

State Level Environment Impact Assessment Authority, Rajasthan

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No. F.1 (4)/SEIAA/SEAC-Raj/Sectt/Project /Cat. 5(f)B2 (18830)/2019-20

Dated: 16.3.2024

Dilip Kumar Bera
M/s Vedanta Limited (Division Cairn Oil & Gas),
DLF Atria, Phase - 2, Jakaranda Marg,
DLF City, Gurgaon, Haryana.

Sub:-E.C for the proposed "Onshore Oil and Gas Exploration, Appraisal and Early Production Unit" Project in RJ- ONHP- 2017/6 Hydrocarbon block, having an area of 925.0 Sq. Km falling in Distt.- Barmer (Raj.) (Proposal No-179955).

This has reference to your application dated 17.12.2020 seeking environmental clearances for the above project under EIA Notification 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification 2006 on the basis of the mandatory documents enclosed with the application viz. the questionnaire, EIA, EMP and additional clarifications furnished in response to the observation of the State Level Expert Appraisal Committee Rajasthan, in its meeting held on 12th to 13th January, 2021.

2 Brief details of the Project:

1	Category / Item no.(in Schedule):	I(b) B2												
2	Location of Project	Baytoo, Gudamalani, Sindhari and Sheo Tehsils, Barmer, Rajasthan												
3	Project Details M.L. No. /Production Capacity	<p>M.L.No.: Not Applicable</p> <p>Vedanta Ltd. (Div: Cairn Oil and Gas) has been allocated RJ-ONHP-2017/6 hydrocarbon block falling in Barmer District of Rajasthan by MoPN&G, GOI under the Revenue Sharing Contract (RSC) for exploration and exploitation of hydrocarbons. Petroleum Exploration Licence (PEL) has been granted vide letter no. P.18 (4) Mine/Group-2/2019 dated 27.05.2019.</p> <p>Proposed project activities include exploration and appraisal drilling of wells in the block Total Block Area : 925 Km² Drilling of Exploratory and Appraisal Wells : 45 Nos. Setting up of 8 Early Production Units (EPUs)/Quick Production Units (QPU) and early production of 16000 BOPD crude oil and 2.4 MMSCFD associated Natural gas in the block RJ-ONHP-2017/6.</p> <p>Details of proposed tentative well coordinates including Village, Tehsil:</p> <table border="1"><thead><tr><th>Well no.</th><th>Coordinates</th><th>Present Land Use</th><th>Village</th><th>Block</th><th>District</th></tr></thead><tbody><tr><td>1</td><td>25°33'21.86"N</td><td>Fallow land</td><td>Ed Sindari</td><td>Sindhari</td><td>Barmer</td></tr></tbody></table>	Well no.	Coordinates	Present Land Use	Village	Block	District	1	25°33'21.86"N	Fallow land	Ed Sindari	Sindhari	Barmer
Well no.	Coordinates	Present Land Use	Village	Block	District									
1	25°33'21.86"N	Fallow land	Ed Sindari	Sindhari	Barmer									

