Reliance
Industries Limited
CIN : L17110MH1973PLC019786

By E-Mail Submission

RIL-NMD/HSE/ENV/2023-01 **1st Dec 2023**

To,

Additional Principal Chief Conservator of Forest
Ministry of Environment, Forests & Climate change
Regional Office, Western Central Zone,
New Secretariat Building, Civil Lanes,
NAGPUR-440001, Maharashtra.

Subject: Half Yearly EC Compliance report for the period October 2022 to March 2023

Ref: 1) EC granted by MoEF vide file no. J-11011/12/89- IA.II dt: 30.11.1989 & amended on 27.07.1990
2) EC granted for Expansion by SEIAA, Maharashtra vide File no. SEAC-2013/CR- /TC-1 dt 05.09.2014.
3) EC granted for Expansion by MoEF&CC vide File no. J-11011/177/2015-IA-II (I) dt. 02.05.2018.

Dear Sir,

Please find enclosed Half Yearly EC Compliance Report for the period **April 2023 to Sept 2023** for the Environmental clearances issued on 1989, 2014 & 2018 referred above. The soft copy of this compliance report will be submitted to your official mail ID.

- Ann-A : Half yearly Compliance report for EC issued on 1989 by MoEF
- Ann-B : Half yearly Compliance report for EC issued on 2014 by SEIAA, Maharashtra
- Ann-C : Half yearly Compliance report for EC issued on 2018 by MoEF&CC

This is for your information and records please.

Thanking you.

Yours faithfully,
RELIANCE INDUSTRIES LTD -NAGOTHANE MANUFACTURING DIVISION

SACHIN BHAGWAT
VICE PRESIDENT-HSEF

Encl: *As above.*

Copy to : 1) Sub-Regional Officer-II, MPCB , Raigad Dist, CBD Belapur, Navimumbai
2) CPCB – Western Regional Office, Vadodara, Gujarat

Compliance Status of EC granted by MoEF, Govt. of India vide letter no . J-11011/12/89- IA.II/ dtd. 30th Nov. 1989 & amended on 27.07.1990
(for the period April 2023 to Sept 2023)

Status of Project: Construction completed and production started in 1990s

S.No.	EC condition	Compliance Status
(i)	Supply of feedstock from Uran Terminal or any other source through the existing pipeline, is agreed to.	**Complied.**
(ii)	Strict adherence to the stipulations made by State Pollution Control Board and the Government of Maharashtra.	**Complied.** All the conditions given in latest Consent received from Maharashtra Pollution Control Board (MPCB) & Government of Maharashtra are complied.
(iii)	A revised Environmental impact Assessment Report and Environmental Management plan to be submitted for review to this Ministry within a period of six months from the date of issue of clearance letter. The revised EIA Report to cover identification, prediction and evaluation steps in all components of environment, viz. air, water, land, noise, biological and socio-economic. The socio-economic study should also cover the occupational health aspects.	**Complied.** M/s Engineers India Limited (EIL) had prepared the revised EIA report in 1990 and the same was submitted to Ministry on 26.06.1990.
(iv)	Explore the possibility of product movement by pipeline and minimizing the road transport to the fullest extent possible.	Most of the products manufactured at NMD are solid, thus transported by road. There are small scale consumers for liquid products such as EO/EG and hence it is also transported by road.
(v)	Gaseous emissions of Sulphur dioxide, oxides of nitrogen, etc. should not at any time exceed the maximum permissible prescribed level by the Central/ State Pollution Control Board. In the event of any failure or non-performance of any pollution control system adopted, the unit should be put out of operation immediately and should not be restarted until the control system is suitably rectified to achieve the desired efficiency.	**Complied.** Gaseous emissions have not exceeded permissible prescribed limits by CPCB/ MPCB. • Stack monitoring is carried out through MoEF&CC approved 3rd party lab for all the stacks at site regularly. Also, Continuous Emission Monitoring systems (CEMS) is installed and connected to CPCB & MPCB. • The analytical results of Stack Emission/ ambient air quality monitoring are submitted as ***Annexure*** **- 1, & 2**
(vi)	The possibility of recycling liquid effluent to the maximum extent possible must be explored either for afforestation or for plant process. The treated effluent must conform to MINAS both in quality and quantity before its discharge through closed pipeline to a submerged discharging point in Amba creek.	**Complied.** • The treated effluent is being reused for Horticulture activities & Fire water make up and excess if any, is disposed off in Dharamtar Creek at a point specified by NIO. • The treated effluent analysis is being carried out internally on shift basis & on a monthly basis through MoEF&CC approved 3rd party lab. • The analytical results of effluent were found within stipulated limits and the reports are submitted as ***Annexure*****- 3**.
(vii)	A solid wastes disposal plan will have to be prepared.	**Complied.** Solid waste management plan prepared and submitted along with Revised EIA report on 26.06.1990.

