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PERFURASAUN ESPLORASAUN TIMOR-LESTE

Konsulta Maksoin-lisuk (stakeholder) (Parte 3, 4)
27 Outubru 2010

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PART THREE:

- Environmental risks and management
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PARTE TOLU:

- Risku no jestaun ambientál



Environmental impacts

- Oil spills
 - Discharge of drill cuttings
 - Solid and hazardous waste
 - Sewage, wastewater, food scraps
 - Air emissions from fuel use
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Impaktu ambientál

- Fafakar petróleu nian
- Sasোক perfurasaun eskavasaun nian
- Fo'er sólidu no perigozu
- Fo'er, bee-fo'er, hahán nia restu
- Emisaun ár hosi uzu kombustivel



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Oil spills:

- Avoid oil spills through good procedures and equipment
 - Refuelling procedures
 - Emergency shut-down valves
 - Blow-out preventer (BOP)
 - Monitoring of reservoir pressure
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Fafakar petróleu:

- Evita fafakar petróleu liuhosi prosedimentu no ekipamentu di'ak
 - Prosedimentu reabastesimentu
 - Válvula taka emerjénsia nian
 - Blow-out preventer (BOP)/Ekipamentu ne'ebé prevene rebenta nian
 - Monitorizasaun presau rezervatóriu nian



Oil spills:

- Preparation for accidental spills
 - member of OSRL for tier 3 emergencies
 - identified relief well locations
 - consulting with other operators



Fafakar petróleu:

- Preparasaun ba fafakar asidentál
 - Membru OSRL nian ba emerjénsia kamada 3 nian
 - identifika lokasaun posu asisténsia nian
 - konsulta ho operadór sira seluk



Drill cuttings:

- Sea water and water-based muds (WBM)
 - ROV survey before and after drilling
 - Well location is in very deep water – no sensitive seabed habitats
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Perfurasan nia eskavasaun:

- Tasi-been no water-based muds (WBM)/Tahu ho bee
- Levantamentu ROV molok no liutiha perfurasan
- Lokasaun posu ne'e iha bee ne'ebé kle'an tebes – ábitat tasi-okos sensitivu



Solid waste

- No solid wastes overboard
 - Store onboard and transfer to Darwin for disposal
 - Hazardous wastes disposed at facility in Darwin
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Bee sólidu

- La iha fo'er sólidu hosi ró
- Armazena iha ró-leten no transfere ba Darwin atu soe
- Fo'er perigozu sira soe iha facilidade iha Darwin



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management/jestaun

Liquid waste

- Sewage treated onboard
- Food scraps ground to small pieces (<25 mm)
- Treated sewage, wastewater (e.g. from kitchen, showers) and food scraps discharged overboard
- MARPOL 73/78 Annex IV

Fo'er líkidu

- Fo'er ne'ebé trata iha ró-leten
- Hahán nia restu dulas to'ó rahun didi'ak (<25 mm)
- Trata fo'er, bee-fo'er (ez. Hosi dapur, xuveiru) no hahán nia restu ne'ebé soe iha ró-leten
- MARPOL 73/78 Aneksu IV



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Liquid waste

- Drain system on deck to collect water
 - Treated in oily water separator
 - Clean water discharged overboard (≤ 15 ppm oil)
 - Sludge and oil stored onboard, taken to land (Darwin)
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Fo'er líkidu

- Sistema drenajen iha konvés nia leten atu halibur bee
- Trata iha separadór bee ho petróleu
- Bee moos ne'e hasai hosi ró (≤ 15 ppm petróleu)
- Fo'er no petróleu armazena iha ró-leten, lori ba rai-maran (Darwin)



Air emissions

- Diesel use will be around 80 000 L/day
- Equipment maintained to burn diesel efficiently
- If oil is found, flaring for up to 3 days (well testing)

Emisaun ar

- Uzu gazóleu ne'e maizumenus 80 000 L/loron
- Ekipamentu ne'ebé mantein atu sunu gazóleu ho eficiente
- Sunu to'ó loron 3 bainhira hetan mina (teste posu)



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- Indicative volumes of emissions from flaring during well testing:
- Indikativu volume emisaun sira husi sunu durante teste posu:

	Duration (hrs)	Flow rate (m ³ /hr)	Total (m ³)
Initial clean-up	6	34	202
Build up	6	0	0
Flow rate 1	6	34	202
Flow rate 2	6	20	121
Build up	18	0	0
TOTAL	42		524
Total CO ₂ ^{-e} (t)			1342



- Eni's drilling activities are certified to ISO14001 *Environmental Management Standards*
 - Audited by SAI Global in October 2010 (Kitan drilling)
 - Continuous improvement, structured system
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- Atividade sira perfurasaun eni nian ba standar jestaun meu-ambiente ISO14001
- Audit hosi SAI Global iha Outubru 2010 (perfurasaun Kitan)
- Kontinua hadiak, sistema estrutura nian



Documents:

- Eni HSE Integrated Management System
 - Environmental Management Plan (EMP)
 - Saipem 10000 Operations Manual
 - Various standards and procedures
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Dokumentu sira :

- Eni nia Sistema Jestaun Integradu HSE nian
- Environmental Management Plan (EMP)/Planu Jestaun Ambientál
- Manuál Operasaun Saipem 10000
- Padraun no prosedimentu sira oioin



Documents:

