must submit the Notice of Initiation of Activities to the Agency, which must include a simple copy of the authorization issued by the Commission and the authorized work plan for the specific activities.</p>	
78 Pozo	Well
<p>It is the construction carried out in the subsurface to communicate the surface with the Site in order to carry out activities of Exploration and Extraction of Hydrocarbons;</p>	
79 Pozo de Alivio	Relief well
<p>Well that is drilled in order to control the flow of fluids or relieve pressure from the reservoir in an uncontrolled well;</p>	

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
80 Pozo de Disposición	Disposal well
Well connected to a receiver formation that is built or is enabled for the injection of fluids or wastes, and to which a strict protocol of mechanical integrity monitoring and admission behavior is applied. Includes those used for the injection of return fluids ejected after the completion of a producing well process;	
81 Pozo Exploratorio	Exploratory well
Well whose objective is to know the stratigraphic column, to confirm the existence of an oil system and, if appropriate, to locate and delimit a possible deposit. In this category are the stratigraphic Wells, the exploratory Wells in strict sense, the delimiting Wells and the advanced Wells;	
82 Pozos de Alta Presión/Alta Temperatura	High pressure / high temperature wells [HPHT]
Wells with a bottom pressure greater than 69 MPa or with a bottom temperature greater than 150 ° C (HPHT);	
83 Procedimiento	Procedure
The description of the sequential activities of a task or specific tasks, applicable to the operation, maintenance, review and investigation, among others, of critical equipment and processes.	
84 Programa de Auditoría	Auditing program
Details agreed upon for a set of one or more audits planned for a specified period of time and directed towards a specific purpose.	
85 Programa de Implementación	Implementation program
Document that sets forth the activities and schedule necessary for the Regulated Party to fully implement each of the elements that make up the [Safety] Management System in each project of the Hydrocarbons Sector that it develops.	
86 Proyecto	Project
The facilities (the equipment and facilities, or all of them) that are associated with a Legacy Lease [<i>asignación</i>], Contract or Permit, as the case may be, that has been granted by a competent authority and by means of which the Regulated Party is authorized to carry out the activities referred to in article 2 of the present guidelines in any stage of development.	

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
87 Prueba de goteo	Negative pressure test (NPT)
Negative pressure test (NPT)	
This term does not appear in the ASEA sources. It refers to the Well Integrity Test that is necessary to be certain that the reservoir has been tightly sealed from the wellbore. It was this test that was blotched (misinterpreted) on Deepwater Horizon on April 20, 2010.	
88 Prueba de Producción	Drill stem test, production test
Set of activities carried out during Exploration or Extraction activities, in order to evaluate an area of interest to determine the productive capacity, initial pressure of the formation, permeability or extension of a Reservoir;	
89 PSO	Protected Species Observer
Protected Species Observer	
R	
90 Registro	Registry
A form issued by the Agency to facilitate the documentation and verification that the Management System of the Regulated Party is in accordance with the requirements established in the Law, the present guidelines and best practices.	
91 Regulado	Regulated Party
The attributions of this Agency to: a) issue the bases and criteria for the Regulated Party to adopt the best practices of Industrial [process] Safety, Operational [occupational] Safety and environmental protection that are applicable to the activities of the Hydrocarbons Sector. . .	
92 Regulados	Regulated Parties
State enterprises, physical and corporate persons of the public, social and private sectors that carry out regulated activities and matters governed by the present Law;	
93 Riesgo	Risk
The probability of occurrence of an undesirable event measured in terms of its consequences on people, facilities, environment or community.	
The probability of occurrence of an undesirable event measured in terms of its consequences on people, facilities, environment or community;	
95 Riesgo crítico	Critical risk
Risk that implies imminent danger and requires immediate action to reduce to acceptable conditions without regard to the cost of its solution;	

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry	Translation
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96	<p>Riesgos Someros</p> <p>Shallow, subsurface risks</p> <p>The occurrence, in the first layers of the subsoil, of one or more of the following geological features: gas pockets, gas hydrates, near-surface faults, shallow aquifer flows, unconsolidated sediments or seabed anomalies;</p>
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S

97	<p>Secretaría</p> <p>Ministry [SEMARNAT]</p> <p>Ministry of the Environment and Natural Resources</p>
98	<p>Sector Hidrocarburos o Sector</p> <p>Hydrocarbon sector, or Sector</p> <p>The following activities: [a-f]</p> <p>a, Surveys and surface exploration, and the exploration and extraction of hydrocarbons;</p> <p>...</p> <p>f) Transportation by pipeline and storage of products derived from the processing of natural gas and oil refining.</p>
99	<p>Seguridad Industrial</p> <p>Industrial safety</p> <p>Multidisciplinary area that covers the identification, reduction, evaluation, prevention, mitigation, control and administration of risks in the Sector; to be accomplished by means of a set of standards including technical guidelines on facilities and activities related to those with associated risks. The main objective is to preserve the physical integrity of the people and installations as well as the protection to the environment.</p>
100	<p>Seguridad Operativa</p> <p>Operational safety</p> <p>Multidisciplinary area that incorporates the processes contained in the technical and administrative dispositions and norms regarding [a specific] technology. It also includes the analysis, evaluation, prevention, mitigation and control of the associated risks to include the design phase, construction, start-up and commissioning, routine operation, normal and emergency stoppages, preventive and corrective maintenance. It also includes operational procedures and safe practices, training and performance, incident and accident investigation and analysis, emergency response plans, audits, quality assurance, pre-start, mechanical integrity and change management, among others, in the Sector;</p>
101	<p>Sistema de Administración</p> <p>Management system</p> <p>System for the Management of Industrial Safety, Operative Safety and Protection to the Environment, provided for in Chapter III of the Law.</p>

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry

Translation

Comprehensive set of interrelated and documented elements whose purpose is the prevention, control and improvement of the performance of a facility or set of them, in matters of Industrial Safety, Operational Safety and environmental protection in the Sector.

103 **Sociedad Clasificadora**

Corporate member of IACS

An independent organization and a member of the International Association of Classification Societies (IACS), whose purpose is to supervise the design, construction, installation, permanent maintenance or any modification of floating units of Drilling and Production, according to the standards of classification societies;

104 **Supervisión**

Public oversight

Act of authority by which the Agency verifies, inspects and, where appropriate, confirms compliance with the legal, regulatory and regulatory provisions in the matters covered by this Law.

T

105 **Tan Bajo Como Sea Razonablemente Factible**

As low as may be reasonably feasible

For a risk to be considered ALARP, it must be possible to demonstrate that the cost of continuing to reduce that risk is greater compared to the ALARP (As Low As Reasonably Practicable);

106 **Taponamiento**

Plugging

Intervention that is made to the well for its temporary or definitive closure and isolation of the traversed formations, in order to prevent the communication of the area producing the site with the surface and prevent invasion or flow of fluids from the Reservoir at the mouth of the Well;

107 **Tercero autorizado**

Authorized third party

The Authorized Third Party mentioned in the previous article would be a national entity with national or international recognition that expresses its informed opinion on the Risk Analysis of the stage of detailed engineering that includes those [risks] associated with the Project and those generated by the activities carried out by contractors, subcontractors, service providers and suppliers of the Regulated Party

108 **Terminación**

Completion

Operations following drilling and following the cementation of the casing pipe, introduction of production rig, well stimulation, training evaluation, in order to leave the well producing hydrocarbons or, as may be the case, plugged;

Table 6

<<gReport Title

Incorporates Tables 1-3

Lexical entry

Translation

109	Tuberías de Revestimiento	Casing pipe, casing
	Steel pipes of different diameters, weights and specifications that are introduced into the perforated wellbore and are annularly cemented to isolate successive formations, to prevent instability of the wellbore and to establish the integrity of the well;	

Y

110	Yacimiento	Deposit / Reservoir
	Natural accumulation of hydrocarbons in subsoil rocks, which have physical characteristics to store them and allow their flow under certain conditions;	

111	Yacimiento No Convencional	Non-conventional reservoir
	Natural accumulation of Hydrocarbons in generating rocks or in compact storage rocks, in which, for the extraction of the same, the rock-fluid system requires to be stimulated or subjected to processes of improved recovery.	