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	71°50'23.54"E				
2	25°35'51.05"N 71°48'36.48"E	Fallow land	Potliyonki Dhani	Gudham alani	Barmer
3	25°38'1.55"N 71°48'34.37"E	Fallow land	SanpaPhanta Bhomji	Baytoo	Barmer
4	25°40'11.50"N 71°48'31.93"E	Fallow land	Godaronki Sara	Baytoo	Barmer
5	25°42'21.66"N 71°48'29.40"E	Limestone quarry	Sajan Ki Dhani	Baytoo	Barmer
6	25°44'31.86"N 71°48'27.14"E	Fallow Land	KarnipuriaCha kCharnot	Baytoo	Barmer
7	25°46'43.79"N 71°48'4.48"E	Fallow Land	Sauon Ki Dhani	Baytoo	Barmer
8	25°48'52.13"N 71°45'38.69"E	Fallow Land	Nagoniyonki DH	Baytoo	Barmer
9	25°48'53.74"N 71°48'2.03"E	on road, fallow land	Seeyolon Ki Dhani	Baytoo	Barmer
10	25°51'1.73"N 71°45'36.69"E	Fallow land	Purana Gaon	Baytoo	Barmer
11	25°51'4.06"N 71°47'59.71"E	Fallow Land	Bairdon Ki dhani	Baytoo	Barmer
12	25°53'9.57"N 71°43'9.46"E	Fallow land	Mahigoniyon MoodhonkiDh ani	Baytoo	Barmer
13	25°53'11.94"N 71°45'33.41"E	Fallow Land,	BayatuChima nji	Baytoo	Barmer
14	25°53'14.16"N 71°47'57.26"E	Fallow land	Darjiyon Ki dhani	Baytoo	Barmer
15	25°55'19.78"N 71°43'7.17"E	Fallow land	JanduonkiDha ni	Baytoo	Barmer
16	25°55'22.01"N 71°45'30.93"E	Fallow land	Hemji Ki Tala	Baytoo	Barmer
17	25°55'24.23"N 71°47'54.85"E	Fallow Land	DhoronmoniP otliyon Ki Dhan	Baytoo	Barmer
18	25°57'29.79"N 71°43'4.49"E	Fallow Land	NarsaliNadi	Baytoo	Barmer
19	25°57'31.96"N 71°45'28.33"E	Fallow land	Meethiyasara	Baytoo	Barmer
20	25°57'34.33"N 71°47'52.34"E	Fallow land	Hemji Ki Pana	Baytoo	Barmer
21	25°59'37.61"N 71°40'37.92"E	Fallow land	Kisne Ka Tala	Baytoo	Barmer
22	25°59'39.91"N 71°43'2.00"E	Fallow land	Koloo	Baytoo	Barmer
23	25°59'42.06"N 71°45'25.98"E	Fallow land	Panawara	Baytoo	Barmer
24	25°59'44.46"N 71°47'49.93"E	Fallow land	BandiDhora	Baytoo	Barmer
25	26° 1'47.80"N 71°40'35.40"E	Fallow land	Hemoniyonki .Tala	Baytoo	Barmer
26	26° 1'49.97"N 71°42'59.43"E	Fallow land	Dabliya	Baytoo	Barmer
27	26° 1'52.38"N 71°45'23.43"E	Fallow Land	Nagona Tala	Baytoo	Barmer
28	26° 1'54.84"N	Fallow Land	Cheelanadi	Baytoo	Barmer

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	71°47'47.38"E				
29	26° 3'55.57"N 71°38'8.75"E	Fallow land	Loonara	Baytoo	Barmer
30	26° 3'57.93"N 71°40'32.81"E	Fallow Land	RamdanKatala	Baytoo	Barmer
31	26° 4'0.11"N 71°42'56.95"E	Fallow Land	Indroniyonki Tala	Baytoo	Barmer
32	26° 4'2.48"N 71°45'20.95"E	Fallow land	Mobtanionki Tala	Baytoo	Barmer
33	26° 4'4.69"N 71°47'45.05"E	Fallow land	GodaronkiDha ni	Baytoo	Barmer
34	26° 6'5.51"N 71°38'5.90"E	Fallow land	ThalesonkiDh ani	Baytoo	Barmer
35	26° 6'8.07"N 71°40'30.30"E	Fallow land	Kheenpar	Baytoo	Barmer
36	26° 6'10.16"N 71°42'54.24"E	Fallow land	Chauraliya	Baytoo	Barmer
37	26° 6'12.60"N 71°45'18.37"E	Fallow land	Pooniyonki Tala	Baytoo	Barmer
38	26° 6'14.61"N 71°47'42.83"E	Fallow land	Kanod	Baytoo	Barmer
39	26° 8'12.45"N 71°35'39.45"E	Fallow land	Jhak	Baytoo	Barmer
40	26° 8'15.84"N 71°38'3.40"E	Fallow land	Ridhusar	Baytoo	Barmer
41	26° 8'18.14"N 71°40'27.73"E	Fallow land	Khimpar	Baytoo	Barmer
42	26° 8'20.42"N 71°42'51.88"E	Fallow land	Sahar	Baytoo	Barmer
43	26° 8'22.77"N 71°45'16.03"E	Fallow land	Beri Nadi	Baytoo	Barmer
44	26° 8'24.93"N 71°47'40.14"E	Fallow land	Beri Nadi	Baytoo	Barmer
45	26° 8'53.92"N 71°31'0.97"E	Fallow land	Batara	Sheo	Barmer

Note:(1) Details of land including Khasra Nos, site layout/ map, etc. will be submitted to RSPCB 15 days prior to commencement of drilling of a well as part of the compliance to CTE conditions.

(2)Actual geographical surface coordinates of exploratory and appraisal well locations will be within 2000m radius of the proposed coordinates.

