



## Karnataka State Pollution Control Board

**HEAD OFFICE** : "Parisara Bhavan",  
No.49, Church Street, Bengaluru-560001  
Tel No: 080-25589112/113, 080-25581383/388,  
Website: <https://kspcb.karnataka.gov.in>

**ZONAL OFFICE** : Mangaluru  
Plot No.10B, Parisara Bhavana, Baikampady Industrial  
Area, Mangaluru-575011  
Tele : 0824-2408420

### Consent For Operation(CFO-Air,Water) - (CfO-Expand)

As per the provisions of  
The Water (Prevention & Control of Pollution) Act, 1974  
&  
The Air (Prevention & Control of Pollution) Act, 1981

To  
Mangalore Refinery And Petrochemicals Limited (Desalination Plant),  
MRPL

for the Facility located at,  
Mangalore Refinery And Petrochemicals Limited (Desalination Plant),38/P,  
72/P, 37/P, 35/P ,MRPL  
Dakshina Kannada

Consent Order No	PCBID	INW ID	Industry Colour/Scale	Date of Issue
AW-342781	77170	216860	ORANGE/LARGE	02/04/2024

**This Consent is granted for the Products/ Activity/Service name indicated  
in the annexure along with the terms & conditions attached to this order**

Validity through : **28/02/2024 to 30/09/2031**

Combined Consent Order No: AW-342781

PCB ID: 77170

GSC No : PBOXG0000206860

Date: 02/04/2024

**Combined consent for discharge of effluents under the Water (Prevention and Control of Pollution) Act , 1974 and emission under Air (Prevention and Control of Pollution) Act , 1981**

Ref: 1. Application filed by the industry / organization on 30/01/2024

2. Inspection of the Industry/organization/by RO, on 12/03/2024

Consent is hereby granted under Section 25(4) of the Water (Prevention & Control of Pollution) Act, 1974 ( herein referred to as the Water Act) & Section 21 of Air (Prevention & Control of Pollution) Act, 1981, ( here in referred to as the Air Act) and the Rules and Orders made there under and subject to the terms and conditions as detailed in the Schedule Annexed to this order.

The Occupier is authorized to operate /carryout industry/activity & to make discharge of the effluents & emissions conforming to the stipulated standards from the premises mentioned below:

**Location:**

Name of the Industry: Mangalore Refinery And Petrochemicals Limited (Desalination Plant)

Address: 38/P, 72/P, 37/P, 35/P, MRPL

Industrial Area: Not In I.A, MANGALORE,

Taluk: Mangalore, District: Dakshina Kannada

**Discharge of effluents under the Water Act:**

Sr	Water Code	WC(KLD)	WWG(KLD)	Remark
1	Domestic Purpose	5.000	4.000	Shall be treated in STP. Treated sewage shall be used onland for gardenig after confirming to standard in Annexure-I
2	Manufacturing Processes	104530.000	64530.000	Water consumption source-Sea water, waste water generated after desalniton shall be rejected to sea as per Annexure-A

**Discharge of Air emissions under the Air Act from the following stacks etc.**

Sl. No.	Description of chimney/outlet	Limits specified refer schedule
The details of Sources, control equipments and its specification, type of fuel, rate of emissions, constituents to be controlled in emissions etc. are detailed in Annexure-I.		

The consent for operation is granted considering the following activities/Products;

Sr	Product Name	Applied Qty	Unit
1	desalination plant (permeate water to refinery)	300000.0000	Cubic Meters/month

**This consent is valid for the period from 02/04/2024 to 30/09/2031**

To,  
Mangalore Refinery And Petrochemicals Limited (Desalination Plant)  
MANGALORE

**NOTE:**

The following Conditions A ( 2a, 3a & 3b) mentioned above are not applicable.