S.No.	EC condition	Compliance Status
(viii)	The project Authority must set up six air quality monitoring station in consultation with State Pollution Control Board at suitable locations in the plant and in the nearby areas. Monitoring should be done with the help of minimum continuous monitoring equipment. At no time, the emission level should be beyond the stipulated standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should be out of operation immediately to be restarted only after the control system is rectified to achieve the desired efficiency. The recorded data should be furnished to the State Pollution Control Board once in every three months and to this Ministry in every six months.	**Complied**. • As specified in the EC, 6 ambient air quality monitoring stations are installed in the complex and out of which one station is Continuous AAQM station. Locations of these stations have been fixed in consultation with MPCB. All parameters as per NAAQS are being monitored at all these 6 stations. • Emission levels are always well within the limits and the reports are submitted to MoEF&CC and MPCB regularly (Please refer **Annexure-1 & 2**)
(ix)	Environmental risk analysis of various process operations should be carried out and report submitted within six months.	**Complied**. The same had been covered in M/s EIL's EIA report'1990.
(x)	The project Authority must set up adequate number of water quality monitoring stations in the coastal area in consultation with State Pollution Control Board to record long term impacts, if any. The recorded data must be furnished to the State Pollution Control Board once in very three months and to this Ministry once in every six months. if at any time effluent quality does not conform to the prescribed limit, the corresponding units of the plant which are contributing the excessive pollution loads shall be put out of operation till the quality of pollutant discharged from the unit is brought down to the required level.	**Complied**. • Periodic monitoring of Amba estuary is being carried out annually by CSIR- National Institute of Oceanography since 1990 at the behest of RIL-NMD and report is being submitted to MPCB regularly. • The treated effluent analysis is being carried out internally on shift basis & on a monthly basis through MoEF&CC approved 3rd party lab. • The analytical results of treated effluent were found within stipulated limits and the reports are submitted as **Annexure- 3**.
(xi)	The disposal of spent catalysts should be carefully regulated and they should not be mixed with other solid wastes for disposal in low lying areas. They may be sent back to the manufacturer for re-generation of safe disposal method evolved and records maintained for this purpose. The site selected for disposal of any spent catalysts should be thoroughly investigated from its likely impact on water and land resources in the region.	**Complied.** • Spent catalyst when generated is being sent to CPCB/MPCB approved recyclers/ re-processor. • Spent catalysts are collected separately and stored in drums and these spent catalyst drums are stored in common Haz. waste storage yard before disposal to approved recyclers.
(xii)	No change in stacks should be made without the prior approval of State Pollution Control Board. The minimum height of the major stacks must be 100 meters for proper dispersion of air pollutants.	The height of the stacks is as that given in the Consent to Operate.
(xiii)	The project Authority should maintain noise and vibration level within the permissible limit	**Complied**. • Noise level (Leq) in and around the plant is maintained within the prescribed limits by

S.No.	EC condition	Compliance Status
	to avoid occupational health hazard to the persons working within the plant.	means of adequate noise control measures. PPE's are provided to personnel working in high noise areas. • The overall noise levels in and around the plant area are kept well within the standards. The Ambient noise monitoring data is submitted as **Annexure 4**
(xiv)	The standards laid down for occupational health of the workers should be adopted and followed. If Indian standards in this regard, for any specific pollutants are not available, the relevant standards of WHO/ ILO, etc. should be followed.	**Complied**. Periodic medical examination for all the employees is being conducted annually and records are maintained as per the Factories Act.
(xv)	Proper safety precautions, fire hazards precautions should be constantly reviewed and updated.	**Complied**. Adequate safety & fire precautions taken to keep risks ALARP, and the same is reviewed and updated periodically. • Revised Disaster Management Plan submitted to Ministry on 27-07-1992 • Emergency Response & Contingency Plan reviewed & updated regularly, and updated plan are submitted to DISH.
(xvi)	The project Authority must provide infrastructure facilities (energy, water etc.) for the construction workers during construction period.	**Complied**.
(xvii)	The project Authority must set up a full-fledged laboratory facilities for collection and analysis of samples, under the supervision of senior technical personnel.	**Complied**. • NABL accredited existing Laboratory in RIL-NMD is carrying out the Effluent & Water sample analysis. • Ambient & Stack monitoring are carried out through MoEF&CC approved 3rd Party Laboratory.
(xviii)	The project Authority must submit a Disaster Management plan duly approved by nodal agency within a period of six months.	**Complied.** Disaster management plan included in the revised EIA Also, Revised DMP submitted to Ministry on 27.07.1992
(xix)	The project Authority must design a green belt and should be incorporated in the revised EIA report.	**Complied.** • Design of the Greenbelts is as per the CPCB guidelines, i.e main preference for local species. • Greenbelt details were included in the Revised EIA report which was submitted to Ministry on 26.06.1990
(xx)	Additional area under the control of the project which are not used for plant utility must be afforested and funds for this purpose should be made available.	**Complied.** Dedicated funds are allotted for afforestation/ greenbelt development every year.
(xxi)	A separate Environment Management Cell with suitably qualified people to carry out various functions related to environmental management be set up under the control of	**Complied.** A dedicated full-fledged Environmental Cell consisting of suitably qualified Professional is set up. It is headed by Head- Environment, who directly reports to the Site President.