112	Yacimiento No Convencional /2	Non-conventional reservoir
	Non-Conventional Reservoirs include those of oil in shales, oil in compact rocks, oil in low permeability sands, heavy and extra heavy oils, oil in bituminous sands, shale gas, gas in compact rocks, gas in low permeability sands, hydrates of methane and gas in coal veins, among others.	

Z

113	Zona de Exclusión	Exclusion zone
	Circular area encompassing noise levels up to 180 dB re 1 [GK: MU] Pa (RMS) measured from the central point of the Seismic Energy Source, this being the threshold of noise that has the potential capacity to cause physiological damages in the auditory system of cetaceans.	

Table 6

ASEA's safety and environmental guidelines pertaining to exploration and extraction

Incorporates entries from Tables 1-3

Lexical entry	Translation	Article/ section
111	Tuberías de Revestimiento Steel pipes of different diameters, weights and specifications that are introduced into the perforated wellbore and are annularly cemented to isolate successive formations, to prevent instability of the wellbore and to establish the integrity of the well;	Casing pipe 2
Y		
112	Yacimiento Natural accumulation of hydrocarbons in subsoil rocks, which have physical characteristics to store them and allow their flow under certain conditions;	Deposit / Reservoir 2
113	Yacimiento No Convencional Natural accumulation of Hydrocarbons in generating rocks or in compact storage rocks, in which, for the extraction of the same, the rock-fluid system requires to be stimulated or subjected to processes of improved recovery.	Non-conventional reservoir 2
114	Yacimiento No Convencional /2 Non-Conventional Reservoirs include those of oil in shales, oil in compact rocks, oil in low permeability sands, heavy and extra heavy oils, oil in bituminous sands, shale gas, gas in compact rocks, gas in low permeability sands, hydrates of methane and gas in coal veins, among others.	Non-conventional reservoir 2
Z		
115	Zona de Exclusión Circular area encompassing noise levels up to 180 dB re 1 [GK: MU] Pa (RMS) measured from the central point of the Seismic Energy Source, this being the threshold of noise that has the potential capacity to cause physiological damages in the auditory system of cetaceans.	Exclusion zone 2, 35

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
A			
Abandono	Abandonment	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Etapa final de un Proyecto del Sector Hidrocarburos, posterior al Cierre definitivo y Desmantelamiento de una Instalación en la que el sitio queda en condiciones seguras y ya no existen causas supervenientes de impacto al medio ambiente.</p> <p>Final stage of a Hydrocarbon Sector Project, subsequent to the Final Closure and Dismantling of an Installation in which the site is in safe condition and there are no remaining causes of environmental impact.</p>			
Accidente	Accident	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>Evento que ocasiona afectaciones al personal, a la población, a los bienes propiedad de la Nación, a los equipos e instalaciones, a los sistemas y/o procesos operativos y al medio ambiente.</p> <p>An event that causes damage or injury to personnel, population, public property, equipment and facilities, systems and/or operational processes and the environment.</p>			
Acuífero	Acquifer	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Cualquier formación geológica o conjunto de formaciones geológicas hidráulicamente conectados entre sí, por las que circulan o se almacenan aguas del subsuelo que pueden ser extraídas para su explotación, uso o aprovechamiento y cuyos límites laterales y verticales se definen convencionalmente para fines de evaluación, manejo y administración de las aguas nacionales del subsuelo.</p> <p>Any geological formation or set of geological formations that are hydraulically connected to each other, through which subsoil water is circulated or stored, which can be extracted for exploitation, use or use and whose lateral and vertical limits are conventionally defined for the purposes of evaluation, management and administration of subsurface water resources.</p>			
Agencia	Agency	Ley de ASEA (8/2014)	3
<p>Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos;</p> <p>National Agency of Industrial Safety and Protection of the Environment of the Hydrocarbons Sector;</p>			

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
Aguas Profundas	Deep water	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Áreas geográficas ubicadas costa afuera cuyos tirantes de agua son iguales o superiores a 500 metros y menores a 1,500 metros.</p> <p>Geographical areas located offshore in water depths that are equal to or greater than 500 meters and less than 1,500 meters.</p>			
Aguas Someras	Shallow water	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Áreas geográficas ubicadas costa afuera cuyos tirantes de agua son menores a 500 metros.</p> <p>Geographical areas located offshore in water depths that are less than 500 meters.</p>			
Aguas Ultraprofundas	Ultra-deep water	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Áreas geográficas ubicadas costa afuera cuyos tirantes de agua son iguales o superiores a 1500 metros.</p> <p>Geographic areas located offshore whose water strata are equal to or greater than 1,500 meters.</p>			
Ambiente de cuestionamiento y aprendizaje	Atmosphere of Questioning and apprenticeship	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	9
<p>La cultura de Seguridad Industrial, Seguridad Operativa y protección al medio ambiente, deberá fomentarse por los Regulados, tomando en cuenta los siguientes principios:</p> <p>...</p> <p>V.f) Establecer organizacionalmente un ambiente de cuestionamiento y aprendizaje basado en el comportamiento seguro de los procesos;</p> <p>The culture of Industrial Safety, Operational Safety and protection of the environment should be encouraged by the Regulated Parties, taking into account the following principles: ...V.f) Establish an organizational environment of questioning and learning based on the safe behavior of processes;</p>			
Análisis de Riesgo	Risk analysis	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>La aplicación de uno o más métodos específicos para identificar, analizar, evaluar y generar alternativas de mitigación y control de los riesgos significativos asociados con equipos críticos y los procesos.</p> <p>The application of one or more specific methods to identify, analyze, evaluate and generate alternatives for mitigation and control of significant risks associated with critical equipment and processes.</p>			

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
<p>Áreas Ambientalmente Sensibles</p> <p>Zonas que cuentan con una declaratoria de Áreas Naturales Protegidas, incluyendo las de carácter Federal, Estatal o Municipal, o que sustentan ecosistemas cuya estructura y función les caracteriza por su fragilidad, por la alta calidad de los servicios ambientales que ofrecen, por presentar vegetación primaria o especies sujetas a protección, tales como manglares, arrecifes coralinos, bosque de niebla, humedales, entre otros, identificados en la Evaluación de Impacto Ambiental.</p> <p>Areas that have a declaration of Protected Natural Areas, including Federal, State or Municipal, or that support ecosystems whose structure and function are characterized by their fragility, by the high quality of the environmental services they offer, due to the presence of primary vegetation or species subject to protection, such as mangroves, coral reefs, cloud forests, wetlands, among others identified in the Environmental Impact Assessment.</p>	<p>Sensitive environmental areas</p>	<p>ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)</p>	<p>2</p>
<p>Aspecto Ambiental</p> <p>Elemento de las actividades, productos o servicios de una organización que puede interactuar con el medio ambiente.</p> <p>Element of the activities, products or services of an organization that can interact with the environment.</p>	<p>Environmental aspect</p>	<p>ASEA - Lineamientos de Seguridad Industrial (5/2016)</p>	<p>3</p>
<p>Auditoría</p> <p>Examen sistemático para determinar si ciertas actividades y el resultado de éstas cumplen con lo planificado y si esto se ha implementado eficazmente, así como si es adecuado para alcanzar la política y los objetivos de la organización.</p> <p>Systematic review to determine whether certain activities and the outcome of these activities are in compliance with the plan and whether this has been effectively implemented, as well as whether it is adequate to achieve the organization's policy and objectives.</p>	<p>Audit</p>	<p>ASEA - Lineamientos de Seguridad Industrial (5/2016)</p>	<p>3</p>
<p>Autorización</p> <p>Acto administrativo que emite la Agencia mediante el cual se tienen por cumplidos los requisitos previstos en la Ley y en los presentes lineamientos respecto del Sistema de Administración que será implementado en los Proyectos que desarrollen los Regulados.</p> <p>Administrative act issued by the Agency that establishes that the [Safety] Management System to be implemented in Projects to be developed by the Regulated Parties complies with the requirements of the Law and the present guidelines.</p>	<p>Authorization</p>	<p>ASEA - Lineamientos de Seguridad Industrial (5/2016)</p>	<p>3</p>

