Karnataka State Pollution Control Board
Parisara Bhavana,No.49, Church Street,Bengaluru-560001
Tele : 080-25589112/3, 25581383
Fax:080-25586321
email id: ho@kspcb.gov.in

Consent For Operation (CFO-Air,Water)

Consent No. AW-330681
Valid upto: 30/06/2026

Industry Colour: RED Industry Scale: LARGE

(This document contains 6 pages including annexure & excluding additional conditions)

Combined Consent Order No. AW-330681 **PCB ID:** 27788 **Date:** 01/04/2022

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

Ref: 1. Application filed by the applicant/organization on 13/08/2021

2.Inspection of the Industry/organization/by RO, on 13/08/2021

3.Proceedings of the ECM dated 17/09/2021 ,held on 07/09/2021

Consent is hereby granted to the Occupier 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, (herein referred to as the Air Act) and the Rules and Orders made there under and authorized the Occupier to operate /carryout industry/activity & to make discharge of the effluents & emissions confirming to the stipulated standards from the premises mentioned below and subject to the terms and conditions as detailed in the Schedule Annexed to this order.

Location:

Name of the Industry: ONGC Mangalore Petrochemicals Limited

Address: , MSEZ, Permude Village

Industrial Area: Mangalore Special Economic Zone (MSEZ), Mangaluru,

Taluk: Mangalore, District: Dakshina Kannada

CONDITIONS:

a) Discharge of effluents under the Water Act:

Sr	Water Code	WC(KLD)	WWG(KLD)	Remark
1	Boiler Feed	2421.600	246.240	Shall be discharged to guard pond as per additional conditions A.II.1. Refer Annexure- III
2	Cooling Water	9772.800	373.000	Shall be treated in ETP as per additional conditions A.II.1.Refer Annexure- III
3	Domestic Purpose	33.600	14.400	Shall be taken directly to SBR tank in ETP as per additional conditions A.II.1. Refer Annexure- III
4	Others	1305.600	0.000	As per additional conditions A.II.1. Refer Annexure- III
5	Others	132.000	0.000	As per additional conditions A.II.1. Refer Annexure- III
6	Processing whereby water gets polluted and the pollutants are easily bio-degradable	57.600	52.800	Shall be treated in ETP and then taken to ETP as per additional conditions A.II.1. Refer Annexure- III

b) 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,constituents to be controlled in emissions etc. are detailed in Annexure-II.		

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

Sr	Product Name	Applied Qty/Month	Unit
1	Aromatic Stream	0.0110	MMT
2	Benzene	0.2730	MMT
3	Fuel Gas	0.1690	MMT
4	Hydrogen	0.0260	MMT
5	LPG	0.0170	MMT
6	Paraffinic stream (raffinate)	0.2240	MMT
7	Paraxylene	0.9000	MMT

This consent is valid for the period from 01/07/2021 **to** 30/06/2026

To,

ONGC Mangalore Petrochemicals Limited

Karnataka State Pollution Control Board
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COPY TO:

The Environmental Officer, KSPCB, Regional Office Mangalore for information and necessary action.

2. Master Register.
3. Case file.

Consent Fee paid	: Rs. 2000000

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-I

3(b). The trade effluent shall be handed over to CETP and maintain logbook of effluent generated & sent every day.

4. The applicant shall install flow measuring/recording devices to record the discharge quantity and maintain the record.

5. The applicant 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 applicant 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.

7. The daily quantity of domestic effluent and trade effluent from the industry shall not exceed the limits as indicated in this consent order:

8. The applicant shall discharge the effluents only to the place mentioned in the Consent order and discharge of treated/untreated outside the premises is not permitted.

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.The tolerance limits of the constituents forming the emissions in each of the stacks shall not exceed the limits laid down in Annexure-II.

2. The applicant 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 applicant shall upgrade/modify/replace the control equipment with prior permission of the Board.

C.MONITORING & REPORTING:

1. The applicant shall get the samples of effluents & emissions collected and get them analyzed once a month/either by in house monitoring laboratory or through EP approved laboratories for the parameters as Indicated in Annexure I & II.

2. The applicant shall maintain log books to reflect the working condition of pollution control systems and also self monitoring results and keep it open for inspection.

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

1.The applicant 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. HAZARDOUS AND OTHER WASTES (MANAGEMENT & TRANSBOUDARY MOVEMENT)Rules 2016:

The applicant shall comply with the provisions of the Hazardous and other Wastes (Management & Transboundry Movement) Rules 2016.

G. GENERAL CONDITIONS:

1. The applicant shall not allow the discharge from the other premises to mix with the discharge from his premises.

2. The applicant shall promptly comply with all orders and instructions issued by the Board from time to time or any other officers of the Board duly authorized in this behalf.

3. The applicant shall set-up Environmental Cell comprising of qualified and competent personnel for complying with the conditions specified.