S.No.	EC condition	Compliance Status
	a senior technical personnel who will report direct to the Head of Organization.	
(xxii)	Adequate funds (capital & recurring expenditure) along with implementation schedule be provided for implementation of the above stipulations and the funds so provided should not be diverted for any other purpose.	**Complied.** • Adequate budget is being provided annually for complying with the stipulations of environment clearance. • Records of environmental expenditure are being maintained and details are being annually submitted to MOEF&CC/MPCB through Environment Statement

For Reliance Industries Limited – NMD

Sachin Bhagwat
Vice President - HSEF

Compliance Status of EC granted by Govt. of Maharashtra vide letter No. SEAC-2013/CR- /TC-1 dated 5th Sept 2014 for the period April 2023 to Sept 2023

Status of Project: Construction completed, and EO/EG, LDPE, PP, LLDPE & HDPE/Metallocene / Hexene-1 plants are operational. Ethoxylates plant construction yet to start.

S.No.	EC condition	Compliance Status
3	**Special conditions:**	
(i)	No additional land shall be used/ acquired for any activity of the project without obtaining proper permission.	**Complied**. The expansion & debottlenecking project was executed within the existing complex. No additional land was required.
(ii)	This environmental clearance is issued subject to obtaining NOC from Forestry & Wild life angle including clearance from the standing committee of the National Board for Wild life as if applicable & this environment clearance does not necessarily implies that Forestry & Wild life clearance granted to the project which will be considered separately on merit.	**Not applicable.** The entire project site is located within a Notified industrial area of MIDC, Govt of Maharashtra.
(iii)	For controlling fugitive natural dust, regular sprinkling of water & wind shields at appropriate distances in vulnerable areas of the plant shall be ensured.	**Complied.** • All Plant areas are paved and internal roads are bitumen topped thus preventing dust emission. • Adequate greenbelt has also been developed in and around the plant area for controlling fugitive dust.
(iv)	PP has to abide by the conditions stipulated by SEAC & SEIAA	**Complied,** compliance report is being regularly submitted to RO – MoEF&CC, RO - CPCB & MPCB.
(v)	Regular monitoring of the air quality, including SPM & SO2 levels both in work zone and ambient air shall be carried out in and around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with Maharashtra Pollution Control Board (MPCB) & submit report accordingly to MPCB.	**Complied.** • Six AAQM stations have been setup in consultation with MPCB. • AAQ monitoring is being carried out in 6 locations as per NAAQS, 2009. • Work zone monitoring is carried out in the plant area regularly. The results of ambient air quality monitoring were found to be within stipulated limits and the results of the reporting period are enclosed as ***Annexure- 2***
(vi)	Necessary arrangement shall be made to adequate safety and ventilation arrangement in furnace area.	**Complied**. All furnaces are located in open area, Adequate safety measures are also implemented as per standards.
(vii)	Proper Housekeeping programs shall be implemented.	**Complied.** A structured "5S" system is implemented at site for housekeeping.
(viii)	In the event of the failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	**Complied**. Pollution control devices are kept in running condition at all times through preventive maintenance schedules. Such an event of failure of any pollution control system did not occur during this period.

S.No.	EC condition	Compliance Status
(ix)	A stack of adequate height based on DG set capacity shall be provided for control and dispersion of pollutant from DG set. (If applicable).	**Complied**. The stack height of the DG sets has been provided as per the CPCB guidelines.
(x)	A detailed scheme for rainwater harvesting shall be prepared and implemented to recharge ground water.	**Complied**. 2 Rainwater harvesting ponds are constructed at the site.
(xi)	Arrangement shall be made that effluent and storm water does not get mixed.	**Complied.** There is a separate drainage network for effluents and storm water to ensure that they are not mixed.
(xii)	Periodic monitoring of ground water shall be undertaken and results analyzed to ascertain any change in the quality of water. Results shall be regularly submitted to the Maharashtra Pollution Control Board.	**Complied**. Periodic monitoring of ground water is carried out in and around the site at 5 locations and the same is also regularly submitted to MPCB. The ground water monitoring results for the reporting period is enclosed as **Annexure 5.**
(xiii)	Leq of Noise level shall be maintained as per standards. For people working in the high noise area, requisite personal protective equipment like earplugs etc. shall be provided.	**Complied**. Noise level (Leq) in and around the plant is maintained well within the prescribed limits by means of adequate noise control measures. PPE's are provided to personnel working in high noise areas.
(xiv)	The overall noise levels in and around the plant are shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc. on all sources of noise generation. The ambient noise levels shall confirm to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989.	**Complied**. Appropriate engineering control measures such as acoustic hoods, silencers, enclosures etc. are provided at identified sources of noise generation. The overall noise levels in and around the plant area are kept well within the standards. The Ambient noise monitoring results for the reporting period is enclosed as **Annexure 4**.
(xv)	Green belt shall be developed & maintained around the plant periphery. Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Department.	**Complied**. Out of 744 ha of Plant & Township area, green belt has been developed & maintained in 298 Ha within and along the site boundary. Native species are used in the development of the green belt as per the CPCB guidelines.
(xvi)	Adequate safety measures shall be provided to limit the risk zone within the plant boundary, in case of an accident. Leak detection devices shall also be installed at strategic places for early detection and warning.	**Complied**. LEL detectors are provided at strategic locations in the plant for early detection of leaks. Necessary safety measures are implemented in the entire site based on the identified risks. The company has implemented a detailed LDAR program for detection and repair of leaks.
(xvii)	Occupational health surveillance of the workers shall be done on a regular basis and record maintained as per Factories Act.	**Complied**. Periodic medical examination for all the employees & Contract workers are being conducted annually and records are maintained as per the Factories Act.
(xviii)	The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.	**Complied.** • Fire proofing is done in identified areas as per the Standards.