4	Project Cost:	939.94 Crores
5	Water Requirement & Source	<p>Water requirement for Exploration and Appraisal: 87 m³/day per well Water requirement for Early Production: 15m³/day at each early production location.</p> <p><u>Drilling of an exploratory/ appraisal well is a short-term activity for about 45 days. Drilling of wells would be carried one well at a time in sequence over the period. Simultaneously all wells will not be drilled.</u></p> <p><u>It is to be noted that after completion of drilling activity in one well, drilling rig would be mobilised to next site for drilling. It is envisaged that about 2 to 3 nos. of wells could be drilled in a year.</u></p> <p>Sourcing of water requirement: Water would be sourced locally through approved/authorized sources (e.g. Irrigation Dept./ Water Resources Dept. of State Govt.). As an additional option, water requirement could be sourced from the</p>

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already existing facilities of Cairn in Barmer. NO bore well will be drilled for the extraction of ground water for this project.

6 Fuel & Energy:

Power requirement during Exploratory and Appraisal well drilling				
Location	DG Capacity	Fuel Requirement	Stack Height (m)	Stack dia (m)
Camp Site	2 X 350 KVA (1W+1S)	HSD- 3-4 KLD	6	0.21
Drilling Site	3 x 1000 KVA (2W +1 S) or 2x 1850 KVA (1W+1S)	HSD- 15-18 KLD	10	0.2
Liquid Mud Pump (LMP)	3X250 KVA (2W+1S))	HSD- 2-3 KLD	6	0.2
Radio Room	2X100 KVA (1W+1S)	HSD-1-2 KLD	6	0.305
Diesel fired Heater-Treater or IWBH (Induced Water Bath Heater) with Well Testing Set up	350 KVA	HSD-3 KLD	6	0.21
Flaring during well testing /extended well testing	Test Flare	Natural Gas- 71 m3/hour	30	0.21

Power requirement during Early Production

DG Set	DG Capacity	Fuel Requirement	Stack Height (m)	Stack dia (m)
GEG (Gas Engine Generator)	1 MW	Natural Gas - 283.16 m3/hour	10	0.21
D.G. Set (Emergency backup)	500 KVA	HSD-0.12 KLD	6	0.15
Flaring for early production	Flare	Natural Gas- 71 m3/hour	30	0.21
Dual fuel (Diesel/Gas) fired Heater-Treater or IWBH (Induced Water Bath Heater)	800 KVA	0.25 MMSCFD or 4 KLD	6	0.15

10 Environment Management Plan

Environment Management Plan (EMP) has been prepared and submitted to SEAC office.
 Cost of Environment Management Plan (EMP) including Greenbelt/ plantation:
 The tentative budget for implementation of the EMP including environmental monitoring and Greenbelt/Plantation would be INR 10.0lakhs for each well site during drilling activity.

S. No.	Particulars	Approx. budget/ well (INR) in Lakh
1.	Air quality management	3.5
2.	Noise monitoring	0.75
3.	Surface and Ground Water Quality	2.0
4.	Soil Quality	0.75
5.	Waste management	2.5
6.	Greenbelt/ Plantation	10.0
	Total:	10.0

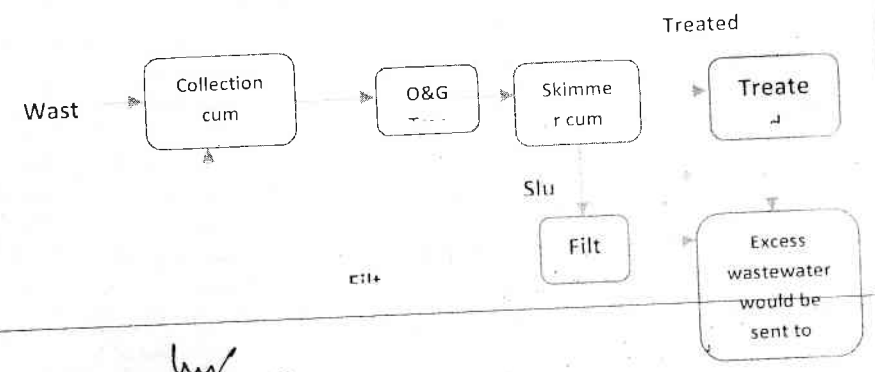
The tentative budget for implementation of the EMP including environmental monitoring and Greenbelt/Plantation would be INR 11.0lakhs for each Early Production unit per year during early production.