- Eni Incident Management Plan
 - Eni S06-03 Oil Spill Response Manual
 - Saipem 10000 Emergency Response Plan
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Dokumentu sira :

- Eni nia Planu Jestaun Insidente
- Eni nia Manuál Resposta Fafakar Petróleu
- Planu Resposta Emerjénsia Saipem 10000

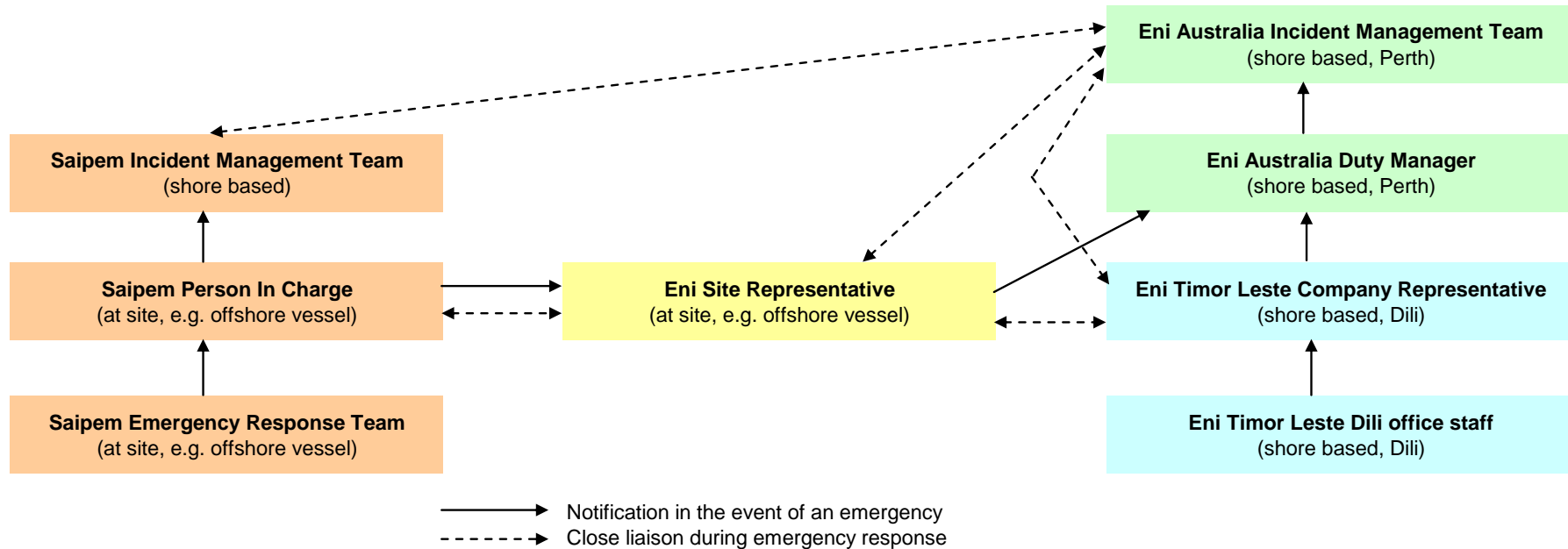


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Estrutura resposta Emerjéncia :



Reporting

- Incident report – DNMA, 48 hours
 - Oil spill >80 L
 - Well Completion Report – DNMA, 6 weeks
 - Monitoring with ROV
 - Chemicals and fuel used
 - Environmental incidents
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Reportajen

- Relatoriu insidente – DNMA, oras 48
 - Fafakar petróleu >80 L
- Relatoriu Banhira remata tiha posu ne'e – DNMA, semana 6
 - Monitoriza ROV
 - Kimiku no kombustive ne'ebé uza
 - Insidente ambientál sira



- Audits
 - Planning stage
 - Drilling stage
 - Demobilisation stage
 - DNMA and ANP invited to come onboard to observe activities
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- Fiskalizaun konta nian
 - Faze planeamentu
 - Faze perfurasaun nian
 - Faze demobilizasaun
 - DNMA no ANP hetan konvite atu mai iha ro-leten hodi observa atividade sira



Conclusion:

- The drilling can be managed to achieve its objectives, without causing unacceptable environmental and socio-economic effects.
 - The exploration drilling program will assist the development of the petroleum industry in Timor Leste, which provides benefits to the Timorese people.
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Konkluzaan:

- Perfurasaun bele jere atu atinji ninia objetivu sira sem kauza ba efeitu meu-ambiente no sosio-ekonomiku sira nebe la bele tolera
- Programa perfurasaun esplorasaun nian sei ajuda desenvolvimentu industria petroleo iha Timor-Leste, nebe oferese benefisiu ba Timor oan sira.



PART FOUR:

- Finalising the assessment of the EIS

PARTE HAAT:

- Finalizasaun avaliasaun EIS



EIS assessment/avaliasaun EIS

- 27 October 2010 — final stakeholder review meeting
 - DNMA have collected some stakeholder comments
 - DNMA to make decision on approval, according to terms of regulations
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- 27 Outubru 2010 — soru-mutu revizaun maksoin-lisuk (stakeholder) final
- DNMA halibur ona komentáriu maksoin-lisuk (stakeholder) sira ne'ebé halibur tiha ona
- DNMA atu halo desizaun kona-ba aprovasaun, haktuir ba termu regulamentu sira