S.No.	EC condition	Compliance Status
		• Dedicated Fire stations (Main & auxiliary) with 8 Fire tenders & 3 Fire jeeps are available round the clock. • Fire mitigation equipment like Fire Hydrants, fire extinguishers, Foam systems, Deluge systems are available at identified locations. • Testing and maintenance of the same is being carried out regularly. • Permit to Work system is being practiced for all the jobs.
(xix)	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous waste in accordance with the Hazardous Waste (Management and Handling) Rules, 2003 (amended). Authorization from the MPCB shall be obtained for collections/ treatment/ storage/ disposal of hazardous wastes.	**Complied.** Provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 are complied with. Authorization from MPCB for generation/collection/storage /transport/ disposal of hazardous waste has been obtained.
(xx)	The company shall undertake following Waste Minimization Measures: • Metering of quantities of active ingredients to minimize waste. • Reuse of by-products from the process as raw materials or as raw material substitutes in other process. • Maximizing Recoveries. • Use of automated material transfer system to minimize spillage.	**Complied.** • Waste minimization measures are implemented in all the process plants at the site. • All processes have automated material handling systems for proper metering, avoiding spillages and loss of material. • Reuse and recycling of waste is practiced to the extent possible. Recyclable wastes are sent only to MPCB/CPCB authorized recyclers.
(xxi)	Regular mock drills for the on-site emergency management plan shall be carried out. Implementation of changes/ improvements required, if any, in the on-site management plan shall be ensured.	**Complied.** The company has a well-established on-site emergency management plan. Mock drills are being carried out on monthly basis.
(xxii)	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	**Complied.** A dedicated full-fledged Environmental Cell consisting of suitably qualified professionals is headed by Head-Environment, who reports to the Site President.
(xxiii)	Transportation of ash will be through closed containers and all measures should be taken to prevent spilling of the ash.	**Not Applicable.**
(xxiv)	Separate silos will be provided for collecting and storing bottom ash and fly ash.	**Not Applicable.**
(xxv)	Separate funds shall be allocated for implementation of environmental protection measures/ EMP along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purpose and year-wise expenditure should reported to the MPCB and this department.	**Complied.** Separate funds are allocated for implementation of environmental protection measures and are not diverted for any other purposes. Environmental expenditure details are being annually submitted through Environment Statements.

S.No.	EC condition	Compliance Status
(xxvi)	The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at http://cc.maharashtra.gov.in	**Complied.** The advertisement was published in "The Free Press Journal" in English, "Vishwarup" in Marathi on 14th September 2014. & in "Raigad Times" in Marathi on 13th September 2014.
(xxvii)	Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB and this department, on 1st June & 1st December of each calendar year.	**Complied**. Half yearly compliance reports are being regularly submitted. Timely submission of last report is done.
(xxviii)	A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	**Complied**. A copy of the EC is submitted to the local Gram Panchayat.
(xxix)	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NO_x (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	**Complied.** EC compliance report is submitted periodically to MoEF Regional office, CPCB zonal office and MPCB. The Environmental data is displayed on the main gate (Kuhire gate) of the company at a location which is clearly visible to the public.
(xxx)	Six monthly monitoring reports should be submitted to the Regional Office MoEF, Bhopal with copy to this department and MPCB.	**Complied.** Half yearly compliance reports are being regularly submitted. Timely submission of last report is done.
(xxxi)	A complete set of all the documents submitted to Department should be forwarded to the Local authority and MPCB.	**Complied**.