4. The Board reserves the right to review, impose additional conditions, revoke, change or alter terms and conditions of this consent.

5. The applicant 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.

6. The applicant shall provide alternate power supply sufficient to operate all Pollution control equipments.

7. The entire premises shall always be kept clean. The effluent holding area, inspection chambers, outlets, flow measuring points should made easily approachable.

8. The applicant shall display the consent granted in a prominent place for perusal of the inspecting officers of the Board.

9. The applicant his heirs, legal representatives or assignee shall have no claims what so ever to the continuation or renewal of this consent after expiry of the validity of consent.

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10. The applicant shall make an application for consent for subsequent period at least 45 days before expiry of this consent.

11. The applicant shall develop and maintain adequate green belt all around the periphery.

12. The applicant shall provide rain water harvesting system and shall provide proper storm water management system.

13. This consent is issued without prejudice to any Court Cases pending in any Hon'ble Court

14. The applicant shall furnish the Environmental statement for every financial year ending with 31st March in Form-V as per Environment (Protection) Rules, 1986. The statement shall be furnished before the end of September.

15. The applicant shall display flow diagram of the pollution control system near the pollution contol system/s.

NOTE:

The Conditions A(2(a) & 3(b)) mentioned in the schedule are not applicable.

Additional Conditions:

1. The Occupier shall comply with all the additional terms and conditions stipulated in Annexure- I, II and III attached herewith.
2. This consent order contains totally 14 pages including Annexure.
3. The Occupier shall not produce any other products other than consented.
4. The applicant shall comply with emission standards as notified by MOEF & CC in GSR 820 E dated: 09.11.2012, in respect of process emission (Enclosed as Annexure-IV).

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Chim.No.	Chimney attached to	Capacity/ KVA Rating	Minimum chimney height to be provided above ground level (in Mts)	Constituents to be controlled in the emission	Tolerance limits mg/NM3	Fuel	Air pollution Control equipment to be installed,in addition to chimney height as per col.(4)	Date of which air pollution control equipments shall be provided to achieve the stipulated tolerance limits and chimney heights conforming to stipulated heights.
1	D.G. Sets	DG Set-1 No. 1250 KVA	30	PM(mg/NM3),SO2 (PPM),NOx(PPM)	75,850,700	DIE	AEC	Before commissioning.
2	Any Other	Flare Stack Chimney	122	PM(mg/NM3),SO2 (PPM),NOx(PPM)	0,0,0	---	N.A	Before commissioning.
3	Furnace	BTF Col RH FO/Gas	80	PM(mg/NM3),SO2 (PPM),NOx(PPM)	50,850,350	F.G	HLS,LNB,PRT	Before commissioning.
4	Furnace	Xylene Col RH Part B FO/G	98	PM(mg/NM3),SO2 (PPM),NOx(PPM)	50,850,350	F.G	HLS,LNB,PRT	Before commissioning.
5	Furnace	Xylene Col RH Part A FO/G	98	PM(mg/NM3),SO2 (PPM),NOx(PPM)	50,850,350	F.G	HLS,LNB,PRT	Before commissioning.
6	NHT/CCR heater	Platformer Unit CH	94	PM(mg/NM3),SO2 (PPM),NOx(PPM)	5,50,250	F.G	HLS,LNB,PRT	Before commissioning.
7	Furnace	Tatory Charge Heater (CH)	65	PM(mg/NM3),SO2 (PPM),NOx(PPM)	5,50,250	F.G	HLS,LNB,PRT	Before commissioning.
8	Furnace	CPP GTG & HRSG -II LSHS	70	PM(mg/NM3),SO2 (PPM),NOx(PPM)	50,850,350	DIE	HLS,LNB,PRT	Before commissioning.
9	Boiler	CPP-Utility Boiler LSHS	70	PM(mg/NM3),SO2 (PPM),NOx(PPM)	50,850,350	---	HLS,LNB,PRT	Before commissioning.
10	Furnace	CPP GTG & HRSG -I LSHS	70	PM(mg/NM3),SO2 (PPM),NOx(PPM)	50,850,350	DIE	HLS,LNB,PRT	Before commissioning.
11	Furnace	Isomar Charge Heater	65	PM(mg/NM3),SO2 (PPM),NOx(PPM)	5,50,250	F.G	HLS,LNB,PRT	Before commissioning.
12	NHT/CCR heater	NHT Charge Heater	65	PM(mg/NM3),SO2 (PPM),NOx(PPM)	5,50,250	F.G	HLS,LNB,PRT	Before commissioning.

Note:

AEC : Accoustic Enclosures

N.A : Not Applicable

HLS,LNB,PRT : Heater/Furnace-Low Sulphur Fuel

HLS,LNB,PRT : Heater/Furnace-Low Sulphur Fuel

HLS,LNB,PRT : Heater/Furnace-Low Sulphur Fuel

Note:

1. The Noise levels within the premises shall not exceed 75 dB (A) leq during day time and 70 dB(A) leq during night time respectively.