**COPY TO:**

1. The Regional Officer, **Mangaluru** for information and necessary action.
2. Master Register.
3. Case file.

Consent Fee paid : Rs. 2400000

**Additional Conditions:**

1. Applicant shall comply with the conditions mentioned in attached Annexures-A & shall submit compliance report periodically once in 6 months to the R.O. 2. MRPL authorities shall take study on impact on aquatic eco system due to discharge of RO-rejects at sea outfall sea point and shall submit the study report to the Board within 6 months.



**SCHEDULE**

**TERMS AND CONDITIONS**

**A. TREATMENT AND DISPOSAL OF EFFLUENTS UNDER THE WATER ACT.**

1. The discharge from the premises of the occupier shall pass through the terminal manhole/manholes where from the Board shall be free to collect samples in accordance with the provisions of the Act/Rules made there under.
- 2(a). The sewage/domestic effluent shall be treated in septic tank and with soak pit. No overflow from the soak pit is allowed. The septic tank and soak pit shall be as per IS 2470 Part-I & Part-II.
- 2(b).The treated sewage effluent discharged shall conform to the standards specified in Annexure-I.
- 3(a). The trade effluent generated in the industry shall be treated in the ETP and treated effluent shall confirm to the standards stipulated by the Board in Annexure-1
- 3(b).The trade effluent shall be handed over to CETP and maintain logbook of effluent generated & sent every day.
4. The occupier shall install flow measuring/recording devices to record the discharge quantity and maintain the record.
5. The occupier shall not change or alter either the quality or the quantity or the place of discharge or temperature or the point of discharge without the previous consent/ permission of the Board.
6. The Occupier shall not allow the discharge from the other premises to mix with the discharge from his premises Storm water shall not be allowed to mix with the effluents on the upstream of the terminal manhole where the flow measuring devices are installed.

**B. EMISSIONS:**

1. The discharge of emissions from the premises of the applicant shall pass through the air pollution control equipment and discharged through stacks/chimneys mentioned in **Annexure-II** where from the Board shall be free to collect the samples at any time in accordance with the provisions of the Act and Rules made there under.
2. The occupier shall provide port holes for sampling of emission, access platforms for carrying out stack sampling, electrical points and all other necessary arrangements including ladder as indicated in Annexure-II.
3. The Occupier shall upgrade/modify/replace the control equipment with prior permission of the Board.

**C.MONITORING & REPORTING:**

1. The occupier shall get the samples of effluents & emissions collected and get them analyzed once a month for the parameters.

**D. SOLID WASTE (OTHER THAN HAZARDOUS WASTE) DISPOSAL:**

1. The Occupier shall segregate solid waste from Hazardous Waste, Municipal Solid Waste and store it properly till treatment/disposal without causing pollution to the surrounding Environment.
2. The solid waste generated shall be handled & disposed by scientific method without causing eye sore to the general public and to the surrounding environment.

**E. NOISE POLLUTION CONTROL:**

The applicant shall ensure that the ambient noise levels within its premises during construction and during operational period shall not exceed w.r.t Area/Zone as per Noise Pollution (Regulation and Control) Rules, 2000 as mentioned below:-

- a) In Industrial Area 75 dB(A) Leq during day time and 70 dB(A) Leq during night time.
- b) In Commercial Area 65 dB(A) Leq during day time and 55 dB(A) Leq during night time.
- c) In Residential Area 55 dB(A) Leq during day time and 45 dB(A) Leq during night time.
- d) In Silence Zone 50 dB(A) Leq during day time and 40 dB(A) Leq during night time.

Note: - \* Day time shall mean 6 am to 10 pm and Night time shall mean 10 pm to 6 am.

- \* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
- \* A "decibel" is a unit in which noise is measured.
- \* "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
- \* Leq: It is an energy mean of the noise level over a specified period.

**F. GENERAL CONDITIONS:**

1. The applicant shall obtain prior permission from the competent authority for drawing of water from Surface/Ground water source and submit a copy of the same to the Board.
2. The Board reserves the right to review, impose additional conditions, revoke, change or alter terms and conditions of this consent.
3. The Occupier shall forthwith keep the Board informed of any accidental discharge of emissions/effluents into the atmosphere in excess of the standards laid down by the Board. The applicant shall also take corrective steps to mitigate the impact.
4. The Occupier shall provide alternative power supply sufficient to operate all Pollution control equipments.

