

Macaé, September 14th 2017

**MINUTES OF IADC-BRAZIL HSE COMMITTEE MEETING HELD ON SEPTEMBER 14th 2017
FROM 2:30 p.m. TO 5:30 p.m. AT QGOG'S OFFICE IN MACAÉ**

Present at this meeting were the following:

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| - Leandro Duarte – QGOG | - Glauca Carvalho – Ensco |
| - Jalile Bartole Pereira – IADC-Brazil | - Lucas Crespo – Ensco |
| - José Villanueva – IADC-Brazil | - Márcio Martins – Transocean |
| - Beatriz Alves – Seadrill | - Romulo Neves – QGOG |
| - Claudinei Aguiar – Etesco | - Aline Pires – Petrobras |
| - Fabricio Manhaes – Petrobras | - Aline Silva – Transocean |
| - Giselle Chunques – Etesco | - Ricardo Marinho – Transocean |

The topics of discussion were as follows:

- Feedback about Audit in QGOG

The following items were agreed upon

- Leandro Duarte presented QGOG's Ouro Negro audit report. The ministry of the work was rigid, due to some denunciations received. The MT report was sent with 6 issues and 1 week after the detailed report. 76 nonconformities, grouped into 6 groups. Leandro will send the presentation.
- 1) Toxic and flammable gases: QGOG considered H₂S and CO₂ only emergency. Ministry of Labor wants it to be treated as occupational exposure. The PPRA was disapproved. Tolerance limits were changed and a sensor was relocated. Leandro suggested that all companies use the same gas dispersion parameter. They contracted the company Safe Solutions to do study of dispersion of gases. Leandro suggested that companies standardize the critical places that need this study. PPR was reworked, based on a Fundacentro model - addition of a spirometry test to determine if the employee is fit or unfit to use respiratory protection equipment, currently done in periodic examination and always before work by the nurse. QGOG wants to organize training for port-counting, could join companies to carry out this training. Maersk's briefing needed to be redone.
- 2) Dishwasher: it had to be installed device to stop machine when it is opened (double device).
- 3) Hoses and pipes: Request inventory with all hoses on board, with certificates. The auditor request to follow ABNT test criteria. Some were followed by API criteria. Shimer does tightness test training.



- 4) Ergonomics: an ergonomic study was performed by an outsourced company, and due to the high level of detail, QGOG did not follow all the recommendations. The audit charged these details.
- 5) Confined space: review of the procedure according to NBR 16577 and review of PET. There must be no confined space work without forced ventilation.
- 6) Cargo handling: Lifting eyebolts certification requirement for lifting people. Training, forklift - report to prove that there was no forklift combustion. Manual and chart of crane were in English.
- IADC will send a spreadsheet for companies to fill in the NO LTI information, for safety awards that will be held on December 2nd.

Actions

- Leandro Duarte will send the presentation to be shared.
- Committee members should share information regarding NR 12 and a new meeting will be scheduled to discuss this issue.
- The drilling contractors need to send the no LTI information to IADC.

Next Meetings

The next meeting for the HSE committee was agreed to be held on November 22th.