2. The DG set shall be provided with acoustic measures as per SI.No.94 in Schedule-I of Environment (Protection)Rules.

3. There shall be no smell or odour nuisance from the industry.

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LOCATION OF SAMPLING PORTHOLES, PLATFORMS, 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 100 mm dia". Arrangements should be made so that the porthole is closed firmly during the non sampling period

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 of 230 V 15 A with suitable switch control and 3 Pin Point shall be provided at the Porthole location.

4. The ladder shall be provided with adequate safety features so as to approach the monitoring location with ease.

For and on behalf of the
Karnataka State Pollution Control Board

Signature Not Verified
Digitally signed by
Date: 2022.04.01 13:15:54 +05:30

ONGC - PCB ID- 27788

ANNEXURE -I

Effluent discharge standards as per MOEF notification No.G.S.R.820(E), dated 09.11.2012

The concentration of various parameters stipulated below shall be met at the Out let of Effluent Treatment Plant of OMPL and before mixing i.e., before Collection tank of Common Effluent Treatment Planr MSEZ.

Sl. No	Parameters	Maximum permissible concentration (in mg/1 except for pH)
1.	pH Value.	6.0 to 8.5
2.	Biochemical Oxygen Demand, (3 days at 27°C)	30
3.	Chemical Oxygen Demand	125
4.	Phenols *	0.35
5.	Sulphide (as S)	2
6.	Cyanide (as CN)	0.20
7.	Fluride(as F) **	1
8.	Total Suspended Solids	100
9.	Hexavalent Chromium (as Cr"*)	0.1
10.	Total Chromium (as Cr)	2.0

Note:

* The concentration permitted at the outlet of effluent treatment of phenol plant. However, concentration of Phenol at the final disposal point, limit shall be less than 1 mg/l.

** The limit for fluoride shall be confirmed to at the outlet of the chrome removal unit. However, at the disposal point fluoride concentration shall be less than 5 mg/l.

*** The Limits for total and Hexavalent Chromium shall be conformed to at the outlet of the chromate removal unit . This implies that in the final treated effluent, total and hexavalent chromium shall be lower than above.

OPwL

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ANNEXURE-II

Chimney	Chimney Attached to	Fuel type	Chimney height above ground level in meters	Rate of emission Nm3/Hr.	Parameter	Fuel Type	Limiting concentration in mg/Nm^3 for emissions.	Air Pollution Control equipment to be installed, in addition to Chimney height as per Col (3)
1	2	3	4	5	6	7	8	9
1.	NHT charge heater	Gas	65	42,390	Sulphur Dioxide (S02)	Gas	50	Chimney as per col.(3)
						Liquid	850	
					Oxides of Nitrogen (NOx)	Gas	250	
						Liquid	350	
					Particulate Matter (PM)	Gas	5	
						Liquid	50	
					Carbon Monoxide (CO)	Gas	100	
						Liquid	150	
2	Isomar charge heater	Gas	65	61,042	-do -	-do -	-do -	Chimney as per col.(3)
3.	CPP (GTG & HRSG) -1 (Gas Turbine-I x 22 MW)	HSD LSHS	70	4,09,309	-do -	-do -	-do -	Chimney as per col.(3)
4.	CPP (GTG & HRSG) - II (Gas Turbine- I x 22MW)	LSHS	70	4,09,309	-do -	-do -	-do -	Chimney as per Col.(3)
5.	Utility boiler of Captive Power Plant (2 x 140 TPH)	LSHS	70	4,09,309	-do -	-do -	-do -	-do-
6.	Platformer Unit Charge Heaters	Gas	94	1,53,028	-do -	-do -	-do -	-do-
7.	Tatory Charge Heater	Gas	65	61,042	-do -	-do -	-do -	-do-
8.	Xylene Column Reboiler heater (part A)	Fuel Oil/ Gas	98	2,26,080	-do -	-do -	-do -	-do-
9.	Xylene Column Re-boiler Heater (Part B)	Fuel Oil/ Gas	98	61,042	-do -	-do -	- do -	-do-
10.	BTF (Toluene column Re-boiler Heater)	Fuel Oil/ Gas	80	61,042	-do -	-do -	- do -	-do-

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11.	Flare	-	122.4	-	-	-	See note below	-do-
12	1250 KVA DG set	HSD	30		NOx. NMHC" PM"* CO""	Liquid	700 100 75 150	-do -

Note: -
For Chimney 1 to 11

Standard as Notified by MOEF & CC, GOI No.G.S.R.820(E), dated : 09.11.2012

i)All value shall be corrected 3% Oxygen.
(ii) Wet scrubber shall necessarily be operated at the time of decoking