For Reliance Industries Limited – NMD

Sachin Bhagwat
Vice President - HSEF

Compliance Status of EC granted by MoEF, Govt. of India vide letter no . EC No: J-11011/177/2015-IA-II (I) dt. 02.05.2018 *for the period April 2023 to Sept 2023*

Status of Project: Project site activities started in Oct'2018. GC, LLDPE unit's expansion completed and production started from Nov'2020

Sl. No.	EC condition	Compliance Status
10.0	**Specific conditions:**	
(i)	The project proponent shall provide documentary evidence to establish the start of manufacturing products (Recycle Polyethylene Terephthalate (R PET) of capacity 16,000 MTA, Reliance Paraffin Dehydrogenation Catalyst-10 (RPDC-10) of capacity 60 MTA & Alumina Balls and powder of capacity 4.8 MTA only after having all statutory clearances. Such a clarification shall be submitted by the project proponent to the Regional Office of the Ministry at Nagpur within 6 months for examination at their end in consultation with the State Pollution Control Board, and forwarding the comments to this Ministry.	**Complied**. The clarification letter with all the relevant documents submitted to MoEF&CC Regional office, Nagpur on 06.08.2018. In continuation to our letter, MoEF&CC Regional office, Nagpur communicated to Member Secretary, MPCB vide letter No. EC-865/RON/2018-NGP dated: 14.09.2018 for seeking their clarifications. The copy of both were submitted along with EC compliance report submitted on : 08.07.2019
(ii)	Compliance to all the environmental conditions stipulated in the environmental clearance letter no. SEAC-2013/CR-TC-1 date 5th September, 2014 shall be satisfactorily implemented and compliance report to be submitted to the Ministry's Regional Office.	**Complied.** All the conditions stipulated in the EC granted in year 2014 have been complied with and the compliance report is submitted for your records as **Annexure-B.**
(iii)	All pollution control and monitoring equipments shall be installed, tested and interlocked with the process. SPCB shall grant 'Consent to Operate' after ensuring that all the mentioned pollution control equipments, construction of storm water drain, rain water harvesting structure, Greenbelt, uploading of compliance report on the website etc. have been implemented.	'Consent to Operate' has been granted by MPCB.
(iv)	The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	**Complied.** Adequate stack heights have been provided for proper dispersion of gaseous emissions.
(v)	Ambient air quality data shall be collected as per NAAQS standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009. The levels of PM10, PM2.5, S02, NOx, VOC and CO shall be monitored in the ambient air and emissions from the stacks and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall	**Being complied.** • AAQ monitoring is being carried out in 6 locations for all the parameters including VOC (Benzene) as notified in NAAQS, 2009. • Stack monitoring is carried out through MoEF approved 3rd party lab for all the stacks at site regularly. Also, Continuous Emission Monitoring systems (CEMS) is installed and connected to CPCB & MPCB portal since 2016.

Sl. No.	EC condition	Compliance Status
	update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the Maharashtra Pollution Control Board (MPCB).	• The analytical results the Stack Emission/ ambient air quality were found to be within stipulated limits during this reporting period and the reports are being submitted to MoEF&CC, CPCB and MPCB through Half yearly reports (Please refer **Annexure-1 , 2**) • AAQM & Stack emission results are displayed at the plant entrance near main gate.
(vi)	Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits stipulated by the MPCB.	**Complied,** there is no specific limit given for work zone environment by MPCB. However, we are monitoring air quality in the critical plant premises and reports are submitted vide ***Annexure-2.***
(vii)	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.	**Complied.** The existing DG sets are meeting the CPCB guidelines and having adequate acoustic enclosures.
(viii)	Total fresh water requirement from MIDC shall not exceed 36,000 m3/day and prior permission shall be obtained from the competent authority. No ground water shall be used without permission.	**Complied,** Approved Water consumption does not exceed 36,000 m3/day. No Ground water is used.
(ix)	The generated effluent shall be treated in the existing ETP. The treated effluent shall be recycled into the system, reused in the green belt and RO reject of 1000 m3/day only shall be sent through the existing 26 km pipeline and discharged into Dharamtar creek.	**Will be complied.** UF- RO system is commissioned in Jan 2022. The RO reject of 1000 m3/day is being discharged through existing 26KM pipeline at Dharamtar Creek during Non-Monsoon period.
(x)	Continuous online (24X7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server.	**Complied**, the stack emissions are being continuously monitored by CEMS analyzers as per CPCB Guidelines and this data is being transmitted to CPCB & MPCB portal.
(xi)	Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	**Complied.** Storm water and effluent channels are separate by design and it ensures that the two streams do not intermingle. With a total area 747 Ha and average rainfall at NMD @ 4000mm pa the design of a requisite Guard pond is not found practical.
(xii)	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm. Solvent transfer shall be by pumps.	**Complied.** All the hazardous chemicals are stored in Tank farms & suitable containers. Required flame arrestors are provided in the tanks as per PESO guidelines and solvents are transferred only through pumps in closed pipelines.

