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**Date:** 2018-10-30  
**Our reference:** M-OA-OS/STIK/  
33990-J-10614  
**Your reference:**

**HAI YANG SHI YOU 982, Id. No. 33990  
TAMARIND TARANAKI LTD-EPA APPLICATION**

Reference is made to your e-mail dated 2018-10-15, with questions regarding discharge on the HYSY 982 semisubmersible drilling rig.

Our comments to your questions below are based on the following submitted documents:

Ref. No	Drawing no	Revision	Title
10	33110004-P-324-XB-0008	3	P& ID drill floor mud drain system
6	33110004-P-803-XB-0001	3	P&ID Hazardous drain system –Drill floor
5	33110004-P-803-XB-0002	3	P&ID Hazardous drain system – Mud treatment room
4	33110004-P-803-XB-0003	3	P&ID Non- hazardous drain system – Drill floor
3	33110004-P-803-XB-0004	3	P&ID Non- hazardous drain system – Mud treatment room
9	DS328-C-101-XD-001	C	General arrangement front view
7	DS328-C-101-XD-004	D	General arrangement B-deck
8	DS328-C-101-XD-006	D	General arrangement main deck
2	DS328-L-803-XB-004	3	P&ID – Non-hazardous drain system -open aft drain system
1	DS328-L-803-XB-009	2	P&ID – Slop tank system- tank cleaning and water treatment
11	DS328-L-803-XB-101	1	P&ID deck drain system

1. *Confirm, or demonstrate by reference to as-built plans, that for the HYSY982 semisubmersible drilling rig for the Tui Phase 3 project, there is no direct discharge to the sea from any hazardous or non-hazardous deck drains.*

Non-hazardous drain from main deck, drill floor, fingerboard, draw works house roof, BOP house roof, mud module roof, top of welding workshop and accommodation (ref drw. 2, 3, 4, 6 & 10) is led to centre aft drain tank and P.S. aft drain tank (ref drw 2).

Deck drain from accommodation is led to stb fwd. drain tank and PS fwd. drain tank (ref drw 11).

From mud treatment room, cement unit room and shale shaker room drain is led to hazardous slop tank. (ref drw 5).

From cement unit room pump side, there seem to be a possibility to drain directly overboard, see question 4.

2. *Confirm that all hazardous or non-hazardous deck drains on the HYSY982 semisubmersible drilling rig are connected to some containment system.*

See question 1.

3. *Confirm that the only direct discharges to the sea come from these containment systems on the HYSY982 semisubmersible drilling rig.*

The aft drain tanks are 7.9m<sup>3</sup> each and the fwd. drain tanks are 10m<sup>3</sup> each. All these tanks have an overboard line with an oil content meter set at 15 ppm. If the oil content is above this limit the drain will be led to bilge settling tank.

From hazardous slop tank, drain is sent to water treatment unit (separation, decanter, dosing), and from this overboard discharge if below 15 ppm, otherwise to sludge tank or return to hazardous slop tank (ref. drw 1)

4. *If there are other points of discharge not connected to containment systems*

- a) *identify those points of discharge, and*

- b) *identify what is likely to be discharged from those discharge points*

- a) From cement unit room pump side, there is a drain pipe (0800-DC-803L3232-AC02-NI) marked overboard, in addition to the pipe to hazardous slop tank. From the collection line (0800-DC-803L3228-AC02-NI) the pipe divides into these two. Both pipes have a valve (803V3204 and 803V3205) but there is no information about operating position on these.

- b) Drain from this area is drain from safety shower, most likely water, a drain from drain boxes in the room that could contain diesel and cement from the pumps.

If the valve on the overboard pipe (803V3205) is kept closed, the possibility the oily water is discharged to sea is eliminated.

5. *Confirm the capacity of containment systems on the HYSY982 semisubmersible drilling rig.*

There are 4 non-hazardous drain tanks with a total capacity of approx. 35 m<sup>3</sup>, and bilge settling tank of approx. 36 m<sup>3</sup>. All drain with an oil content below 15 ppm will be led overboard. There is also a separator system for the bilge settling tank. The capacity is not given on the drawings, but a conservative estimate is 5m<sup>3</sup>/h. This should give a sufficient drain capacity.

6. *Based on known patterns of rainfall in the area, how likely is that this capacity will be exceeded?*

Using the highest volume scenario for rainfall (Marine Discharge Consent Application – Deck Drainage, table 6) of 3263 m<sup>3</sup> over 50 days, this gives approx. 65 m<sup>3</sup> per day.

With a conservative estimate on the bilge water separator, with a separator capacity of 5 m<sup>3</sup>/h, all rainwater can be separated in 13 hours, and in case of heavy rain, most of the water will have an oil content below 15 ppm and go directly overboard from the drain tanks.

7. *What is the operational strategy/response to situations when the containment system capacity is exceeded?*

There is a possibility to lead drain water to a shore connection (to a service vessel) and there is also a possibility to lead water directly from the bilge settling tank and overboard by opening a normally closed valve, the last possibility will however not ensure the oil content of water going overboard.

Sincerely  
for DNV GL AS



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