For stack attached to Source 12
Standard as Notified by MOEF & CC, GOI **G.S.R. 489(E), dated 9.7.2002.**

i)NOx (Oxides of Nitrogen as NO2) At 15% O_2 , dry basis, in ppmv
ii) Non-Methane Hydrocarbon (NMHC- as C)- - at 15% O_2 in mg/Nm^3
iii) Particulate Matter (PM) - at 15% O2 , in mg/Nm^3
iv) Carbon Monoxide (CO) - at 15% O2 , in mg/Nm^3
v) Particulate matter, Non-Methane Hydrocarbon and Carbon Monoxide results are to be normalized to 25 0C, 1.01 Kilo Pascal (760 mm of mercury) pressure and zero percent moisture (dry basis).
vi)**The applicant shall raise the chimney height attached 1250 KVA DG set within 3 months.**

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ANNEXURE-III

ADDITIONAL CONDITIONS TO ACCOMPANY COMBINED CONSENT ORDER OF M/S. ONGC MANGALORE PETROCHEMICALS LIMITED (OMPL), PERMUDE VILLAGE, MSEZ PHASE-I , MANGALORE. D.K. DISTRICT (PCB ID : 27788)

1. The consent is issued for the operation of processing unit for production of

a) Aromatic complex to produce 0.9 MMTPA
b) Paraxylene(main product), 0.273MMTPA
c) Benzene (co-product), Aromatic Stream-0.011 MMTPA,
d) LPG-0.017 MMTPA,
e) Hydrogen-0.026 MMTPA
f) Paraffinic Stream(raffinate) -0.224 MMTPA,
g) Fuel Gas -0.169 MMTPA (by -products)
h) Captive power plant of 60 MW.

2.This consent is granted for the period from 01/07/2021 to 30/06/2026.

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

I. Quantity of the water use.

The water consumption shall not exceed 571.8 m^3/hr.

II. Treatment and disposal of trade and sewage effluent:

1. The discharge from the premises of the applicant shall pass through terminal manhole/manholes where from the Board shall be free to collect samples at any time in accordance with the provisions of the Act or Rules made there under.
2. The details of water consumption, effluent generation and method of treatment and mode of disposal shall be as under;

Sl. NO.	Purpose	Water consumption in m3/hr	Waste water Discharge in m3/hr	Mode of disposal
1	Domestic	1.4	0.6	i) Domestic and trade effluent shall be shall be treated in in- house Effluent Treatment Plant so as to meet the standard stipulated in Annexure -I. ii)61. m^3/hr of treated effluent shall be recycled for cooling tower make up, gardening etc. iii)Balance quantity of treated effluent of 21.06m3/hr shall be discharged to guard pond of Common Effluent Treatment Plant of MSEZ for further disposal into sea and shall conform to standards prescribed in Annexure-I.
.2	Industrial purpose			
a.	Process	2.4	2.2	
b.	Boiler feed	100.9	10.26	
c.	Others	54.4	Nil	
d.	Cooling	407.2	69	
3	Gardening	5.5	Nil	
		571.8 M^3/hour	82.06 M^3/hour	

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2. The applicant shall operate the integrated flow measuring/recording devices on the effluent line leading to common receiving sump of MSEZ.

3. There shall be no bypass or discharge of effluents outside the factory premises. All the treatment units shall be impervious.

4. The applicant shall protect all the oil transfer points from rain and oil collected in the catch pit shall be collected without allowing it to reach storm water drain.

5. The applicant shall ensure continuous and effective operation and maintenance of pollution control system. The industry shall continue to maintain alternate power supply to ETP for its continuous operation.

6. All the contaminated rain water during monsoon shall be treated as per the treatment proposals submitted and treated contaminated rain water shall be discharged to MSEZ common effluent sump for further disposal into sea.

A.(1)**SELF MONITORING AND REPORTING:**

1. The applicant shall doe self monitoring or engaged MoEF & CC, Govt. of India approved laboratory for carrying out monitoring of emission and effluent.
2. The applicant shall continue self monitoring system for monitoring the effluents as indicated in Annexure-I.
3. he Applicant shall analyze the treated effluent samples collected from the place specified in as per the frequency and parameters indicated in **Annexure-I once in 30 days.**
4. Report shall be submitted to the Board office and to the Regional Office Mangalore, once in a month along with the water used, the waste water generated, treated, recycled and discharged to sea in a compiled statement, with a graphical and statistical analysis.
5. The industry shall operate continuously on-line monitoring system. The results shall be displayed on real time basis to CPCB and SPCB servers.
6. Industry shall carry out Ground Water Quality Monitoring at 4 locations for all the relevant parameters to drinking water standards and submit the report once in a month.
7. The applicant shall monitor the total HC and Benzene in the premises regularly and submit report.