Sl. No.	EC condition	Compliance Status
(xiii)	As proposed, ETP sludge shall be disposed at TSDF. Organic waste, spent solvent distillation residue, spent catalyst shall be sent to registered recyclers/ reprocessors /TSDF.	**Complied**. • ETP Oily & Chemical sludge and Process Organic wastes are being disposed at CHWTSDF at Taloja Mumbai • ETP Biological sludge are being used as manure in Horticulture. • Spent Solvents & Catalyst are disposed to authorized recyclers.
(xiv)	The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from MPCB shall be obtained for disposal of solid/ hazardous waste in the TSDF. Measures shall be taken for firefighting facilities in case of emergency.	**Agreed.** 'Authorization' from MPCB under the 'Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016', which includes the expanded facility has been obtained and it is valid till 31.08.2023. CTO renewal application was done on 25.5.2023 and is under renewal. Adequate firefighting facilities have been provided for the existing operation and same shall be extended for the expansion project
(xv)	The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.	**Complied**. • Provisions under the MSIHC Rules are complied with. • Emergency Response & Contingency Plan reviewed & updated regularly and updated plan being submitted to DISH. Records of submission are available. • Haz. chemicals are transported as per the provision of Motor Vehicle Act (MVA), 1989
(xvi)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	**Complied**. • Fire proofing is done in identified areas as per the Standards • Dedicated Fire stations (Main & auxiliary) with 8 Fire tenders & 3 Fire jeeps are available round the clock. • Fire mitigation equipment like Fire Hydrants, fire extinguishers, Foam systems, Deluge systems are available at identified locations. • Testing and maintenance of the same is being carried out regularly. The same is being extended for expanded operation.
(xvii)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	**Complied**. Periodic medical examination for all the employees & contract workers are being conducted annually and records are maintained as per the Factories Act.
(xviii)	At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall	**Being Complied.** MoEF&CC has come up with an OM vide F. No. 22-65/2017-IA.III dated: 01.05.2018. Accordingly the applicable Corporate Environment Responsibility (CER) for our project is 0.25% of the capital investment. The CER expenditure is completed as per the plan.

Sl. No.	EC condition	Compliance Status
	be ensured accordingly in a time bound manner.	
(xix)	As proposed, green belt over 298 ha shall be developed/maintained within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	**Complied.** • Design of the Greenbelts is as per the CPCB guidelines, i.e preference for local species, 10-25 metre width greenbelt along periphery, hedges along roadside. • Maharashtra Horticulture Dept had been consulted for the Greenbelt development and they have provided inputs during the development stage.
(xx)	Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.	**Being complied.** The existing township will be used for accommodating construction workers during project stage. The construction waste will be disposed as per the provision of Construction & Demolition Waste management rules, 2016.
(xxi)	A regular Environment Manager having Post Graduate qualification in Environmental Sciences/ Environmental Engineering to be appointed for looking after the environmental management activities of the proposed plant.	**Complied.** A dedicated full-fledged Environmental Cell consisting of suitably qualified Professionals is headed by Head (Environment), who reports to the Site President. This will be extended for proposed expansion also.

S.No.	EC condition	Compliance Status
10.1	**General conditions:**	
(i)	The project authorities shall adhere to the stipulations made by the State Government, Central Pollution Control Board, State Pollution Control Board and any other statutory authority.	**Agreed.**
(ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	**Agreed.**
(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 station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	**Complied.** The location of the AAQM stations are decided in consultation with MPCB and 6 AAQM stations have been setup.
(iv)	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.	**Complied,** ambient air quality is being monitored for all the parameters stipulated in the NAAQ Standards, 2009 and the monitoring frequency is as per CPCB guidelines & NAAQ Standards 2009.
(v)	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. 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).	**Complied**. The Ambient noise monitoring results for the reporting period is enclosed as **Annexure 4**.
(vi)	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	**Complied**. Being a high rainfall area as well as having shallow ground water table, the ground water recharging option is not suitable. Hence, we have implemented two rain water harvesting ponds, whose capacities are 11,000 m^3 & 5,500 m^3, and harvested rain waters are used for Horticulture activities.
(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	**Complied.** Only after the comprehensive Safety & Environmental training (including chemical handling) employees & contractors are engaged for plant operation & maintenance jobs. We are

S.No.	EC condition	Compliance Status
	employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	also regularly carrying out awareness training for all on these subjects. Pre-employment & annual medical checkup are mandatory for all the employees including those of contractor and records are being maintained as per Factories Act.
(viii)	The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management and risk mitigation measures relating to the project shall be implemented	**Agreed and complied.** All the recommendations made in the EIA are implemented.
(ix)	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. ESC activities shall be undertaken by involving local villages and administration.	**Complied.** 50% of the existing employees are from local & nearby area and majority of the contractors are also from local area. We are also implementing various CSR activities in and around villages.
(x)	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment	**Complied.**
(xi)	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.	**Complied.** The budget allotted for EMP and expenditure is completed.
(xii)	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/ Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	**Complied.** The copy of this Env.clearance has been submitted to Roha Nagarpalika and Kuhire village panchayat and the acknowledgement copies were submitted along with the compliance report dated 05.12.2018.
(xiii)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF& CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.	**Complied.** We are regularly submitting half yearly EC compliance report to MoEF Regional office, MPCB & CPCB regional offices.