B

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
Barrera	Barrier	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 7
<p>Medio establecido para evitar o mitigar eventos no deseados o Accidentes, a través de medios físicos o procedimientos para dirigir la energía a canales deseados y controlar su liberación indeseable. En el contexto de Pozos, serán los elementos que previenen el flujo no planificado de fluidos o gases de la formación a la superficie o a otra formación.</p> <p>Means utilized to prevent or mitigate unwanted events or accidents, through physical means or procedures to direct energy to desired channels and control their undesirable release. In the context of Wells, they will be the elements that prevent the unplanned flow of fluids or gases from formation to the surface or to another formation.</p>			
C			
Campo	Field	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Área consistente en uno o varios Yacimientos, agrupados o relacionados conforme a determinados aspectos geológicos, estructurales y condiciones estratigráficas.</p> <p>Area consisting of one or more deposits, grouped or related according to certain geological, structural and stratigraphic conditions.</p> <p><i>In other jurisdictions, "field" refers to a reservoir that is in production.</i></p>			
Cierre	Closing / decommissioning	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Etapa del ciclo de vida de un Proyecto del Sector Hidrocarburos en la cual una Instalación deja de operar de manera temporal o definitiva, en condiciones seguras y libre de Hidrocarburos, petrolíferos o cualquier producto resultado o inherente al proceso.</p> <p>Stage of the life cycle of a hydrocarbon sector project in which an installation ceases to operate temporarily or definitively, in safe conditions and free of hydrocarbons, oil or any product resulting or inherent to the process.</p>			
Clave Única de Registro del Regulado (CURR):	Regulated Party ID Code	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>Clave que se otorga para identificar individualmente al Regulado en el Registro de Regulados de la Agencia.</p> <p>Identification code that is issued to individually identify the Regulated Party in the Registry of the Agency.</p>			

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
Comisión	Commission [CNH]	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
Comisión Nacional de Hidrocarburos			
<u>National Hydrocarbon Commission</u>			
Competencia del Personal	Personnel competency	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
Atributos personales y aptitud demostrada para aplicar conocimientos y habilidades.			
<u>Personnel qualification and demonstrated ability to apply knowledge and skills.</u>			
Confidencial	Confidential	ASEA - Lineamientos de Seguridad Industrial (5/2016)	5
Los Regulados deberán señalar expresamente aquellos documentos que tengan el carácter de reservado o confidencial, así como el fundamento con base en el cual se clasifica.			
<u>The Regulated Party must expressly indicate those documents that have the character of reserved or confidential, as well as the foundation on the basis of which it is classified.</u>			
Conformación del Sistema de Administración	Elements of a [Safety] Management System	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
Conjunto documental de los elementos mínimos que deben contener los Sistemas de Administración de los Regulados, de acuerdo con lo previsto en la Ley y en los presentes lineamientos.			
<u>Documentary set of minimum elements that should be contained in the [Safety] Management Systems of a Regulated Party, in accordance with the provisions of the Law and these guidelines.</u>			
Conjunto de Preventores	Blowout preventor [BOP]	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
Sistema de válvulas y elementos de corte y sello total del Pozo, operadas generalmente en forma remota a través de accionadores hidráulicos, conformadas por elementos sellantes de los espacios anulares, que se conectan directamente al cabezal del Pozo y se utilizan para evitar el flujo descontrolado de fluidos del Pozo hacia la superficie y prevenir un reventón (BOP, Blowout Preventer, por sus siglas en inglés);			
<u>System of valves and elements of cut and total seal of the well, generally operated remotely through hydraulic actuators, consisting of sealing elements of the annular spaces that are connected directly to the head of the Well and are used to avoid the uncontrolled flow of Well fluids to the surface and to prevent a blowout (BOP, Blowout Preventer);</u>			
Consecuencia	Consequence	Ley de ASEA (8/2014)	3
Resultado real o potencial de un evento no deseado, medido por sus efectos en las personas, instalaciones y el medio ambiente;			
<u>Actual or potential outcome of an undesired event, as measured by its effects on people, facilities and the environment;</u>			

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
Contingencia	Safety or environmental contingency	Ley de ASEA (8/2014)	3
<p>Situación de riesgo, derivada de actividades humanas o fenómenos naturales, que puede poner en peligro la integridad de la población, el medio ambiente o las instalaciones industriales.</p> <p>Risk situation, arising from human activities or natural phenomena, which may endanger the integrity of the population, the environment or industrial facilities.</p>			
Costa afuera	Offshore	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Areas geográficas ubicadas costa afuera cuyos tirantes de agua son menores a 500 metros;</p> <p>Geographical areas located offshore in water depths of fewer than 500 meters.</p>			
Crterios de Auditoría	Audit criteria	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>Conjunto de políticas, procedimientos o requisitos usados como referencia frente a la cual se compara la evidencia de la auditoría.</p> <p>Set of policies, procedures or requirements used as benchmarks against which the evidence of an audit is compared.</p>			
Cultura	Culture	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	7
<p>Se debe fomentar una cultura de protección de las personas que incorpore todas las fases y áreas de actividad e involucre personal multidisciplinario.</p> <p>A culture of protection of people should be fostered that protects the people involved in all the phases and areas of activity and [for which purpose] employs multidisciplinary personnel.</p>			
Cultura de administración del Riesgo	Culture of risk management	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	9
<p>Enfatizar la necesidad de fomentar en el personal, la empresa y en los objetivos de la misma, una cultura de administración del Riesgo operativo basado en la prevención, así como la protección de las personas y del medio ambiente;</p> <p>Emphasize the need to promote in the employees, the company and in its objectives a culture of operational risk management based on prevention, as well as the protection of people and the environment.</p>			
d			
dB re 1 [GK: mu]Pa	dB re 1 [mu]Pa	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Decibeles en referencia a 1 micro</p>			

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
Desempeño	Performance	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>Resultados de la operación y funcionamiento de una organización del Regulado respecto a sus actividades, procesos y servicios.</p> <p>Results of the operation and functioning of an organization of the Regulated Party with respect to its activities, processes and services.</p>			
Desmantelamiento	Decommissioning	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Actividad en la que se realiza la remoción total o parcial, el desarmado y desmontaje en el sitio o la reutilización y disposición segura de equipos y accesorios de una Instalación.</p> <p>Activity in which the total or partial removal is performed, the disassembly and dismantling on the site or the reuse and safe disposal of equipment and accessories of an Installation.</p>			
Destrucción Controlada	Flaring	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Quema o incineración de Gas Natural, proveniente de las actividades de Exploración y Extracción, que no puede ser conservado o aprovechado, por razones técnicas o económicas;</p> <p>Ignition or incineration of natural gas, from exploration and extraction activities, that can not be conserved or exploited, for technical or economic reasons;</p>			
Dictamen Técnico	Technical [compliance] report	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 6, 17, 180
<p>Documento que emite un Tercero Autorizado, en el cual se establece el resultado de la verificación del cumplimiento de los requisitos establecidos en un patrón (documento regulatorio, código, estándar, diseño establecido o práctica nacional o internacional);</p> <p>Document issued by an Authorized Third Party, in which the result of the verification of compliance with the requirements established in a standard (regulatory document, code, standard, established design or national or international practice) is established;</p>			
Disparo	Perforation [of well casing]	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Acción de detonar una carga explosiva dentro de un Pozo, a una profundidad preestablecida, con la finalidad de comunicar al Yacimiento con el Pozo.</p> <p>Action to detonate an explosive charge within a well, at a pre-established depth, in order to communicate to the reservoir with the well.</p>			