S. No.	Particulars	Approx. budget/ EPU/Year (INR) in Lakh
1.	Air quality management	10.0
2.	Noise monitoring	
3.	Surface and Ground Water Quality	
4.	Soil Quality	
5.	Waste management	0.5
6.	Greenbelt/ Plantation	0.5
	Total:	11.0

Drilling Wastewater Management
Wastewater estimated to be generated from each well drilling would be 40 KLD which will be treated onsite in modular and mobile effluent treatment plant (ETP). Wastewater will be collected and treated in ETP of 50 KLD capacity. ETP would consist of physicochemical treatment, i.e. oil & grease separator; skimmer cum clarifier; and filtrations. Treated effluent/ water would be reused/ recycled to the maximum extent possible onsite for dust suppression, green belt/ plantation, fire water, drilling mud preparation, housekeeping, etc.

As an additional option, wastewater would be sent to the existing effluent treatment facilities (capacity 124450 KLD) of Cairn Oil & Gas at Mangala Processing Terminal (MPT) which is a centralize facility in Barmer District for treatment. The treated effluent will be reused for reinjection into the reservoir (to maintain the pressure for sustaining production) to the maximum extent possible and the excess treated effluent would be disposed into deep dump well (by reinjection in abandoned well).

Process Flow Diagram – Effluent Treatment Plant (ETP):



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Note:

- (1): Oil and Grease removal unit would consist of API and TPI separator.
- (2) IF needed, the clarified water would be subjected to filtration through (sand/charcoal filters) and ultrafiltration followed by RO (reverse osmosis) for onsite reuse/recycle of the treated effluent.

Domestic Wastewater Management

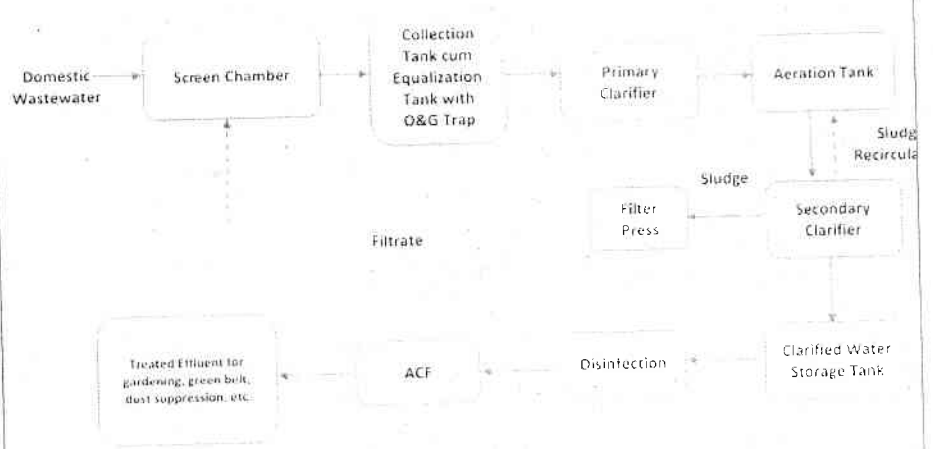
Domestic effluent is collected from toilets, washrooms, kitchen in porta cabins, and connected through pipes to the STP for treatment. Total domestic wastewater would be generated during drilling is 12KLD. Same would be treated in 15KLD modular STP on well site during drilling. Price of 15KLD STP would be approx. 1.5 lakhs.

During early production maximum 2KLD domestic wastewater would be generated and treated in modular STP of 10 KLD capacity. Price of 10 KLD STP would be approx. 5 lakhs. Treated domestic wastewater would be used in gardening, green belt, dust suppression, etc.

Treated Sewage Disposal

Treated domestic wastewater would be used in gardening, green belt, dust suppression, etc.

Process Flow Diagram - STP



Hazardous Waste generation and disposal details

S. No.	Hazardous Waste	Quantity	Mode of Disposal
	During Drilling		
1	Drill cutting excluding those from Water-based mud	1500 ton/well	Collection in HDPE lined pit and disposal in co-processing in cement kiln/ common hazardous waste TSDF/ HW processing facility
2	Drilling Mud containing oil	500 ton/well	
3	Sludge containing oil	500 ton well	
4	Spent	0.6	

