

# MAHARASHTRA POLLUTION CONTROL BOARD

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Mumbai - 400 022

Red/L.S.I

Date: 15/02/2013

Consent No: BO/JD (PAMS)/EIC No- RD-2507-13/R/ CAC- 1402

Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization / Renewal of Authorization under Rule 5 of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules 2008

[To be referred as Water Act, Air Act and HW (M&H) Rules respectively].

CONSENT is hereby granted to

Reliance Industries Limited (NMD)  
Nagothane Manufacturing Divn, Nagothane,  
Tal: Roha, Raigad, Maharashtra-402125  
India

located in the area declared under the provisions of the Water Act, Air act and Authorization under the provisions of HW(M&H) Rules and amendments thereto subject to the provisions of the Act and the Rules and the Orders that may be made further and subject to the following terms and conditions:

1. The Consent to Operate is granted for a period up to: 31/12/2014.
2. The Consent is valid for the manufacture of -

<u>Sr.No</u>	<u>PRODUCTS</u>	<u>PRODUCTION (MTA)</u>
1	Ethylene	4,00,000
2	Propylene	90,000
3	Ethylene Glycol	50,000
4	Ethylene Oxide	5,000
5	LDPE	80,000
6	LLDPE/HDPE [2 TRAINS]	2,67,800
7	Polypropylene	60,000
8	Butene-1	15,000
9	Acetylene	3,000
10	R-PET (Recycle Polyethylene Terphthalate)	16000
11	(RPDC 10) Reliance Paraffin Dehydrogenation Catalyst - 10	60
12	Alumina balls & powder	4.8
13	Utilities (Major)	
	Power	85 MW
	DM Water	340 M <sup>3</sup> /hr.
	Nitrogen	10600 Nm <sup>3</sup> /hr.

**List of By-Products:-**

Sr.No	BY-PRODUCTS	PRODUCTION (MTA)
1	Acetylene Black	2,400
2	Mixed Oil (Pyrolysis Gasoline- RARFS, Pyrolysis Fuel Oil)	23,000
3	C <sub>4</sub> -Cut	24,000
4	Polyethylene Glycol	4,409
5	Tar (GC)	30
6	Prepoly Powder(LLDPE)	30

**3. CONDITIONS UNDER WATER ACT:**

(i) The daily quantity of trade effluent from the factory shall not exceed **14400.00M3**.

(ii) The daily quantity of sewage effluent from the factory shall not exceed **7640.00M3**.

**(iii) Trade Effluent :**

Treatment: The applicant shall provide comprehensive treatment system consisting of primary / secondary and/or tertiary treatment as is warranted with reference to influent quality and operate and maintain the same continuously so as to achieve the quality of the treated effluent to the following standards:

1)	pH	Between	5.5 to 9.0
2)	Suspended Solids	Not to exceed	100 mg/l.
3)	BOD 3days 27 Deg. C.	Not to exceed	100 mg/l.
4)	COD	Not to exceed	250 mg/l.
5)	Oil & Grease	Not to exceed	10 mg/l.
6)	Total dissolved Solids	Not to exceed	2100 mg/l.
7)	Sulphates	Not to exceed	1000 mg/l.
8)	Chlorides	Not to exceed	600 mg/l.

(iv) **Trade Effluent Disposal:** The treated effluent shall be reused /recirculated to maximum extent; excess if any shall be disposed into Dharmtar Creek at specific point as suggested by NIO.

(v) **Sewage Effluent Treatment:** The applicant shall provide comprehensive treatment system as is warranted with reference to influent quality and operate and maintain the same continuously so as to achieve the quality of treated effluent to the following standards.

(1)	Suspended Solids.	Not to exceed	100 mg/l.
(2)	BOD 3 days 27o C.	Not to exceed	100 mg/l.

(vi) **Sewage Effluent Disposal:** The treated domestic effluent shall be soaked in a soak pit, which shall be got cleaned periodically. Overflow, if any, shall be used on land for gardening / plantation only.

(vii) Non-Hazardous Solid Wastes:

Sr. No.	Type Of Waste	Quantity	UOM	Disposal
1	Decoked Carbon	20.00	MT/A	Sale/Landfill
2	Spent Resin	41.00	KLtr./ Two year	Sale/Landfill
3	Activated Carbon & Charcoal	30.00	MT/ Two years	Sale
4	Discarded Alumina (Selexorb Adsorbent etc)	90.00	MT/( 3-5 years)	Sale/Landfill
5	Ceramic balls	10.00	MT/( 3-5 years)	Sale/Landfill
6	Ferrous scrap, Aluminium, Plastic scrap, wood scrap	5.00	MT/A	Sale
7	Misclaneous waste	5.00	MT/A	Landfill

(viii) Other Conditions: Industry should monitor effluent quality regularly.