5. The entire premises shall always be kept clean. The effluent holding area, inspection chambers, outlets, flow measuring points should be made easily approachable.
6. The Occupier shall display the consent granted in a prominent place for perusal of the inspecting officers of the Board.
7. The Occupier his heirs, legal representatives or assigns shall have no claims whatsoever to the continuation or renewal of this consent after expiry of the validity of consent.
8. The Occupier shall make an application for consent at least 120 days before expiry of this consent.
9. The occupier shall maintain register recording the ambient air quality and stack monitoring. The register shall be open for inspection by the Board Officers at all time.

**Note:** All efforts should be made to remove colour and unpleasant odour as far as practicable.

### Annexure-II

Chim. No.	Chimney attached to	KVA Rating/ Capacity	Minimum chimney height to be provided above ground level (in Mtr)	Constituents to be controlled in the emission	Tolerance limits mg/NM3	Air pollution Control equipment to be installed, in addition to chimney height as per col.(4)	Date on which air pollution control equipments shall be provided to achieve the stipulated tolerance limits and chimney heights conforming to stipulated heights.
1	Any Other .....	Diesel driven fire water pumps	9	PM,SO <sub>2</sub> ,NO <sub>x</sub>	0,0,0,0,0	N.A	---
2	D.G. Sets	750 KVA, 2 no.	12	PM,SO <sub>2</sub> ,NO <sub>x</sub>	150,0,0,0,0	AEC,N.A,PRT	---

Note:

N.A : Not Applicable

AEC,N.A, : Acoustic Enclosures  
PRT

**Note:**

1. The DG set shall be provided with acoustic measures as per SI.No.94 in Schedule-I of Environment (Protection) Rules.
2. There shall be no smell or odour nuisance from the industry.



**LOCATION OF SAMPLING PORTHOLES, THE PLATFORMS, THE ELECTRICAL OUTLET.**

1. Location of Portholes and approach platform:

Portholes shall be provided for all chimneys, stacks and other sources of emission. These shall serve as the sampling points. The sampling point should be located at a distance equal to atleast eight times the stack or duct diameters downstream and two diameters upstream from source of low disturbance such as a Bend, Expansion, Construction Valve, Fitting or Visible Flame for rectangular stacks, the equivalent diameter can be calculated from the following equation.

$$\text{Equivalent Diameter} = \frac{2 (\text{Length} \times \text{Width})}{(\text{Length} + \text{Width})}$$

2. The diameter of the sampling port should not be less than 3". Arrangements should be made so that the porthole is closed firmly during the period when it is not used for sampling.
3. An easily accessible platform to accommodate 3 to 4 persons to conveniently monitor the stack emission from the portholes shall be provided. Arrangements for an Electric Outlet Point off 230 V 15 A with suitable switch control and 3 Pin Point shall be provided at the Porthole location.

For and on behalf of the  
Karnataka State Pollution Control Board

Signature Not Verified

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ANNEXURE-A

**ADDITIONAL CONDITIONS TO ACCOMPANY CONSENT FOR OPERATION (EXPANSION) OF M/S MANGALORE REFINERY AND RETROCHEMICALS LIMITED (DESALINATION PLANT AT SY NO. 38/P, 72/P, 37/P, 35/P, THANNIRBHAVI VILLAGE, MANGALURU TALUK & DAKSHINA KANNADA DISTRICT**

This Consent for Operation (Expansion) is valid for operation of Sea Water Desalination Plant for production of 10 MLD potable water (Permeate).