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		Chemicals	ton/well																
		5 Used or Spent oil	2 ton/well	Disposal with registered recyclers															
		During Early Production																	
		6 Cotton/filters contaminated with oil	0.3 ton/year	Collection in HDPE lined pit and disposal in co-processing in cement kiln/ common hazardous waste TSDF/ HW processing facility															
		7 Empty barrels/containers/liners contaminated with hazardous chemicals/waste	50 nos./year	Will be sent to recyclers															
		8 ETP Sludge	120 ton/year	Collection in HDPE lined pit and disposal in co-processing in cement kiln/ common hazardous waste TSDF/ HW processing facility															
		9 Oily Sludge	20 ton/year																
		10 Slop Oil	2 ton/year																
		11 Spent Carbon	3 ton/year																
		12 Used or Spent oil	1 kl/year	Used oil will be sent RSPCB/ CPCB authorized recyclers															
		13 Wastes or residues containing oil	0.5 kl/year	Collection in HDPE lined pit and disposal in co-processing in cement kiln/common hazardous waste TSDF/HW processing facility															
		<p align="center"><u>Hazardous Waste Collection Pit for Temporary Storage During drilling:</u> <u>The hazardous wastes i.e. mainly drill cuttings associated with synthetic base mud (SBM) generated during drilling would be collected temporarily in hazardous waste collection pit made of PCC & HDPE geomembrane. The Pit would be secured impervious by laying 1.5 mm thickness HDPE geo-membrane liner (as per CPCB guidelines) above the compacted Clay layer which will prevent ground penetration of any hazardous waste material stored in the pit for temporary duration.</u></p> <p><u>Finally, hazardous waste would be sent to cement kiln for co processing or sent to TSDF /HW processing facility for disposal for sustainable waste disposal. Efforts would be made to immediate disposal of drill cutting generated after passing through centrifuge & cutting drier and from the cutting coral itself. This practice would avoid requirement for temporary storage at drill/ well site.</u></p>																	
11	CSR /ESR Activities	NA																	
12	Green Belt/ Plantation	<p>33% of its plant areas/ permanent facilities (which would be developed subsequently after commercially viable successful discovery) will be developed as greenbelt. Peripheral greenbelt will be developed in a phase-wise manner by undertaking Source & Receptor Approach Based Plantation around the facilities to mitigate the impact of fugitive emission.</p> <p>Tree plantation will be done at a spacing of 2.5 x 2.5 m. About 1500 trees per ha will be planted.</p> <p>Species considered for greenbelt development are:</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Scientific Name</th> <th>Local Name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Accacianilotica</td> <td>Babul</td> </tr> <tr> <td>2</td> <td>Azardirachtaindica</td> <td>Neem</td> </tr> <tr> <td>3</td> <td>Pongamiapinnata</td> <td>Karanj</td> </tr> <tr> <td>4</td> <td>Ziziphus nimmularia</td> <td>Jhar Beri</td> </tr> </tbody> </table>			S. No.	Scientific Name	Local Name	1	Accacianilotica	Babul	2	Azardirachtaindica	Neem	3	Pongamiapinnata	Karanj	4	Ziziphus nimmularia	Jhar Beri
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		5	Punicagranatum	Anar
		6	Parkinsonia aculeata	Ram babul
		7	Phoenix sylvestris	Khejur
		8	Tamarixaphylla	Lal Jhar
		9	Ziziphus jujube	Ber
13	Budgetary Breakup for Labour	Estimated Budgetary Breakup for Labour Welfare: The following provisions will be made towards Labour Welfare during drilling:		
		S. No.	Particulars	Estimated Budget per well(in Lakhs)
		1.	Safe drinking water for workforce	
		2.	Sanitation facilities	
		3.	First aid facility and ambulance for emergency medical evacuation	
		4.	PPEs (Safety Boots, Helmet, Mask, ear plugs, gloves, etc.)	6.0 Lakhs/Well (Approx.)
		5.	Environmental, safety & occupational health and wellness awareness program	
		The following provisions will be made towards Labour Welfare during Early Production:		
		#.	Particulars	Estimated Budget per EPU per Year(in Lakhs)
		1.	Safe drinking water for workforce	
		2.	Sanitation facilities	
		3.	First aid facility and ambulance for emergency medical evacuation	
		4.	PPEs (Safety Boots, Helmet, Mask, ear plugs, gloves, etc.)	2.0 Lakhs/ EPU/Year (Approx.)
		5.	Environmental, safety & occupational health and wellness awareness program	

3. The SEAC Rajasthan after due considerations of the relevant documents submitted by the project proponent and additional clarifications/documents furnished to it have recommended for Environmental Clearance with certain stipulations. The SEIAA Rajasthan after considering the proposal and recommendations of the SEAC, Rajasthan in its 4.53rd Meeting held on 19.02.2021 hereby accord Environmental Clearance to the project as per the provisions of Environmental Impact Assessment Notification 2006 and its subsequent amendments, subject to strict compliance of the terms and conditions as follows:

1. Statutory compliance:

- i. The project **Proponent** shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project **Proponent** shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project **Proponent** shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (incase of the presence of schedule-I species in the study area)
- iv. The project **Proponent** shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.

v. Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

vi. The project **Proponent** shall obtain and adhere to statutory clearance under the Coastal Regulation Zone Notification, 2011, as applicable

II. Air quality monitoring and preservation

i. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied with

ii. To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers to control particulate emissions within permissible limits (as applicable). The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

iii. The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.