4. The applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Cess Act, 1977 (to be referred as Cess Act) and amendment Rules, 2003 there under

The daily water consumption for the following categories is as under:

- (i) Domestic purpose ... 9600.00 CMD
- (ii) Water gets Polluted & Pollutants are Biodegradable ... 1610.00 CMD
- (iii) Water gets Polluted, Pollutants are not Biodegradable & Toxic ... 0.00 CMD
- (iv) Industrial Cooling, spraying in mine pits or boiler feed ... 32690.0 CMD

The applicant shall regularly submit to the Board the returns of water consumption in the prescribed form and pay the Cess as specified under Section 3 of the said Act.

5. CONDITIONS UNDER AIR ACT:

- (i) The applicant shall install a comprehensive control system consisting of control equipments as is warranted with reference to generation of emission and operate and maintain the same continuously so as to achieve the level of pollutants to the following standards:

a. Control Equipment:

Industry shall provide Scrubbers, dust collector of sufficient capacity to control the emissions.

Standards for Emissions of Air Pollutants:

- (i) SPM/TPM Not to exceed 150.0 mg/Nm<sup>3</sup>.
- (ii) SO<sub>2</sub> Not to exceed 16.42 T/day.
- (iii) NO<sub>x</sub> Not to exceed 50.0 ppm.
- (iv) Acid Mist Not to exceed 35.0 mg/Nm<sup>3</sup>

(ii) The applicant shall observe the following fuel pattern:-

Sr. No.	Type Of Fuel	Quantity	UOM
1	Lean gas	408.90	MT /day
2	LSHS	335.00	MT /day
3	HSD	331.44	MT /day
4	Mixed Oil	120	MT /day
5	OFF Gas	18	MT /day

(iii) The applicant shall erect the chimney(s) of the following specifications:-

Sr. No.	Chimney Attached To	Height in Mtrs.
1	CPP Black	100.00
2	GC Furnace	37.50
3	Flare (1+1)	100.00 & 20
4	44 m EO/EG Vent	44.00
5	24 PP Plant Vent	24.00
6	35 m LLDPE Vent	35.00
7	30 m LLDPE Vent	30.00
8	Air Heater-I, II, III	30.00

- (iv) The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate Identification.
- (v) The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality Standard in respect of noise to less than 75 dB(A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
- (vi) **Other Conditions:**
- 1) The industry should not cause any nuisance in surrounding area.
  - 2) The industry should monitor stack emissions and ambient air quality regularly.

**Conditions for D.G. Set**

- a. Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
- b. Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
- c. The industry shall take adequate measures for control of noise levels from its own sources within the premises in respect of noise to less than 75 dB(A) during day time and 70 dB(A) during the night time. Day time is reckoned between 6 a.m. to 10 p.m and night time is reckoned between 10 p.m to 6 a.m.

- d. Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
- e. Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
- f. A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
- g. D.G. Set shall be operated only in case of power failure
- h. The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set

**6. CONDITIONS UNDER HAZARDOUS WASTE (MANAGEMENT, HANDLING & TRANSBOUNDARY MOVEMENT) RULES, 2008:**

- (i) The Industry shall handle hazardous wastes as specified below:

Category of Waste		Quantity	Treatment & Disposal
Schedule -I	Description		
1.3	Oily sludge (Gross Block) - major chunk is generated in shut downs only.	300 MT/A	Sent to (valid) registered recyclers / re-processors / co processor from MoEF/CPCB and having valid consent from SPCB
1.9	Biological sludge	900 MT/A	Used as manure
5.1	Used oils {Vaseline, Lubricating oil etc.(Gross block)}	100 MT/A	Sent to (valid) registered recyclers / reprocessors from MoEF/CPCB and having valid consent from SPCB
5.2	Waste Oil	150 MT/A	Sent to (valid) registered recyclers / reprocessors from MoEF/CPCB and having valid consent from SPCB
20.2	Spent solvent	800 MT/A	Sent to (valid) registered recyclers / reprocessors / Use as fuel in CPP ( in-house use)
33.3	Discarded containers, liners used for storing hazardous chemicals	10,000 nos./A	Sent to (valid) registered recyclers / reprocessors