B. EMISSIONS

I. Emissions

1. The hourly rate of emissions discharged and the tolerance limits of the constituents forming the emissions in each of the chimneys/stacks shall not exceed the limits laid down in **Annexure-II.**
2. The applicant shall operate the Air pollution control equipment as specified in the **Annexure-II** continuously so as to ensure that the emission does not exceed the limits specified. The operation of the control equipment shall be synchronized with the operation of the emission source.
3. The Applicant shall maintain access platforms for carrying out stack sampling with electrical outlet points for sampling the emissions from port holes in all the stacks, as per the CPCB guidelines.
4. The applicant shall use low NOx burner.

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5. The industry shall maintain continuous online monitoring system for S02, NOx, CO and PM emission for major stacks with proper calibration facilities.

6. For the purpose of protecting environment industry shall consider

   > Heaters with LOW NO_x Burners
   > Maximum amount of heat recovery from flue gas
   > Heaters stacks fitted with Online analyzers for measuring the following:
      - Carbon Monoxide
      - Sulphur Dioxide
      - Nitrogen Oxides
      - Suspended Particulate matters
   > Vapor recovery unit installed for reducing Hydrocarbon emission

7. The applicant shall install Online detectors based on Dispersion Model Analysis by Bell Energy India for the following:

Benzene Detectors	27
H2S Detector	21
Hydrocarbon Detectors	193
Hydrogen Detectors	68
Fire Detectors (In case of Fire)	26
Plant MCP's	124

8. All efforts shall be made to control fugitive emissions.

9. Flare losses shall be minimized.

10. All the pumps and other equipment, where there is a likelihood of HC leakages, shall be provided with appropriate indicators and detectors. Provision for immediate isolation of such equipment, in case of a leakage shall also be made. The company shall adopt Leak Detection and Repair (LDAR) programme for quantification and control of fugitive emissions.

11. The industry shall take necessary steps to mitigate smell nuisance and reduce the emissions of Volatile Organic Carbon and comply with the standards stipulated by MOEF **prescribed under as per MOEF Notification No.G.S.R. 820(E), dated 09.11.2012.**

B.(I). SELF MONITORING AND REPORTING

1. The applicant shall monitor the emissions through online emission monitoring system, for major stacks. Manual monitoring for all the emission parameters in such furnaces or boilers shall be carried out once in two months.
2. The applicant shall keep daily record of the readings of SOx, NOx, CO and PM from the continuous recorder, maximum, minimum average daily readings shall be computed once in a month and report along with the manual monitoring results and the data shall be statistically analysed, represented in graphical format and reported to the Board office and to the Regional Office once in four months for major stacks.
3. The applicant shall monitor the ambient air quality and submit the report to the Regional Office of the Board. The AAQM shall be carried out in all the five stations as per the requirement under the revised National Ambient Air Quality Monitoring Standards issued by MOEF (Notification GSR 826 dated 16.11.2009.

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4. AAQM stations shall be fixed in consultation with RSEO/RO based on the occurrence of maximum ground level concentration and downwind direction of wind and one on the upwind directions to cover all the seasons.

5. The industry shall furnish statistical analysis for annual average of pollutants at all the locations as per Ambient Air Quality standards Notification once in a year.

6. The applicant shall follow the guidelines and requirements for fugitive emissions, Volatile liquids, and emission control for road tank, standards for equipment leaks and the monitoring as prescribed in **MOEF Notification No. GSR 820, dated 09.11.2012.**

7. The industry shall once in a year for all the seasons prepare wind rose diagram and furnish the same to the Board Office and Regional Office, Mangalore.

8. The total emission of SO_2 from the plant should be furnished to the Board once in four months.

9. Quarterly monitoring of fugitive emissions shall be carried out by Fugitive Emission Detectors (GMI Leak Surveyor). Guidelines of CPCB will be followed for monitoring fugitive emissions; all unsaturated hydrocarbons shall be routed to the flare system. The flare system shall be designed for smokeless burning. Flare Gas Recovery System shall be installed for reduction of Hydrocarbon loss and emission of VOC's, NOx, N2O, SOx & CO2 to the environment.

10. The applicant shall maintain Continuous Online Emission and Effluent Monitoring Systems viz Digital flow meter, pH BOD, COD, TSS in case of effluents and online emission monitoring systems installed for monitoring PM. S02, NOX & CO ' in the stack attached to process stacks in good working conditions and connect the monitors to CPCB /KSPCB server for uninterrupted online transmission of data.

11. The applicant shall install continuous Ambient Air Quality Monitoring Station within 3 months and shall provide the on-line data to KSPCB/CPCB server.

C. STORM WATER MANAGEMENT

All the contaminated rain water during monsoon shall be treated and discharged to sea through submarine pipeline.

D. HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY MOVEMENT) RULES 2016:

1. The applicant shall comply with the conditions issued under Hazardous & other Waste (Management and Transboundary Movement) Rules, 2016 to handle store and dispose Hazardous waste.
2. The applicant shall store the hazardous waste in scientifically designed dedicated storage area with proper ventilation for storing various categories of hazardous wastes including sludge generated from Effluent Treatment plant.
3. Industry shall store empty chemical containers only inside the shed.
4. The industry shall handover incinerable hazardous waste directly to authorised Cement unit for co-processing and shall submit copy of MOU while applying of authorisation.
5. The industry shall decontaminate all the chemicals drums and plastic liners and chemical glass bottle within the industry premises before handing over to authorized recyclers. The industry shall establish dedicated washing bay for this purpose and shall comply with Standards Operating Procedure laid down by CPCB for this purpose.

SENIOR ENVIRONMENTAL OFFICER
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6. The industry shall maintain log book for quantity of the sludge generated and its accumulation.
7. Slop oil handling and sludge dewatering system shall consist of the following units.

i. Skimmed oil collection vessel
ii. Recovered oil storage vessel
iii. Aerobic digester sump
iv. Bio sludge centrifuge
v. Oily and chemical sludge slump
vi. Sludge thickener
vii. Thickened oily & chemical sludge sump
viii. Oily and chemical sludge centrifuge
ix. Bio Reactor

8. The final bio-remediation is non-hazardous and shall be disposed to secure designated landfill.

E. GENERAL

1. Applicant is advised to maintain an Environmental Management System in conformity with ISO 14001:2004 & OSHAS standards.
2. The applicant shall comply with the action points under CREP 2003.
3. The Applicant shall display suitable caution boards at the places to be indicated by the Board or any other Officers of the Board for indicating that the Watercourse into which the effluents are discharged is not fit for domestic usage/bathing/agriculture.
4. The applicant shall follow the EMP as indicated in the EIA report of the NEERI.
5. The industry shall construct dykes to all storage tanks. The capacity of dykes shall be sufficient to contain the quantity of raw material or product in the storage tank in case of accidental spills.
6. The applicant shall, upon the reduction, loss or failure of one or more of the primary sources of electric power to any facilities utilized by the Applicant to maintain compliance with the Terms and conditions of this consent, the applicant shall halt reduce or otherwise control production and/or all discharges in order to maintain compliance with the Terms and Conditions of this consent order.
7. The applicant shall submit copy of Public Liability Insurance obtained under PLI Act, 1991 along with copy of Environment Relief Fund scheme under the PLI Act within 15 days.
8. The applicant is liable to pay balance consent fee ,if any immediately as per the revised fee structure.
9. The application shall obtain prior permission of the State Ground Water Board of abstraction of ground water and shall submit copy of such permission issued within 3 months if ground water is proposed to be drawn for industrial/domestic use.
10. Industry shall comply with all the consent conditions and furnish report within 30 days to the Regional Office.

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ANNEXURE - IV

ONGC- PCBID-27788

सीमेंस अक्षर ईजी- ईथाइलीन ग्लाइकोल, पीजी-प्रोपिलीन ग्लाइकोल, ईओ-ईथाइलीन आक्साइड, वीसीएम-विनायल क्लोराइड मोनोमर, ईडीसी-ईथाइलीन डाइ क्लोरीन, एसीएन-एक्राइलोनाइट्राइल, पीओ, प्रोपीलीन आक्साइड, एचसीएन-हाइड्रोजन साइनाइड "।

[फा. सं. क्यू- 15017/12/2008-सी.पी.डब्ल्यू.]

अजय त्यागी, संयुक्त सचिव

टिप्पण.—मूल अधिसूचना भारत के राजपत्र में का.आ. 844(अ), तारीख 19 नवम्बर, 1986 के द्वारा प्रकाशित की गई थी और इसके पश्चात सं. का.आ.433 (अ) तारीख 18 अप्रैल 1987; और अभी हाल में सा.का.नि 512 (अ), तारीख 9 जुलाई 2009; सा.का.नि 543 (अ), तारीख 22 जुलाई 2009; सा.का.नि 595 (अ) तारीख 21 अगस्त 2009; सा.का.नि 794 (अ) तारीख 4 नवम्बर 2009; सा.का.नि 826 (अ) तारीख 16 नवम्बर 2009; सा.का.नि 01 (अ) तारीख 1 जनवरी 2010; सा.का.नि 61 (अ) तारीख 5 फरवरी 2010; सा.का.नि 485 (अ) तारीख 9 जून 2010; सा.का.नि 608 (अ) तारीख 21 जुलाई 2010; सा.का.नि 739 (अ) तारीख 9 सितम्बर 2010; सा.का.नि 809 (अ) तारीख 4 अक्टूबर 2010; सा.का.नि 215 (अ) तारीख 15 मार्च 2011; सा.का.नि 221 (अ) तारीख 18 मार्च 2011; सा.का.नि 354 (अ) तारीख 2 मई 2011; सा.का.नि 424 (अ) तारीख 1 जून 2011; सा.का.नि 446 (अ) तारीख 13 जून 2011; सा.का.नि. 152 (अ) तारीख 16 मार्च 2012; सा.का.नि. 266 (अ) तारीख 30 मार्च 2012 और सा.का.नि. 277 (अ) तारीख 31 मार्च 2012 के द्वारा उसमें संशोधन किये गये।