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
Documento Puente	Compliance report	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>Documento en el que consta el estudio de correspondencia de los elementos que integran el Sistema de Administración a cargo del Regulado con cada uno de los elementos establecidos en el artículo 13 de la Ley y en lo dispuesto en los presentes lineamientos.</p> <p>Report that shows that match the elements that make up the [Safety] Management System by the Regulated Party with each of the elements established Article 13 of the Law and in the provisions of these guidelines.</p>			
<hr/>			
E			
EERA	Escape, Evacuation and Rescue Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
<p>Análisis de escape, evaluación y rescate (por sus siglas en inglés Escape, Evacuation and Rescue Analysis),</p> <p>Escape, Evacuation and Rescue Analysis</p>			
Emergencia	Emergency	Ley de ASEA (8/2014)	3
<p>Situación derivada de actividades humanas o fenómenos naturales que al ocurrir, afectan la integridad de la población, el medio ambiente o las instalaciones industriales;</p> <p>A situation arising from human activities or natural phenomena that affects the integrity of the population, the environment or industrial facilities;</p>			
ENVID	Environmental Impact Identification	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
<p>Identificación de Impacto Ambiental (por sus siglas en inglés Environmental Impact Identification)</p> <p>Environmental Impact Identification</p>			
Equipo crítico	Critical equipment	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>Sistemas, maquinaria, equipos, instalaciones o componentes, cuya falla pudiera derivar en la liberación de energía o material peligroso, capaz de originar incidentes y accidentes.</p> <p>Systems, machinery, equipment, installations or components, the failure of which could lead to the release of energy or hazardous material, capable of causing [safety] incidents and accidents.</p>			
Estimulación	Stimulation	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Tratamiento realizado para inducir, restaurar o mejorar la productividad de un Yacimiento;</p> <p>Treatment performed to induce, restore or improve the productivity of a reservoir;</p>			

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
Estudio de Geotecnia	Geotechnical study	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Un estudio para obtener las características físicas y mecánicas del subsuelo con objeto de diseñar el asentamiento de la tubería de revestimiento (casing) y el cabezal del pozo, así como el diseño del tubular de conexión (riser) que se va a utilizar ...</p> <p>A study to obtain the physical and mechanical characteristics of the subsurface in order to design the placement of the casing and the wellhead, as well as the design of the riser to be used and its design. At the moment the Infrastructure land and offshore that you want to install.</p>			
ETA	Event Tree Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
<p>Análisis de árbol de eventos (por sus siglas en inglés Event Tree Analysis); Event Tree Analysis</p>			
Etapas de Desarrollo	Stages of development	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>Aquellas que componen el ciclo de vida de un Proyecto y que incluyen el diseño, construcción, operación, cierre, desmantelamiento y abandono, o sus equivalentes, de las instalaciones.</p> <p>Those that make up the life cycle of a Project and which include the design, construction, operation, closure, dismantling and abandonment, or their equivalents, of the facilities.</p>			
Evaluación de Riesgos	Evaluation of risk	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>Proceso dirigido a estimar la probabilidad y magnitud de los riesgos. Process aimed at estimating the probability and magnitude of risks.</p>			
Evaluación estratégica	Strategic evaluation	Ley de ASEA (8/2014)	3
<p>Proceso sistemático de análisis que realiza la Agencia para emitir observaciones y recomendaciones en las materias de Seguridad Industrial, Seguridad Operativa y de protección ambiental en las iniciativas de políticas públicas, planes o programas de gobierno relacionadas con las actividades del Sector Hidrocarburos;</p> <p>Systematic analysis process carried out by the Agency to issue observations and recommendations in the areas of Industrial Safety, Operational Safety and environmental protection in relation to public policies, plans or government programs in the Hydrocarbons Sector;</p>			

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Lexical entry	Translation	Source	Article
Evaluación Técnica	Technical evaluation	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Proceso por medio del cual un Tercero Autorizado efectúa un análisis técnico comparativo de uno o más requisitos contra un patrón (dimensiones, propósitos, materiales, resultados, límites, alcances), del que se deriva un informe de evaluación;</p> <p>Process by which an Authorized Third Party performs a comparative technical analysis of one or more requirements against a standard (dimensions, purposes, materials, results, limits, ranges), from which an evaluation report is derived;</p>			
Externalidades	Externalities	Ley de ASEA (8/2014)	3
<p>Los impactos positivos o negativos que genera la provisión de un bien o servicio y que afectan o que pudieran afectar a una tercera persona o al medio ambiente. Las externalidades ocurren cuando el costo pagado por un bien o servicio es diferente del costo total de los daños y beneficios en términos económicos, sociales, ambientales y a la salud que involucran su producción y consumo;</p> <p>Los impactos positivos o negativos que genera la provisión de un bien o servicio y que afectan o que pudieran afectar a una tercera persona o al medio ambiente. Las externalidades ocurren cuando el costo pagado por un bien o servicio es diferente del costo total de los daños y beneficios en términos económicos, sociales, ambientales y a la salud que involucran su producción y consumo;</p>			
F			
FMEA	Failure Modes and Effects Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
<p>VII. FMEA - análisis modal de fallas y efectos (por sus siglas en inglés Failure Modes and Effects Analysis); Failure Modes and Effects Analysis</p>			
FPSO	Floating Production Storage Offloading	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Instalación flotante de producción, almacenamiento y descarga costa afuera (por sus siglas en inglés, Floating Production Storage Offloading, por sus siglas en inglés);</p> <p>Floating Production Storage Off-loading vessel.</p>			

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Lexical entry	Translation	Source	Article
Fracturamiento	Fracturing	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Operación enfocada al incremento de la productividad o inyectividad de los Pozos a través de generación de una fractura en la roca que facilita el flujo de fluidos de la formación productora al Pozo o viceversa;</p> <p>Operation focused on increasing the productivity or injectivity of the wells through the generation of a fracture in the rock that facilitates the flow of fluids from the production formation to the well or vice versa;</p> <p><i>Injectivity index: The number of barrels per day of gross liquid pumped into an injection well per psi (pound per square inch) pressure differential between the mean injection pressure and the mean formation pressure.</i></p>			
FTA	Fault Tree Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
<p>Análisis de árbol de fallas (por sus siglas en inglés Fault Tree Analysis); Fault Tree Analysis</p>			
Fuente de Energía Sísmica	Seismic energy source	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Pulso de alta energía utilizado para la adquisición de datos sísmicos, incluyendo el uso de aire a alta presión, cargas explosivas o vibraciones;</p> <p>High energy pulse used for the acquisition of seismic data, including the use of high pressure air, explosive charges or vibrations;</p>			
H			
Hallazgo	Finding, discovery	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>El resultado de evaluar la evidencia contra un criterio.</p> <p>The result of evaluating the evidence by reference to a criterion.</p>			
HAZID	Hazard Identification	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
<p>Una técnica de identificación de todos los Peligros significativos asociados a una actividad en particular (por sus siglas en inglés Hazard Identification); Hazard Identification</p>			

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Lexical entry	Translation	Source	Article
HAZOP	Hazard And Operability Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
HAZOP - análisis de riesgo y operatividad (por sus siglas en inglés Hazard And Operability Analysis); Hazard And Operability Analysis			

Implementación del Sistema de Administración	Implementation of a [safety] management system	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
La puesta en funcionamiento, de forma gradual, por parte del Regulado de los elementos de su Sistema de Administración en la realización de Proyectos del Sector Hidrocarburos durante cada una de las Etapas de Desarrollo, conforme a los Programas de Implementación correspondientes.			
The gradual implementation by the Regulated Party of the elements of its [Safety] Management System in the execution of Projects of the Hydrocarbons Sector during each of the Development Stages, according to the corresponding Implementation Programs.			