**Hazardous waste**

**Incidental (during major, shutdowns, frequency more than a year)**

Category of Waste		Description	Quantity	Treatment and Disposal
Schedule -I	Schedule -II			
1.4	-	Organic residues	40 MT	Incineration /CHWSTDF
1.7	-	Spent Catalyst	40 MT	Sent to (valid) registered recyclers / reprocessors from MoEF/CPCB and having valid consent from SPCB and/or to be returned back to manufacturer / suppliers

1.7	-	Molecular sieves	120 MT	Sent to (valid) registered recyclers / reprocessors from MoEF/CPCB and having valid consent from SPCB and/or to be returned back to manufacturer / suppliers
Category-9 & 10 as per Schedule-IV		Copper cables (jelly filled)	20 MT	Sent to (valid) registered recyclers / reprocessors from MoEF/CPCB and having valid consent from SPCB
-	B-4	Lead Acid batteries	1000 Nos.	Sent to (valid) registered recyclers / reprocessors from MoEF/CPCB and having valid consent from SPCB and/or to be returned back to manufacturer / suppliers
-	A4 / B6	Ni-Cd batteries	1500 Nos.	Sent to (valid) registered recyclers / reprocessors from MoEF/CPCB and having valid consent from SPCB and/or to be returned back to manufacturer / suppliers
5.2	-	Oily cotton rags	5 MT	Sent to (valid) registered recyclers / reprocessors from MoEF/CPCB and having valid consent from SPCB Or MWML
	-	E-waste	15MT	Sent to (valid) registered recyclers / reprocessors from MoEF/CPCB and having valid consent from SPCB

1. The authorization is hereby granted to operate a facility for collection, storage, transport & disposal of hazardous waste.
2. The industry should comply with the Hazardous Waste (M&H) Rules, 2003.
  - a. Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.
  - b. The unit has to display and maintain the data online outside the factory main gate in Marathi & English both on a 6'x4' display board in the manner and the report of the compliance along with photograph shall be submitted to this office & concerned Regional Office/ Sub Regional Office.
  - c. It shall be ensured that the Hazardous waste is handled, managed & disposed of strictly in accordance with the Hazardous Waste (Management & Handling) Rules, 1989 as amended on 2003 and shown & submitted to the Board as & when asked for.

**7. Industry shall comply with following additional conditions:**

- i. The applicant shall maintain good housekeeping and take adequate measures for control of pollution from all sources so as not to cause nuisance to surrounding area / inhabitants.
- ii. The applicant shall bring minimum 33% of the available open land under green coverage/ tree plantation.
- iii. Solid waste – The non hazardous solid waste arising in the factory premises, sweepings, etc., be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal to dumping ground.
- iv. The applicant shall provide for an alternate electric power source sufficient to operate all pollution control facilities installed by he applicant to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms & conditions of this consent regarding pollution levels.
- v. The applicant shall not change or alter quantity, quality, the rate of discharge, temperature or the mode of the effluent / emissions or hazardous wastes or control equipments provided for without previous written permission of the Board.
- vi. The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous wastes to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
- vii. The applicant shall make an application for renewal of the consent at least 60 days before the date of the expiry of the consent.
- viii. The firm shall submit to this office, the 30<sup>th</sup> day of September every year, the Environmental Statement Report for the financial year ending 31<sup>st</sup> March in the prescribed Form-V as pre the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992.
- ix. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
- x. The applicant shall install a separate electric meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.
- xi. Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes / sewers down- stream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
- xii. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.

8. The consent is issued as per the decision taken in the meeting of the Consent Appraisal Committee held on 31/01/2013.
9. The industry shall install CAAQMS by 15/04/2013, till then the Ambient Air Monitoring shall be carried out manually.
10. The Capital investment of the industry is Rs. 967.50 Cr.

(Rajeev Kumar Mital IAS)  
Member Secretary

To,  
Reliance Industries Limited (NMD)  
Nagothane Manufacturing Divn, Nagothane,  
Tal: Roha, Raigad, Maharashtra-402125  
India.

Copy for information to:-  
Regional Officer MPCB Raigad.  
Sub-Regional Officer MPCB Raigad-II  
Chief Account Officer MPCB Mumbai

Received Consent fee of -

Sr. No.	Amount(Rs.)	DD. No.	Date	Drawn On
1	387000	288506	30/10/2012	SBI