MINISTRY OF ENVIRONMENT AND FORESTS

NOTIFICATION

New Delhi, the 9th November, 2012

G.S.R. 820(E).— In exercise of the powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:-

1. (1) These rules may be called the Environment (Protection) Fourth Amendment Rules, 2012.
   (2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Environment (Protection) Rules, 1986,-

   (a) in Schedule I, in the entries against serial number 38 relating to 'Petrochemical (Basic and Intermediates),-

   (i) in the entries under column 2, for the word "EFFLUENT", the letter and word "A. Effluent" shall be substituted;
   (ii) at the end, the following entries shall be inserted, namely:-

S. No.	Industry	Parameter	Standards		
(1)	(2)	(3)	(4)		
B. Emission from Chimney / Stack					
			Limiting concentration in mg/Nm^3, unless stated		
	"(Furnace, Boiler, Heater, Vaporiser)		Fuel Type	Existing Plants	New plants / Expansion of Existing Plant
		Sulphur Dioxide (SO_2)	Gas	50	50
			Liquid	1700	850
		Oxides of Nitrogen (NOx)	Gas	350	250
			Liquid	450	350
		Particulate Matter (PM)	Gas	10	05
			Liquid	100	50

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(1)	(2)	(3)	(4)		
		Carbon Monoxide (CO)	Gas	150	100
			Liquid	200	150
		Note,- (i) All values shall be corrected to 3% Oxygen. (ii) Wet scrubber shall necessarily be operated at the time of decoking. (iii) Norms for CO shall be monitored only in case of Phthalic Anhydride (PA), Maleic Anhydride (MA), Terephthalic Acid (PTA) and Dimethyl Terephalate (DMT) Plants. Norms for CO emissions shall not be applicable to PA/ MA manufacturing standalone existing plants with an installed capacity of less than 30,000 metric tonnes per annum, provided that such units have a chimney/stack of minimum 30 metres height for emitting Carbon Monoxide.		

Process Emission (Specific Pollutant)

	Source	Limiting concentration in mg/Nm^3	
		Exiting Plants	New Plants
Chlorine	EDC/VCM Plant and Incinerator	10	10
Hydrochloric Acid Mist	EDC / VCM Plant and Incinerator	30	30
Ammonia	Wastewater stripper, acrylonitrile plant, caprolactum plant	75	75
Hydrogen Sulphide	Naphtha pre-treatment plant, olefin plant	05	05
Phosgene	(TDI) and (MDI) plant	01	01
Hydrogen Cyanide(HCN)	Acrylonitrile plant	10	10
VOC (HAPs)- TDI and MDI	TDI, Methylenediphenyl Di-isocyante (MDI) Plants	0.1	0.1
VOC (HAPs), Benzene and Butadiene	Benzene, Butadiene Plants	5.0	5.0
VOC (HAPs), EO, VCM, EDC, ACN and PO	EO, VCM, EDC, ACN, PO Plants	20.0	10.0
Organic Particulate	PA, MA and TDI Plants	50	25

Process Emission (General Pollutant)

	Source	Limiting concentration in mg/Nm^3
VOC (MA, PA and Phenol)	MA, PA, Phenol Plants	20
VOC (EB, Styrene, Toluene, Xylene, Aromatics, EG and PG)	Ethyl benzene (EB), Styrene, Toluene, Xylene, Aromatics, EG, PG Plants	100
VOC (paraffin, Acetone and Olefins)	Non-methane, HC (paraffin), Acetone, Olefins Plants	150

NOTE.— HAP – Hazardous Air Pollutants are those pollutants that cause cancer or other serious health effects, or adverse environmental and ecological effects.

C. Standards for Fugitive Emission

Storage of Volatile Liquids: General Petrochemical / Petroleum Products.

(1) Storage tanks with capacity between 4 to 75m^3 and total vapour pressure (TVP) of more

(2) Storage tanks with capacity between 75 to 500 m^3 and total vapour pressure (TVP) of 10 to 76 kpa should have internal floating roof or external floating roof or fixed roof with vapour control or vapour balancing system.

(3) Storage tanks with the capacity of more than 500 m^3 and total vapour pressure (TVP) of 10 to 76 kpa should have internal floating roof or external floating roof or fixed roof with vapour control system.

(4) The tanks with the capacity of more than 75 m^3 and total vapour pressure (TVP) of more than 76 kpa should have fixed roof with vapour control system.

(5) Requirement for seals in Floating Roof Tanks-

(i) (a) Internal Floating Roof Tank (IFRT) and External Floating Roof Tank (EFRT) shall be provided double seals with minimum vapour recovery of 96%.