Sea Water Intake	Permeate water to refinery	Brine outfall to sea
26 MLD	10 MLD	16 MLD

- All conditions/recommendation stipulated by MOEF & CC, GOI vide its letter F.No. 11- 3/2019-1A-III dated: 18.04.2019 shall be complied with
- All conditions/recommendation stipulated by Karnataka Coastal Zone Management Authority(KCZMA) vide its letter FEE 194 CRZ 2018 Dated: 22.12.2018 shall be complied with
- Proposed landfall points (LEPs) along the shoreline for sea water intake and marine outfall have been planned at 1.7 Km South of Southern breakwaters of the New Mangalore Port at Panmabur, in Mnagaluru, Gurupur River runs on the eastern side of the proposed LFPS.
- Seawater will be drawn adjacent Arabian Sea and will be carried to desalination plant located within project premises on western side of the plant. Brine reject coming out of the desalination plant will be routed through pipeline back to sea. Desalination plant will have pre-treatment plant consisting of pH correction, Coagulation Flocculation, Clarification. Ultra Filtration, Reverse Osmosis including high pressure pump, energy recovery system and outfall.
- Seawater requirement for the RO plant will be **26 MLD**.
- The Sea water intake head will be located at selected distance of 950 m from the shore at 7.7m CD (Chart Datum) water depth. The intake pipeline will be made of HDPE material and it will be laid on the sea bed. The entire pipeline will be buried in such a way that the top of the pipeline will remain at minimum 2m below the seafloor
- Salinity of the brine reject released into the sea will be 65ppt will have the salinity difference of 30ppt higher than seawater ambient salinity of 35 ppt
- Brine discharge into the sea from the desalination plant will be **16 MLD**.
- Outfall diffuser will be located at 1050 m distance from the shoreline at water depth of 8 m CD. Outfall pipeline will be laid on seabed where top of the pipeline will be buried 2 m below the sea floor.
- Seawater intake pipeline will have length of 950 m and Outfall length will be 1050m
- Desalination plant will be in CRZ-II area but the pipeline will traverse through CRZ-IV CRZ-II and CRZ-1
- Desalination water (permeate) will be transported through MRPL refinery through pipeline in Right of way (ROW) of MSEZL pipeline corridor.

  
Senior Environmental Officer,

**I. WATER CONSUMPTION AND DISCHARGE DETAILS  
DISCHARGE OF EFFLUENT UNDER WATER ACT:**

Water Code	Water Consumption in KLD	Waste water generation in KLD	Place of Discharge
Process	26 MLD	16 MLD	Brine reject discharge into Sea through outfall diffuser

**II. AIR POLLUTION CONTROL STATUS (PROPOSED ADDITIONAL AIR POLLUTION SOURCES)**

Chimney attached to (1)	Emission Constituents (2)	Chimney height stipulated (3)	Air Pollution Control equipment stipulated (4)
750 KVA DG set-2 No's	SO <sub>2</sub> & NO <sub>x</sub>	12 mts AGL individual chimney	As per Col.3 with acoustic enclosure
Diesel driven fire water pumps	SO <sub>2</sub> & NO <sub>x</sub>	9 mts AGL individual chimney	As per Col.3

**ANNEXURE-I  
ON LAND FOR GARDENING**

SI No	Parameters	Concentration not to exceed
1	pH	6.5-9.0
2	BOD	>10 mg/l
3	COD	>50mg/l
4	TSS	>20 mg/l
5	NH <sub>4</sub> -N	>5mg/l
6	N-Total	>10 mg/l
7	Fecal Coliform (FC) Most Probable Number per 100 milliliter, MPN/100ml	<100


Note:

1. All efforts should be made to remove colour and unpleasant odour from the treated effluent before discharge.

**TABLE**

**HYDRAULIC LOADING APPLICABLE FOR DIFFERENT SOILS:**

Sl. No.	Soil Texture	Loading Rate in m <sup>3</sup> /Hec./day
1	Sandy	225 to 280
2	Sandy Loam	170 to 225
3	Loam	110 to 170
4	Clay Loam	55 to 110
5	Clay	35 to 55

  
Senior Environmental Officer  
KSPCB, Mangaluru