

Exploration and Appraisal Project in GS-OSHP-2017/1 block in Gulf of Kutchh, Gujarat

Standard ToR for conducting EIA Study for Project/ Activity 1(b) [Offshore Oil & Gas Exploration, Development and Production] and Information to be included in EIA/ EMP Report will be followed, which is provided in the following section.

**** Since the proposed project activities are falling entirely in offshore at approx. 24 NM from shoreline (no onshore activities will be undertaken) and considering the short term nature of the proposed project, we request Expert Appraisal Committee (EAC) for Exemption of the Public Hearing.**

A. Proposed TOR for Offshore Oil & Gas Exploration & Appraisal

1. Executive summary of the project.
2. No. of exploratory wells for which environmental clearance is accorded and No. of new wells proposed during expansion. Status and No. of the wells which are completed and closed.
3. Project Description and Project Benefits;
4. Cost of project and period of completion.
5. Employment to be generated.
6. Distance from coast line.
7. Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.
8. Recommendation of SCZMA/CRZ clearance as per CRZ Notification dated 6th January, 2011 (if applicable).
9. Details on support infrastructure and vessel in the study area.
10. Climatology and meteorology including wind speed, wave and currents, rainfall etc.
11. Details on establishment of baseline on the air quality of the areas immediately affected by the exploratory drilling and also particularly with reference to hydrogen sulphide, Sulphur dioxide, NO_x and background levels of hydrocarbons and VOCs.
12. Details on estimation and computation of air emissions (such as nitrogen oxides*, sulphur oxides*, carbon monoxide*, hydrocarbons*, VOCs*, etc.) resulting from flaring, DG sets, combustion, etc. during all project phases
13. Base line data collection for surface water for one season leaving the monsoon season within 1 km for each exploratory wells, particularly in respect of oil content in the water sample and sediments sample.
14. Fisheries study w.r.t. benthos and marine organic material and coastal fisheries.
15. Source of fresh water. Detailed water balance, waste water generation and discharge.
16. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case of project site closed to the coast.
17. Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.
18. Procedure for preventing spills and spill contingency plans.
19. Procedure for treatment and disposal of produced water.
20. Procedure for sewage treatment and disposal and also for kitchen waste disposal.
21. Details on solid waste management for drill cuttings, drilling mud and oil sludge, produced sand, radioactive materials, other hazardous materials, etc. including its handling and disposal options during all project phases.
22. Storage of chemicals on site.

23. Commitment for the use of water based mud (WBM) and synthetic oil based mud in special case. (#) Synthetic based mud will be used in specific hole problems due to difficult geological formations and in deeper sections to drill.
24. Details of blowout preventer Installation.
25. Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices will be followed.
26. Handling of spent oils and oil from well test operations.
27. H₂S emissions control plans, if required.
28. Details of all environment and safety related documentation within the company in the form of guidelines, manuals, monitoring programmes including Occupational Health Surveillance Programme etc.
29. Restoration plans and measures to be taken for decommissioning of the rig and restoration of onshore support facilities on land.
30. Documentary proof for membership of common disposal facilities, if required.
31. Any litigation pending against the project or any directions/order passed by any Court of Law against the project. If so, details thereof.
32. Total capital and recurring cost for environmental pollution control measures.

The proposed Sampling Plan proposed for this EIA Study is included in **Annex A-1**.

Annex A-1: Sampling Plan for the EIA Study

As the block is located beyond 12 NM away from the shoreline and there is no receptor the AAQ, Noise monitoring is not applicable

A. Proposed Marine Water & Sediment Quality Monitoring

Monitoring location Code	Latitude	Longitude
Marine Water Quality Monitoring		
MW1	22° 8'32.26"N	68°20'59.14"E
MW2	21°59'58.73"N	68°36'17.32"E
MW3	21°35'54.50"N	68°14'50.22"E
MW4	21°21'52.64"N	68°35'26.89"E
MW5	21°37'13.86"N	68°33'11.19"E
Sediment Quality Monitoring		
S1	22° 8'39.37"N	68°23'47.00"E
S2	21°58'18.94"N	68°37'26.59"E
S3	21°32'52.69"N	68°12'59.41"E
S4	21°21'22.58"N	68°33'2.78"E
S5	21°41'4.73"N	68°31'23.98"E

Maps showing the monitoring locations are presented in **Figures 1.to 3.**

Figure 1 Monitoring Location Map – Marine Water and Sediment