(b) Primary seal shall be liquid or shoe mounted for EFRT and vapour mounted for IFRT. Maximum seal gap width will be 4 cm and maximum gap area will be 200 cm^2/m of tank diameter.

(c) Secondary seal shall be rim mounted. Maximum seal gap width will be 1.3 cm and maximum gap area will be 20 cm^2 /m of tank diameter.

(d) Material of seal and construction shall ensure high performance and durability.

(ii) Fixed roof tanks shall have vapour control efficiency of 95% and vapour balancing efficiency of 90%.

(iii) (a) inspection and maintenance of storage tanks shall be carried out under strict control;
(b) for the inspection, API RP 575 may be adopted;
(c) In-service inspection with regard seal gap should be carried out once in every six months and repair to be implemented in short time; and
(d) the possibility of on-stream repair of both shall be examined.

(iv) Storage tanks shall be painted with white colour shade, except for derogation of visually sensitive area.

D. Storage of Benzene, VCM and ACN

(i) FRT with vapour for incineration with 99.9% of removal efficiency for volatile organic compounds (VOC) shall be provided; or

(ii) IFRT/EFRT with double seals, emission-reducing roof fitting and fitted with fixed roof with vapour removal efficiency of at least 99% shall be provided; or

(iii) Internal floating roof and nitrogen blanketing in between fixed and floating roofs shall be provided.

(Emission control for Road tank, truck / Rail tank, wagon loading)			
	Loading of Volatile Products	Naphtha: (i) VOC reduction, % or (ii) Emission, gm/m^3	(i) ≥99.5 or (ii) ≤5
		Benzene and Butadiene: (i) VOC reduction, % or (ii) Emission, mg/m^3	(i) ≥99.99 or (ii) ≤ 20
		Toluene/Xylene: (i) VOC reduction, % or (ii) Emission, mg/m^3	(i) ≥99.98 or (ii) ≤ 150.".

(b) in Schedule VI, in Part D relating to General Standards, in the entries under item III relating to Load/Mass based Standards, after serial number 8 relating to 'Glass Industry' and entries relating thereto, the following serial number and entries shall be inserted, namely :-

S. No.	Industry	Parameter	Standard	
"9	Petrochemicals (Basic and Intermediates)		Source	Quantum limit in gm/hour for New/ Expansion Plants (gm/hr)
		Organic Particulate	Phthalic anhydride (PA), Maleic anhydride (MA), Toluene Di-isocyanate (TDI) plants – process emission	100
		VOC-HAPs (TDI + MDI)	(Toluene Di-isocyate) TDI, Methylenediphenyl Di-isocyante (MDI) Plants-Process emission	0.5
		VOC-HAPs (Benzene + Butadiene)	Benzene, Butadiene Plants – Process emission	25.0
		VOC-HAPs (EO, VCM, EDC, ACN + PO)	EO, VCM, EDC, ACN, PO Plants – Process emission	50.0

Abbreviations: EG – Ethylene Glycol, PG – Propylene Glycol, EO – Ethylene Oxide, VCM – Vinyl Chloride Monomer, EDC – Ethylene Di Chloride, ACN – Acrylonitrile, PO – Propylene Oxide, HCN – Hydrogen Cyanide.".

[F. No. Q-15017/12/2008-CPW]

AJAY TYAGI, Jt. Secy.

Note.— The principal rules were published in the Gazette of India vide number S.O. 844 (E), 19th November, 1986 and subsequently amended vide notifications numbers S.O. 433 (E), dated 18th April 1987; G.S.R. 97 (E), dated the 18th February, 2009; G.S.R. 149 (E), dated the 4th March , 2009; G.S.R. 512 (E), dated the 9th July, 2009;G.S.R. 543 (E), dated the 22nd July, 2009; G.S.R. 595 (E), dated the 21st August, 2009; G.S.R. 794 (E), dated the 4th November, 2009; G.S.R. 826 (E), dated the 16th November, 2009; G.S.R. 01 (E), dated the 1st January, 2010; G.S.R. 61 (E), dated the 5th February, 2010; G.S.R. 485 (E), dated the 9th June, 2010; G.S.R. 608 (E) ,dated the 21st July, 2010; G.S.R. 739 (E), dated the 9th September, 2010; G.S.R. 809(E), dated, the 4th October, 2010, G.S.R. 215 (E), dated the 15th March, 2011; G.S.R. 221(E), dated the 18th March, 2011; G.S.R. 354 (E), dated the 2nd May, 2011; G.S.R. 424 (E), dated the 1st June, 2011; G.S.R. 446 (E), dated the 13th June, 2011; G.S.R. 152 (E), dated the 16th March, 2012; G.S.R. 266(E), dated the 30th March, 2012; and G.S.R. 277 (E), dated the 31st March, 2012.

Printed by the Manager, Government of India Press, Ring Road, Mayapuri, New Delhi-110064
and Published by the Controller of Publications, Delhi-110054