S.No.	EC condition	Compliance Status
(xiv)	The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	**Complied.** Environment statement submitted to MPCB through their online portal. The copy of the Environment Statement 2022-23 is attached as **Annexure 8.**
(xv)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	**Complied.** The advertisement was published as stipulated and copy of these paper clippings were submitted along with the compliance report dated 05.12.2018.
(xvi)	The project authorities 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 and the date of start of the project.	These details were submitted to your office through compliance report dated: 05.12.2018.

For Reliance Industries Limited – NMD

Sachin Bhagwat
Vice President - HSEF

Annexure-1

Reliance Industries Limited , Nagothane Manufacturing Division

Half yearly Stack Monitoring Results :Arp'23 to Sept'23

Apr-23

Parameter Analysed	MPCB Limit	Unit	STACKS						
			H10(GC)	H11(GC)	H12(GC)	H13(GC)	H14(GC)	CPP	RPET
PM	10 (GC)/ 150 (CPP& RPET)	mg/Nm^3	4.2	3.8	6.0	3.4	4.8	5.5	1.1
SO2	50	mg/Nm^3	7.5	6.7	3.5	3.8	6.5	*	*
	1700	mg/Nm^3	*	*	*	*	*	5.8	56.32
NOx	350	mg/NM^3	109.6	80.5	78.8	73.8	92.2	63.2	17.63
CO	150	mg/Nm^3	5.4	19.7	6.2	21.4	4.2	9.7	18.23

May-23

Parameter Analysed	MPCB Limit	Unit	STACKS						
			H10(GC)	H11(GC)	H12(GC)	H13(GC)	H14(GC)	CPP	RPET
PM	10 (GC)/ 150 (CPP& RPET)	mg/Nm^3	4.5	5.3	3.8	6.7	4.2	5.8	4.6
SO2	50	mg/Nm^3	6.8	8.1	7.3	5.8	7.7	*	*
	1700	mg/Nm^3	*	*	*	*	*	6.8	26.0
NOx	350	mg/NM^3	98.6	67.5	104.8	78.8	43.8	80.2	49.5
CO	150	mg/Nm^3	5.9	15.8	9.2	18.4	2.9	5.2	9.7

Jun-23

Parameter Analysed	MPCB Limit	Unit	STACKS						
			H10(GC)	H11(GC)	H12(GC)	H13(GC)	H14(GC)	CPP	RPET
PM	10 (GC)/ 150 (CPP& RPET)	mg/Nm^3	3.6	5.2	Not in opt	6.4	4.9	4.7	1.0
SO2	50	mg/Nm^3	7.9	4.4		9.6	6.1	*	*
	1700	mg/Nm^3	*	*		*		7.5	48.2
NOx	350	mg/NM^3	86.4	72.9		69.2	58.7	76.3	18.4
CO	150	mg/Nm^3	9.4	10.3		12.1	7.7	6.7	8.4

****Stack emission has been monitored monthly by third party MoEF approved vendor - M/s Netel India**

Annexure-1

Reliance Industries Limited , Nagothane Manufacturing Division

Half yearly Stack Monitoring Results :Apr'22 to Sept'23

Jul-23

Parameter Analysed	MPCB Limit	Unit	STACKS						
			H10(GC)	H11(GC)	H12(GC)	H13(GC)	H14(GC)	CPP	RPET
PM	10 (GC)/ 150 (CPP& RPET)	mg/Nm^3	**5.1**	**4.7**	**6.1**	**4.8**	**5.6**	**4.9**	**O.62**
SO2	50	mg/Nm^3	**7.8**	**8.4**	**8.1**	**5.3**	**3.9**	*	*
	1700	mg/Nm^3	*	*	*	*	*	**6.2**	**36.61**
NOx	350	mg/NM^3	**98.6**	**67.5**	**104.8**	**78.8**	**43.8**	**57.2**	**6.62**
CO	150	mg/Nm^3	**5.9**	**15.8**	**9.2**	**18.4**	**4.9**	**6.3**	**5.54**

Aug-23

Parameter Analysed	MPCB Limit	Unit	STACKS						
			H10(GC)	H11(GC)	H12(GC)	H13(GC)	H14(GC)	CPP	RPET
PM	10 (GC)/ 150 (CPP& RPET)	mg/Nm^3	**4.2**	**6.6**	**5.6**	**4.9**	**5.3**	**5.4**	**0.3**
SO2	50	mg/Nm^3	**6.3**	**7.2**	**4.8**	**5.9**	**6.3**	*	*
	1700	mg/Nm^3	*	*	*	*	*	**6.1**	**37.0**
NOx	350	mg/NM^3	**90.6**	**75.5**	**99.0**	**78.7**	**93.8**	**54.4**	**7.5**
CO	150	mg/Nm^3	**4.1**	**14.2**	**8.9**	**16.6**	**6.3**	**6.3**	**10.8**

