



मंगलूर रिफाइनरी एण्ड पेट्रोकेमिकल्स लिमिटेड  
MANGALORE REFINERY AND PETROCHEMICALS LIMITED

अनुसूची 'अ' के अंतर्गत भारत सरकार का उद्यम, SCHEDULE 'A' GOVT. OF INDIA ENTERPRISE.  
(ऑयल एण्ड नेचुरल गैस कॉर्पोरेशन लिमिटेड की सहायक कंपनी, A SUBSIDIARY OF OIL AND NATURAL GAS CORPORATION LIMITED)  
आई.एस.ओ. 9001, 14001 एवं 50001 प्रमाणित कंपनी, AN ISO 9001, 14001 AND 50001 CERTIFIED COMPANY.  
सीआईएन/CIN : L23209KA1988GOI008959 / वेबसाइट Website : www.mrpl.co.in

L/MS/KSPCB/7326  
28<sup>th</sup> September, 2023

The Member Secretary  
Karnataka Pollution Control Board  
No. 49, Parisara Bhavan  
Church Street  
Bangalore – 560 001

Dear Sir,

**विषय SUB: - Submission of Environment Statement (Form-V) for the year 2022 – 23  
for Desalination Plant**

We are enclosing herewith the Environmental Statement (Form - V) for the year 2022-23  
pertaining to Consent Order issued by the Board for Desalination Plant.

धन्यवाद Thanking you,

Yours sincerely,

For Mangalore Refinery & Petrochemicals Limited,

*M.S. Sudarsan  
29.9.2023*  
M.S. Sudarsan  
Chief General Manager (Health, Safety and Environment)

Encl: As above

Cc: EO, KSPCB, Mangalore

## **FORM - V**

(See Rule - 14)

### **Environmental Statement for the financial year ending with 31<sup>st</sup> March 2023 for Desalination plant at Tannerbhavi Village , Mangalore**

#### **PART-A**

- (i) Name and address of the owner / occupier of the industry, operation or process:

Sanjay Varma

Managing Director (Additional Charge) & Director (Refinery)

Mangalore Refinery and Petrochemicals Limited,

Kuthethoor Post, via Katipalla, Mangalore – 575 030

Address of Desalination Plant:

Sy. No 16, 26, 27 Tannerbhavi Village

- (ii) Industry category

Orange Category (Large)

- (iii) Production Capacity:

Operation of sea water desalination plant for production of 30 MLD potable water(Permeate)

- (iv) Year of Establishment: Commissioned in 2021

- (v) Date of the Last environmental statement: Nil

#### **PART -B**

### **Water and Raw Material Consumption**

- (i) Water consumption

Sea Water : 6 MLD (Permeate)

Cooling Water : NA

Domestic : 5 KLD

<b>Name of Products</b>	<b>Water consumption</b>	
	During the current Financial year <b>2021-22</b>	During the current Financial year <b>2022-23</b>
Permeate water	-	6 MLD

(ii) Raw material consumption

<b>Name of raw materials</b>	<b>Name of Products</b>	<b>Consumption of raw material per unit of output</b>	
		During the current Financial year <b>2021-22</b>	During the current Financial year <b>2022-23</b>
Sea Water	Permeate water to refinery	-	2.61

### **PART-C**

#### **Pollution discharged to Environment/unit of output**

<b>Pollutants</b>	<b>Description</b>
<b>(a) Water</b>	Salinity of the brine reject released into the sea is maintained within 65 ppt.
<b>(b) Air</b>	Ambient Air Quality Monitoring is being done and concentration of pollutants found within limit.  SO <sub>2</sub> range varying within 10-16 mg/Nm <sup>3</sup>  NO <sub>2</sub> range varying within 9-15 mg/Nm <sup>3</sup>

### **PART-D**

#### **Hazardous Waste**

<b>Hazardous Waste Streams</b>	<b>Total Quantity Generated (Liter)</b>	
	<b>During the current Financial year 2021-22</b>	<b>During the current Financial year 2022-23</b>
<b>1. From process</b>	-	Nil
<b>2. From Pollution Control Facilities</b>	-	Nil

## **PART-E**

### **Solid Wastes**

<b>Solid Wastes</b>	<b>Total Quantity Generated</b>	
	<b>During the current Financial year 2021-22</b>	<b>During the current Financial year 2022-23</b>
a. From process	-	Nil
b. From pollution control facilities	-	Nil
c. Quantity Recycled within the unit	-	Nil

Note: Insignificant quantity Solid waste generated from project site is disposed to MCC through existing tie-up with Refinery.

## **PART-F**

### **Characteristics and disposal of Hazardous and Solid Waste**

No Hazardous waste has been generated from Desalination Plant.

## **Part – G**

### **Impact of pollution, control measures on conservation of natural resources and on the cost of production**

- The Sea water intake head selected distance of 950 m from the shore at 7.7 m CD (Chart datum) water depth. The intake pipeline is made of HDPE Material and it has been laid on the sea bed. The entire pipeline is buried in such a way that the top of pipeline remains at minimum 2m below the seafloor.
- Salinity of the brine reject released into the sea is 65 ppt and have the salinity difference of 30ppt higher than seawater ambient salinity of 35 ppt
- Brine discharge into the sea from the desalination plant is 9.68 MLD at the distance of 1050 m from shore.

- Desalination Operation & maintenance cost = 1272 lakhs.
- Power Consumption cost =852 lakhs

#### **Part – H**

#### **Additional measures/investment proposal for environmental protection including abatement of pollution (2023-24)**

1. Monitoring of D.G set
2. Seawater intake pipeline have length of 950 m and outfall length of 1050 m to dilute the brine reject in an effective manner
3. Brine reject coming out the desalination plant has been routed through pipeline back to sea. Desalination plant is having pre-treatment plant consisting of PH Correction, Coagulation, Flocculation, Clarification, Ultra Filtration, Reverse Osmosis including high pressure pump, energy recovery system and outfall.

#### **Part – I**

#### **Any other particulars in respect of environmental protection including abatement of pollution**

1. Adequate STP has been provided to treat Sanitary Sewage Generated from toilets provided for the Staff and treated water is being used for gardening.
2. For DG set of 750 KVA (2 No) stacks of adequate height i.e. 12 m (2 No) are provided as stipulated by KSPCB/CPCB for adequate dispersion of pollutants.
3. Environment Management of D.G set is in line with the refinery.
4. Afforestation project being taken up at Bengre with Rs 1.72 Cr in association with Forest Dept. GoK, INR 106.94 Lacs was released for the same

**Signature of the occupier**

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