Ambient air quality shall be monitored at the nearest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM10, PM2.5, SO2, NOX, CO, CH4, HC, Non-methane HC etc.

During exploration, production, storage and handling, the fugitive emission of methane, if any, shall be monitored using Infra-red camera/ appropriate technology.

The project **Proponent** also to ensure trapping/storing of the CO2 generated, if any, during the process and handling.

Approach road shall be made pucca to minimize generation of suspended dust

III. Water quality monitoring and preservation

i. As proposed by the project **Proponent**, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged to any surface water body, sea and/or on land. Domestic sewage shall be disposed off through septic tank/soak pit.

ii. The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State Pollution Control Board while granting Consent under the Air/Water Act, whichever is more stringent.

iii. Total fresh water requirement shall not exceed the proposed quantity or as specified by the Committee. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.

iv. The company shall construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards.

v. Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/drilling mud/drill cutting shall be discharged/dropped off into nearby surface water bodies. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.

IV. Noise monitoring and prevention

i. The company shall make all arrangements for control of noise from the drilling activity. Acoustic enclosure shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.



ii. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc, on all sources of noise generation.

iii. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

V. Energy Conservation measures

i. The energy sources for lighting purposes shall preferably be LED based.

VI. Waste management

i. Oil spillage prevention and mitigation scheme shall be prepared. In case of oil spillage/contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.

ii. Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office

VII. Safety, Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. Blow Out Preventer system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.

iii. Company shall prepare operating manual in respect of all activities, which would cover all safety & environment related issues and measures to be taken for protection. One set of environmental manual shall be made available at the drilling site/ project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office. Remote monitoring of site should be done.

iv. On completion of drilling, the company has to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority

v. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored the area in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations

vi. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare shall be explored. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.

vii. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.

viii. The company shall develop a contingency plan for H2S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H2S detectors in locations of high risk of exposure along with self containing breathing apparatus

ix. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

x. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

xi. The Company shall carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected shall be submitted six monthly to the Ministry and Regional Office.



VIII. Corporate Environment Responsibility

- i. The project **Proponent** shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms /conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

IX. Miscellaneous

- i. The project **Proponent** shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project **Proponent's** website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project **Proponents** to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project **Proponent** shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project **Proponent** shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The project **Proponent** shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vi. The project **Proponent** shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- vii. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project **Proponent** shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.



viii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

ix. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.


x. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory:

xi. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.


xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.


(P.K. Upadhyay)
Member Secretary,
SEIAA, Rajasthan.

No. F1 (4)/SEIAA/SEAC-Raj/Sectt/Project /Cat. 5(f)B2 (18830)/ 2019-20 Dated:

Copy to following for information and necessary action:

1. Secretary, Ministry of Environment, Forest & Climate Change, Govt. of India, Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi-110003.
2. Principal Secretary, Environment Department, Rajasthan, Jaipur.
3. Sh. R.K. Meena, IAS (Retd.), B-75, Shankar Vihar, 50 Feet Gaitore Road, Sawai Gaitore, Jaipur
4. Dr. Anil Kumar Goel IFS (Retd.), Forest Colony, Sector 4, Jawahar Nagar, Jaipur.
5. Member Secretary, Rajasthan State Pollution Control Board, Jaipur for information & necessary action and to display this sanction on the website of the Rajasthan Pollution Control Board, Jaipur.
6. Member Secretary, SEAC Rajasthan.
7. The CCF, Regional Office, Ministry of Environment & Forests, RO(CZ), Kendriya Bhawan, 5th Floor, Sector 'H', Aliganj, Lucknow-226 020.
8. Environment Management Plan- Division, Monitoring Cell, Environment, Forest & Climate Change, Govt. of India, Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi-110003.
9. Sh. Jagbir Singh Manral, ACP, Department of Environment, Government of Rajasthan, Jaipur with the direction to upload the copy of this Environment Clearance on the website.


M.S. SEIAA, (Rajasthan)