Incidente	Incident	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
Evento o combinación de eventos inesperados no deseados que alteran el funcionamiento normal de las Instalaciones, del proceso o de la industria; acompañado o no de afectación al Ambiente, a las Instalaciones, a la Población y/o al personal del Regulado, así como al personal de contratistas, subcontratistas, proveedores y prestadores de servicios;			
Event or combination of unexpected and unwanted events that disrupt the normal operation of the Facilities, process or industry; regardless of any effect on the Environment, Facilities, Population and / or personnel of the Regulated Party, or on contractors, subcontractors, suppliers and service providers;			
Evento o combinación de eventos inesperados no deseados que alteran el funcionamiento normal de las instalaciones, del proceso o de la industria; acompañado o no de afectación al Ambiente, a las instalaciones, a la población y/o al personal del Regulado, así como al personal de contratistas, subcontratistas, proveedores y prestadores de servicios.			
Event or combination of unexpected unwanted events that disrupt the normal operation of the facility, process or industry that may or may not affect the environment, facilities, population and/or personnel of the Regulated Personnel, as well as the personnel of contractors, subcontractors, suppliers and service providers.			

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Lexical entry	Translation	Source	Article
Informe geológico	Geological report	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	15
<p>Los Regulados deberán conservar la información documental de la elaboración del Análisis de Riesgos ... incluyendo al menos los siguientes elementos:</p> <p>...</p> <p>Informe Geológico para evaluar:</p> <p>a) Actividad sísmica en la ubicación planteada;</p> <p>b) Zonas de fallas geológicas, y</p> <p>c) Para las plataformas ubicadas en áreas de producción, la posibilidad y los potenciales efectos de hundimientos.</p> <p>The Regulated Parties must keep the documentary information regarding the elaboration of the Risk Analysis ... including at least the following elements:</p> <p>...</p> <p>Geological Report to evaluate: A) Seismic activity in the proposed location; (B) Geological fault zones, and C) For platforms located in production areas, the possibility and potential effects of subsidence.</p>			
Infraestructura	Infrastructure	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Conjunto de Instalaciones, estructuras, maquinaria, equipo, tuberías, entre otros, necesarios para llevar a cabo los procesos operativos, para las actividades de Reconocimiento y Exploración Superficial, Exploración y Extracción;</p> <p>Set of Facilities, structures, machinery, equipment, pipelines, among others, necessary to carry out the operational processes, for the activities of Surveying and Surface Exploration, Exploration and Extraction;</p>			
Instalación	Installation	Ley de ASEA (8/2014)	3
<p>El conjunto de estructuras, plantas industriales, equipos, circuitos de tuberías de proceso y servicios auxiliares, así como sistemas instrumentados, dispuestos para un proceso productivo o comercial específicos, incluyendo, entre otros, pozos para la exploración y extracción de hidrocarburos, plataformas, plantas de almacenamiento, refinación y procesamiento de hidrocarburos en tierra y en mar, plantas de compresión y descompresión de hidrocarburos, sistemas de transporte y distribución en cualquier modalidad, así como estaciones de expendio al público;</p> <p>The set of structures, industrial plants, equipment, process piping circuits and auxiliary services, as well as instrumented systems, arranged for a specific production or commercial process; these include (but are not limited to) wells for exploration and extraction of hydrocarbons, platforms, plants Storage, refining and processing of hydrocarbons on land and at sea, hydrocarbon compression and decompression plants, transport and distribution systems in any form, as well as stations for sale to the public;</p>			
Integridad	Integrity	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	8
<p>[Physical] Integrity</p>			

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Lexical entry	Translation	Source	Article
Integridad mecánica	Mechanical integrity	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 21
<p>Situación o estado mecánico de las Instalaciones y de los sistemas que en su conjunto contribuyen a la funcionalidad óptima de la Infraestructura y sus partes mediante la aplicación sistemática de directrices generales, para asegurar que los equipos o sistemas se encuentran en condiciones de operación, de acuerdo a las especificaciones del fabricante y de conformidad con la demanda de cada proceso, a fin de prevenir fallas, Accidentes o potenciales Riesgos a personas, Instalaciones y al medio ambiente;</p> <p>Situation or mechanical state of the facilities and systems that together contribute to the optimal functionality of the Infrastructure and its parts through the systematic application of general guidelines, to ensure that the equipment or systems are in operating conditions, according to to the specifications of the manufacturer and in accordance with the demand of each process, in order to prevent failures, accidents or potential risks to people, facilities and the environment;</p>			
J			
JHA	Job Hazard Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
<p>Análisis de riesgos de trabajo (por sus siglas en inglés Job Hazard Analysis); Job Hazard Analysis</p>			
L			
Ley	Law [ASEA]	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Ley de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos;</p> <p>Law of the National Agency of Industrial Safety and Protection of the Environment of the Hydrocarbons Sector;</p> <p>Ley de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos.</p> <p>Law of the National Agency of Industrial Safety and Protection of the Environment of the Hydrocarbons Sector.</p>			
Línea de Descarga	Flow line	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Sistema de tuberías con diferentes componentes tales como: válvulas, bridas, accesorios, dispositivos de seguridad o alivio, entre otros, por medio del cual se transportan los Hidrocarburos y sus derivados del Pozo a las estaciones de Recolección;</p> <p>Pipe system with different components such as: valves, flanges, accessories, safety devices or relief, among others, through which the hydrocarbons and their derivatives from the well are transported to the tank batteries.</p>			

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Lexical entry	Translation	Source	Article
M			
Mecanismo	Mechanism	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>Conjunto de elementos y combinación de sus partes que, ajustados entre sí de manera ordenada, permiten que un trabajo o una función se cumpla satisfactoriamente.</p> <p>A set of elements and a combination of its parts that, adjusted to each other in an orderly manner, allow a job or function to be satisfactorily fulfilled.</p>			
Monitoreo Acústico Pasivo	Passive Acoustic Monitoring	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Técnica para la detección de mamíferos marinos que utiliza hidrófonos y software para detectar sus vocalizaciones y se emplea para localizarlos en los alrededores de la fuente energía (PAM, Passive Acoustic Monitoring, por sus siglas en inglés);</p> <p>A technique for the detection of marine mammals that uses hydrophones and software to detect their vocalizations and is used to locate them in the surroundings of the power source (PAM);</p>			
O			
Operaciones Simultáneas	Simultaneous operations	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Dos o más operaciones independientes tales como Perforación, reparación, operaciones con cable, construcción de instalaciones, pruebas de pozos, mantenimiento, movimiento de equipos y materiales, etc., bajo control operacional común en el cual las actividades de una operación pueden afectar la seguridad del personal, equipo y/o medio ambiente;</p> <p>Two or more independent operations such as drilling, repairing, wiring, facility construction, well testing, maintenance, movement of equipment and materials, etc., under common operational control in which the activities of an operation may affect safety Personnel, equipment and / or environment;</p>			
P			
Peligro	Hazard	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
<p>HAZID.- una técnica de identificación de todos los Peligros significativos asociados a una actividad en particular (por sus siglas en inglés Hazard Identification);</p> <p>HAZID - A technique of identification of all the significant hazards associated with a particular activity (Hazard Identification)</p> <p>Fuente o situación potencial de daño en términos de lesiones o efectos nocivos para la salud de las personas, daños a la propiedad, daños al entorno del lugar de trabajo, al medio ambiente o una combinación de éstos.</p> <p>Source or situation of potential injury to human health, property, the workplace environment, the</p>			

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Lexical entry	Translation	Source	Article
<p>Source or situation of potential injury to human health, property, the workplace environment, the environment, or a combination of these.</p>			
PEM	Physical Effects Modelling	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
<p>Modelización de efectos físicos (por sus siglas en inglés Physical Effects Modelling); Physical Effects Modelling</p>			
Peor Escenario	Worse-case scenario	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Escenario derivado del Análisis de Riesgos, el cual corresponde al mayor volumen estimado del material, energía o sustancia peligrosa producto de una liberación accidental, y el cual pudiese resultar en la afectación a las personas, al medio ambiente o a las Instalaciones;</p>			
<p>Scenario derived from the Risk Analysis, which corresponds to the higher estimated volume of the material, energy or hazardous substance resulting from an accidental release, and which could result in the affectation to people, the environment or the Facilities;</p>			
Perforación	Drilling, well bore	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Es el conjunto de actividades para realizar y mantener la horadación que comunica al Yacimiento con la superficie, mediante herramientas diseñadas para la prospección o Extracción de Hidrocarburos. La Perforación comprende desde su diseño, construcción del Pozo, Terminación y seguimiento de su Integridad, hasta su Abandono;</p>			
<p>Scenario derived from the Risk Analysis, which corresponds to the higher estimated volume of the material, energy or hazardous substance resulting from an accidental release, and which could result in the damage to people, the environment or the facilities;</p>			
PHA	Preliminary Hazard Analysis	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	10
<p>Análisis de riesgo preliminar (por sus siglas en inglés Preliminary Hazard Analysis); Preliminary Hazard Analysis</p>			
Plan de trabajo	Work plan	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	27, 86, 169
<p>Previo al inicio de las actividades de Reconocimiento y Exploración Superficial, los Regulados deberán presentar el Aviso de Inicio de Actividades a la Agencia, en el cual deberán incluir copia simple de la autorización expedida por la Comisión y del plan de trabajo autorizado de las actividades específicas.</p>			
<p>Prior to the start of surveying and surface Exploration activities, Regulated parties must submit the Notice of Initiation of Activities to the Agency, which must include a simple copy of the authorization issued by the Commission and the authorized work plan for the specific activities.</p>			

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Lexical entry	Translation	Source	Article
Pozo	Well	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Es la construcción efectuada en el subsuelo para comunicar la superficie con el Yacimiento con el objeto de realizar actividades de Exploración y Extracción de Hidrocarburos;</p> <p>It is the construction carried out in the subsurface to communicate the surface with the Site in order to carry out activities of Exploration and Extraction of Hydrocarbons;</p>			
Pozo de Alivio	Relief well	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Pozo que se perfora con la finalidad de controlar el flujo de fluidos o aliviar presión del Yacimiento en un Pozo descontrolado;</p> <p>Well that is drilled in order to control the flow of fluids or relieve pressure from the reservoir in an uncontrolled well;</p>			
Pozo de Disposición	Disposal well	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Pozo conectado a una formación receptora que se construye o se habilita para la inyección de fluidos o residuos, y al que se le aplica un protocolo estricto de seguimiento de Integridad Mecánica y comportamiento de admisión. Incluye a los utilizados para la inyección de los Fluidos de Retorno expulsados después del proceso de Terminación de un Pozo productor;</p> <p>Well connected to a receiver formation that is built or is enabled for the injection of fluids or wastes, and to which a strict protocol of mechanical integrity monitoring and admission behavior is applied. Includes those used for the injection of return fluids ejected after the completion of a producing well process;</p>			
Pozo Exploratorio	Exploratory well	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Pozo cuyo objetivo es conocer la columna estratigráfica, confirmar la existencia de un sistema petrolero y, en su caso, localizar y delimitar un posible Yacimiento. En esta categoría se encuentran los Pozos de sondeo estratigráfico, los Pozos exploratorios en estricto sentido, los Pozos delimitadores y los Pozos de avanzada;</p> <p>Well whose objective is to know the stratigraphic column, to confirm the existence of an oil system and, if appropriate, to locate and delimit a possible deposit. In this category are the stratigraphic Wells, the exploratory Wells in strict sense, the delimiting Wells and the advanced Wells;</p>			

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Lexical entry	Translation	Source	Article
<p>Pozos de Alta Presión/Alta Temperatura</p> <p>Pozos con una presión de fondo mayor a 69 MPa o con una temperatura de fondo mayor a 150 °C (HPHT, High Pressure High Temperature, por sus siglas en inglés);</p> <p>Wells with a bottom pressure greater than 69 MPa or with a bottom temperature greater than 150 °C (HPHT);</p>	<p>High pressure / high temperature wells [HPHT]</p>	<p>ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)</p>	<p>2, 15</p>
<p>Procedimiento</p> <p>La descripción de las actividades de manera secuencial de una tarea o tareas específicas, aplicables a la operación, mantenimiento, revisión e investigación, entre otros, de equipos críticos y de los procesos.</p> <p>The description of the sequential activities of a task or specific tasks, applicable to the operation, maintenance, review and investigation, among others, of critical equipment and processes.</p>	<p>Procedure</p>	<p>ASEA - Lineamientos de Seguridad Industrial (5/2016)</p>	<p>3</p>
<p>Programa de Auditoría</p> <p>Detalles acordados para un conjunto de una o más auditorías planificadas durante un periodo de tiempo determinado y dirigidas hacia un propósito específico.</p> <p>Details agreed upon for a set of one or more audits planned for a specified period of time and directed towards a specific purpose.</p>	<p>Auditing program</p>	<p>ASEA - Lineamientos de Seguridad Industrial (5/2016)</p>	<p>3</p>
<p>Programa de Implementación</p> <p>Documento que establece las actividades y los tiempos necesarios para que el Regulado implemente en su totalidad cada uno de los elementos que componen el Sistema de Administración en cada proyecto del Sector Hidrocarburos que desarrolle.</p> <p>Document that sets forth the activities and schedule necessary for the Regulated Party to fully implement each of the elements that make up the [Safety] Management System in each project of the Hydrocarbons Sector that it develops.</p>	<p>Implementation program</p>	<p>ASEA - Lineamientos de Seguridad Industrial (5/2016)</p>	<p>3</p>
<p>Proyecto</p> <p>Son los equipos e instalaciones, o conjunto de ellas, identificadas mediante una Asignación, Contrato o Permiso, según corresponda, otorgado por la autoridad competente, a través del cual se habilita al Regulado para realizar las obras y actividades a las que se refiere el artículo 2 de los presentes lineamientos en cualquiera de sus Etapas de Desarrollo.</p> <p>The facilities (the equipment and facilities, or all of them) that are associated with a Legacy Lease [<i>asignación</i>], Contract or Permit, as the case may be, that has been granted by a competent authority and by means of which the Regulated Party is authorized to carry out the activities referred to in article 2 of the present guidelines in any stage of development.</p>	<p>Project</p>	<p>ASEA - Lineamientos de Seguridad Industrial (5/2016)</p>	<p>3</p>

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Lexical entry	Translation	Source	Article
Prueba de goteo	Negative pressure test (NPT)	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	
<p>Negative pressure test (NPT).</p> <p><u>Negative pressure test (NPT)</u> <i>This term does not appear in the ASEA sources. It refers to the Well Integrity Test that is necessary to be certain that the reservoir has been tightly sealed from the wellbore. It was this test that was blotched (misinterpreted) on Deepwater Horizon on April 20, 2010.</i></p>			
Prueba de Producción	Drill stem test, production test	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Conjunto de actividades realizadas durante las actividades de Exploración o Extracción, a fin de evaluar una zona de interés para determinar la capacidad productiva, presión inicial de la formación, permeabilidad o extensión de un Yacimiento;</p> <p>Set of activities carried out during Exploration or Extraction activities, in order to evaluate an area of interest to determine the productive capacity, initial pressure of the formation, permeability or extension of a Reservoir;</p>			
PSO	Protected Species Observer	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 37
<p>Observador de Especies Protegidas (Protected Species Observer, por sus siglas en inglés);</p> <p><u>Protected Species Observer</u></p>			
R			
Registro	Registry	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>Acto administrativo que emite la Agencia para facilitar la documentación y constatación de que la Conformación del Sistema de Administración del Regulado es acorde con los requisitos previstos en la Ley, los presentes lineamientos y las mejores prácticas.</p> <p>A form issued by the Agency to facilitate the documentation and verification that the Management System of the Regulated Party is in accordance with the requirements established in the Law, the present guidelines and best practices.</p>			
Regulado	Regulated Party	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	Preamble
<p>Las atribuciones de esta Agencia para: a) emitir las bases y criterios para que los Regulados adopten las mejores prácticas de Seguridad Industrial, Seguridad Operativa y de protección al medio ambiente que resulten aplicables a las actividades del Sector Hidrocarburos. . .</p> <p>The attributions of this Agency to: a) issue the bases and criteria for the Regulated Party to adopt the best practices of Industrial [process] Safety, Operational [occupational] Safety and environmental protection that are applicable to the activities of the Hydrocarbons Sector. . .</p>			

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Lexical entry	Translation	Source	Article
Regulados	Regulated Parties	Ley de ASEA (8/2014)	3
<p>Las empresas productivas del Estado, las personas físicas y morales de los sectores público, social y privado que realicen actividades reguladas y materia de la presente Ley;</p> <p>State enterprises, physical and corporate persons of the public, social and private sectors that carry out regulated activities and matters governed by the present Law;</p>			
Riesgo	Risk	ASEA - Lineamientos de Seguridad Industrial (5/2016)	3
<p>La probabilidad de ocurrencia de un evento indeseable medido en términos de sus consecuencias en las personas, instalaciones, medio ambiente o la comunidad.</p> <p>The probability of occurrence of an undesirable event measured in terms of its consequences on people, facilities, environment or community.</p> <p>Es la probabilidad de ocurrencia de un evento indeseable medido en términos de sus consecuencias en las personas, instalaciones, medio ambiente o la comunidad;</p> <p>The probability of occurrence of an undesirable event measured in terms of its consequences on people, facilities, environment or community;</p>			
Riesgo crítico	Critical risk	Ley de ASEA (8/2014)	3
<p>Riesgo que implica un peligro inminente y requiere acción inmediata para reducirse a condiciones aceptables sin limitar el costo de su solución;</p> <p>Risk that implies imminent danger and requires immediate action to reduce to acceptable conditions without regard to the cost of its solution;</p>			
Riesgos Someros	Shallow, subsurface risks	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 15
<p>Ocurrencia, en las primeras capas del subsuelo, de una o varias de las siguientes características geológicas: bolsas de gas, hidratos de gas, fallas cercanas a la superficie, flujos de Acuíferos someros, sedimentos no consolidados o anomalías del fondo marino;</p> <p>The occurrence, in the first layers of the subsoil, of one or more of the following geological features: gas pockets, gas hydrates, near-surface faults, shallow aquifer flows, unconsolidated sediments or seabed anomalies;</p>			
S			
Secretaría	Ministry [SEMARNAT]	Ley de ASEA (8/2014)	3
<p>Secretaría de Medio Ambiente y Recursos Naturales Ministry of the Environment and Natural Resources</p>			

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
<p>Sector Hidrocarburos o Sector</p> <p>Las actividades siguientes: [a-f]</p> <p>a. El reconocimiento y exploración superficial, y la exploración y extracción de hidrocarburos;</p> <p>...</p> <p>f. El transporte por ducto y el almacenamiento, que se encuentre vinculado a ductos de petroquímicos producto del procesamiento del gas natural y de la refinación del petróleo;</p> <p>The following activities: [a-f]</p> <p>a, Surveys and surface exploration, and the exploration and extraction of hydrocarbons;</p> <p>...</p> <p>f) Transportation by pipeline and storage of products derived from the processing of natural gas and oil refining.</p>	<p>Hydrocarbon sector, or Sector</p>	<p>Ley de ASEA (8/2014)</p>	<p>3</p>
<p>Seguridad Industrial</p> <p>Area multidisciplinaria que se encarga de identificar, reducir, evaluar, prevenir, mitigar, controlar y administrar los riesgos en el Sector, mediante un conjunto de normas que incluyen directrices técnicas sobre las instalaciones, y de las actividades relacionadas con aquéllas que tengan riesgos asociados, cuyo principal objetivo es preservar la integridad física de las personas, de las instalaciones, así como la protección al medio ambiente;</p> <p>Multidisciplinary area that covers the identification, reduction, evaluation, prevention, mitigation, control and administration of risks in the Sector; to be accomplished by means of a set of standards including technical guidelines on facilities and activities related to those with associated risks. The main objective is to preserve the physical integrity of the people and installations as well as the protection to the environment.</p>	<p>Industrial safety</p>	<p>Ley de ASEA (8/2014)</p>	<p>3</p>
<p>Seguridad Operativa</p> <p>Área multidisciplinaria que se encarga de los procesos contenidos en las disposiciones y normas técnicas, administrativas y operativas, respecto de la tecnología aplicada, así como del análisis, evaluación, prevención, mitigación y control de los riesgos asociados de proceso, desde la fase de diseño, construcción, arranque y puesta en operación, operación rutinaria, paros normales y de emergencia, mantenimiento preventivo y correctivo. También incluye los procedimientos de operación y prácticas seguras, entrenamiento y desempeño, investigación y análisis de incidentes y accidentes, planes de respuesta a emergencias, auditorías, aseguramiento de calidad, pre-arranque, integridad mecánica y administración de cambios, entre otros, en el Sector;</p> <p>Multidisciplinary area that incorporates the processes contained in the technical and administrative dispositions and norms regarding [a specific] technology. It also includes the analysis, evaluation, prevention, mitigation and control of the associated risks to include the design phase, construction, start-up and commissioning, routine operation, normal and emergency stoppages, preventive and corrective maintenance. It also includes operational procedures and safe practices, training and performance, incident and accident investigation and analysis, emergency response plans, audits, quality assurance, pre-start, mechanical integrity and change management, among others, in the Sector;</p>	<p>Operational safety</p>	<p>Ley de ASEA (8/2014)</p>	<p>3</p>

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
<p>Sistema de Administración</p> <p>Sistema de Administración de Seguridad Industrial, Seguridad Operativa y Protección al Medio Ambiente, previsto en el Capítulo III de la Ley.</p> <p>System for the Management of Industrial Safety, Operative Safety and Protection to the Environment, provided for in Chapter III of the Law.</p> <p>Conjunto integral de elementos interrelacionados y documentados cuyo propósito es la prevención, control y mejora del desempeño de una instalación o conjunto de ellas, en materia de Seguridad Industrial, Seguridad Operativa y de protección al medio ambiente en el Sector.</p> <p>Comprehensive set of interrelated and documented elements whose purpose is the prevention, control and improvement of the performance of a facility or set of them, in matters of Industrial Safety, Operational Safety and environmental protection in the Sector.</p>	<p>Management system</p>	<p>ASEA - Lineamientos de Seguridad Industrial (5/2016)</p>	<p>3</p>
<p>Sociedad Clasificadora</p> <p>Organización independiente, miembro de la Asociación Internacional de Sociedades Clasificadoras (IACS, International Association of Classification Societies. por sus siglas en ingles), cuyo objetivo es supervisar el diseño, la construcción, la instalación, el mantenimiento permanente o cualquier modificación de unidades flotantes de Perforación y Producción, de acuerdo con las normas de las sociedades clasificadoras;</p> <p>An independent organization and a member of the International Association of Classification Societies (IACS), whose purpose is to supervise the design, construction, installation, permanent maintenance or any modification of floating units of Drilling and Production, according to the standards of classification societies;</p>	<p>Corporate member of IACS</p>	<p>ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)</p>	<p>2</p>
<p>Supervisión</p> <p>Acto de autoridad mediante el cual la Agencia verifica, inspecciona y, en su caso, comprueba el cumplimiento de las disposiciones legales, reglamentarias y normativas en las materias objeto de esta Ley.</p> <p>Act of authority by which the Agency verifies, inspects and, where appropriate, confirms compliance with the legal, regulatory and regulatory provisions in the matters covered by this Law.</p>	<p>Public oversight</p>	<p>Ley de ASEA (8/2014)</p>	<p>3</p>

T

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
<p>Tan Bajo Como Sea Razonablemente Factible</p> <p>Para que un riesgo sea considerado ALARP debe ser posible demostrar que el costo de continuar reduciendo ese riesgo es mayor en comparación con el beneficio económico que se obtendría (ALARP, As Low As Reasonably Practicable, por sus siglas en inglés);</p> <p>For a risk to be considered ALARP, it must be possible to demonstrate that the cost of continuing to reduce that risk is greater compared to the ALARP (As Low As Reasonably Practicable);</p>	<p>As low as may be reasonably feasible</p>	<p>ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)</p>	<p>2</p>
<p>Taponamiento</p> <p>Intervención que se le realiza al Pozo para su Cierre temporal o definitivo y aislamiento de las formaciones atravesadas, con el objetivo de impedir la comunicación de la zona productora del Yacimiento con la superficie y evitar invasiones o flujo de fluidos del Yacimiento en la boca del Pozo;</p> <p>Intervention that is made to the well for its temporary or definitive closure and isolation of the traversed formations, in order to prevent the communication of the area producing the site with the surface and prevent invasion or flow of fluids from the Reservoir at the mouth of the Well;</p>	<p>Plugging</p>	<p>ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)</p>	<p>2</p>
<p>Tercero autorizado</p> <p>El Tercero Autorizado mencionado en el artículo anterior sería persona moral con reconocimiento nacional o internacional que exprese su opinión calificada sobre el Anlisis de Riesgo de la etapa de ingeniería de detalle que incluya aquellos propios del Proyecto y los generados por las actividades realizadas por contratistas, subcontratistas, prestadores de servicios y proveedores del Regulado,</p> <p>The Authorized Third Party mentioned in the previous article would be a national entity with national or international recognition that expresses its informed opinion on the Risk Analysis of the stage of detailed engineering that includes those [risks] associated with the Project and those generated by the activities carried out by contractors, subcontractors, service providers and suppliers of the Regulated Party</p>	<p>Authorized third party</p>	<p>ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)</p>	<p>17, 18, 181</p>
<p>Terminación</p> <p>Operaciones posteriores a la Perforación y que siguen a la cementación de la tubería de revestimiento de producción, la introducción del aparejo de producción, la Estimulación del Pozo, la evaluación de la formación, con el fin de dejar el Pozo produciendo Hidrocarburos o, en su caso, taponado;</p> <p>Operations following drilling and following the cementation of the casing pipe, introduction of production rig, well atimulation, training evaluation, in order to leave the well producing hydrocarbons or, as may be the case, plugged;</p>	<p>Completion</p>	<p>ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)</p>	<p>2</p>

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
Tuberías de Revestimiento	Casing pipe, casing	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Tubos de acero de diferentes diámetros, pesos y especificaciones que se introducen en el agujero perforado y que son cementados anularmente para aislar las formaciones atravesadas, prevenir la inestabilidad del agujero y establecer la hermeticidad del Pozo;</p> <p>Steel pipes of different diameters, weights and specifications that are introduced into the perforated wellbore and are annularly cemented to isolate successive formations, to prevent instability of the wellbore and to establish the integrity of the well;</p>			
Y			
Yacimiento	Deposit / Reservoir	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Acumulación natural de Hidrocarburos en rocas del subsuelo, las cuales tienen características físicas para almacenarlos y permitir su flujo bajo ciertas condiciones;</p> <p>Natural accumulation of hydrocarbons in subsoil rocks, which have physical characteristics to store them and allow their flow under certain conditions;</p>			
Yacimiento No Convencional	Non-conventional reservoir	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Acumulación natural de Hidrocarburos en rocas generadoras o en rocas almacén compactas, en la que para la Extracción de los mismos, el sistema roca-fluido requiere ser estimulado o sometido a procesos de recuperación mejorada.</p> <p>Natural accumulation of Hydrocarbons in generating rocks or in compact storage rocks, in which, for the extraction of the same, the rock-fluid system requires to be stimulated or subjected to processes of improved recovery.</p>			
Yacimiento No Convencional /2	Non-conventional reservoir	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2
<p>Los Yacimientos No Convencionales comprenden aquellos de: aceite en lutitas, aceite en rocas compactas, aceite en arenas de baja permeabilidad, aceites pesados y extra pesados, aceite en arenas bituminosas, gas en lutitas, gas en rocas compactas, gas en arenas de baja permeabilidad, hidratos de metano y gas en vetas de carbón, entre otros,</p> <p>Non-Conventional Reservoirs include those of oil in shales, oil in compact rocks, oil in low permeability sands, heavy and extra heavy oils, oil in bituminous sands, shale gas, gas in compact rocks, gas in low permeability sands, hydrates of methane and gas in coal veins, among others.</p>			

Z

Table 7

ASEA Safety Guidelines for E&P

Incorporates Tables 1-3

Lexical entry	Translation	Source	Article
Zona de Exclusión	Exclusion zone	ASEA - Disposiciones ... Lineamientos en Seguridad ... (12/2016)	2, 35

Área circular que abarca niveles de ruido de hasta 180 dB re 1 [GK: MU] Pa (RMS) medido desde el punto central de la Fuente de Energía Sísmica; siendo éste el umbral de ruido que tiene la capacidad potencial de provocar daños fisiológicos en el sistema auditivo de los cetáceos.

Circular area encompassing noise levels up to 180 dB re 1 [GK: MU] Pa (RMS) measured from the central point of the Seismic Energy Source, this being the threshold of noise that has the potential capacity to cause physiological damages in the auditory system of cetaceans.



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Reports related to offshore safety

Year	Topic	File #	Pages	Chart
2016				
Dec 23, 16	Mexico's Problematic E&P Safety Regime	832	15	2
	<p>This report offers a critique of the safety guidelines that Mexico's Hydrocarbon Safety Authority (ASEA) published to coincide with the lease auction on Dec. 5, 2016, of nine deepwater blocks in Mexico's portion of the Gulf of Mexico. As an introduction to the ASEA guidelines, the report reviews of the safety frameworks that have been enhanced since the Macondo incident of 2010. The report includes a succinct account of the causes and time-line of the Macondo accident. The guidelines do not identify the hazards and risks of deepwater exploratory drilling; instead, the regulated parties are to make their own evaluation, which, in turn, will be reviewed by Authorized Third Parties. More work by ASEA is needed to be Macondo-ready.</p>			
2015				
Nov 08, 15	University of Macondo: The Need for a Continuing Conversation	793	6	5
	<p>The continuing importance of the Macondo blowout and oil spill of 2010 lies not only in the need to better understand the physical and social science of the incident; it also lies in the need for stakeholders in petroleum provinces where there are multiple, national jurisdictions to be prepared for a coordinated response in the event of a future, Macondo-scale incident. Tables 1-3 examine safety issues before, during and immediately after the incident. Table 4 is a list of pending items related to technology, policy and international relations.</p>			
Aug 07, 15	Macondo Wellbore Influx: Findings and recommendations from a forensic analysis	789	6	3
	<p>This report presents a fresh perspective on the undetected entry into the Macondo wellbore of formation fluids on April 20, 2010. The report draws on an extended interview with Ronald E. Sweatman, who, with others, modeled the likely effects of temperature differentials in the well. Based on an analysis of fluid mechanics, they concluded that the lower portion of the cement slurry had been washed away by formation fluids within two hours of the placement of the cement. The report includes the recommendations that arise from the modeling and conclusions.</p>			
Apr 20, 15	The Macondo Accident (Post Litigation)	10032	7	2
	<p>Now that most of the litigation related to the Macondo accident has been settled, persons familiar with the events, testimony and back-office stories associated with the event are beginning to speak in industry conferences and published papers. In this report we take note of the first of two enduring questions: 1) Why the influx of formation fluids into the wellbore post-cementing? 2) Why the failure of well monitoring and control? In another report, we shall present new time lines for the physical and human events of the accident.</p>			

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