Sep-23

Parameter Analysed	MPCB Limit	Unit	STACKS						
			H10(GC)	H11(GC)	H12(GC)	H13(GC)	H14(GC)	CPP	RPET
PM	10 (GC)/ 150 (CPP& RPET)	mg/Nm^3	**3.8**	**3.5**	**4.3**	**4.1**	**4**	**3.4**	**0.4**
SO_2	50	mg/Nm^3	**7.0**	**8.2**	**10.0**	**4.4**	**6.9**	*	*
	1700	mg/Nm^3	*	*	*	*	*	**8.6**	**34.81**
NOx	350	mg/NM^3	**83.2**	**60.1**	**89.1**	**78.3**	**62.8**	**51.1**	**7.4**
CO	150	mg/Nm^3	**5.3**	**9.9**	**9.9**	**8.6**	**6.2**	**4.9**	**9**

****Stack emission has been monitored monthly by third party MoEF approved vendor - M/s Netel India**

Annexure-2

Reliance Industries Limited , Nagothane Manufacturing Division

Half Yearly Report of Ambient Air Monitoring Results - Monthly average data

Period: Apr'23 to Sept'23

SL. NO.	DESCRIPTION	Unit	NAAQMS Limit	Apr-23						May-23						Jun-23					
				LOCATIONS						LOCATIONS						LOCATIONS					
				Colony	H.S.E. Building	Plant East Boundary -EOEG	Parking Plaza	Kuhire Nursery area	CAAQM Station at Mat. Stores	Colony	H.S.E. Building	Plant East Boundary -EOEG	Parking Plaza	Kuhire Nursery area	CAAQM Station at Mat. Stores	Colony	H.S.E. Building	Plant East Boundary - EOEG	Parking Plaza	Kuhire Nursery area	CAAQM Station at Mat. Stores
1	PM10 (24 hrs)	µg/m3	100 (24 Hourly)	55.5	59.21	58.01	73.48	60.98	42	57.93	57.5	61.7	75.65	65.54	24.4	49.49	56.09	56.81	67.02	55.06	15.3
2	PM2.5 (24 hrs)	µg/m3	60 (24 Hourly)	21.04	21.83	24.4	27.44	20.94	19.6	21.69	21.51	24.3	28.63	22.8	10.6	19.29	20.36	22.85	24.72	21.08	6.8
3	Sulphur Dioxide (24 hrs)	µg/m3	80 (24 Hourly)	9.21	9.7	8.76	12.45	10.39	6.20	9.04	10.23	9.1	12.06	10.46	2.33	8.72	9.54	8.34	11.75	8.99	2.04
4	Oxides of Nitrogen (24 hrs)	µg/m3	80 (24 Hourly)	14.46	14.46	12.66	18.06	15.44	28.36	13.09	15.65	12.3	18.81	15.59	18.31	12.64	14.72	11.46	16.94	15.05	12.03
5	Carbon Monoxide (8hrs)	mg/m3	2 (8 Hourly)	1.37	1.53	1.10	1.17	1.32	0.84	1.30	1.55	1.14	1.30	1.34	0.78	1.36	0.98	1.14	1.22	1.17	0.76
6	Benzene (24 hrs.)	µg/m3	5 (Yearly)	2.69	4.03	3.13	2.99	3.14	1.40	2.96	4.06	3.4	3.41	3	0.3	2.68	3.46	3.11	2.95	2.71	0.01
7	Ammonia (24 hrs.)	µg/m3	400 (24 Hourly)	15.43	15.39	14.81	13.31	14.81	3.58	14.23	15.48	14.5	14.29	15.53	1.76	14.07	13.38	12.97	13.36	14.07	2.53
8	Ozone (8 hrs)	µg/m3	100 (8 Hourly)	7.31	10.78	9.85	12.2	9.01	41.64	7.58	11.08	9.9	11.83	9.11	20.67	6.71	10.1	8.91	10.59	8.5	12.67
9	Benzo- a - Pyrene (24 hrs)	ng/m3	1 (Yearly)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead (24 hrs)	µg/m3	1 (24 Hourly)	0.24	0.37	0.33	0.33	0.27	BDL	0.24	0.39	0.4	0.36	0.29	BDL	0.21	0.35	0.31	0.35	0.27	BDL
11	Arsenic (24 hrs)	ng/m3	6 (Yearly)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12	Nickel (24 hrs)	ng/m3	20 (Yearly)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note : Ambient air is monitored weekly twice by third party vendor approved by MoEF - M/s Netel India
In addition, 1 Continuos Ambient Air Monitoring station is operational at a location approved by MPCB.

Annexure-2

Reliance Industries Limited , Nagothane Manufacturing Division

Half Yearly Report of Ambient Air Monitoring Results - Monthly average data
Period: Apr'23 to Sept'23

SR. NO.	DESCRIPTION	Unit	NAAQMS Limit	Jul-23						Aug-23						Sep-23					
				LOCATIONS						LOCATIONS						LOCATIONS					
				Colony	H.S.E. Building	Plant East Boundary -EOEG	Parking Plaza	Kuhire Nursery area	CAAQM Station at Mat. Stores	Colony	H.S.E. Building	Plant East Boundary -EOEG	Parking Plaza	Kuhire Nursery area	CAAQM Station at Mat. Stores	Colony	H.S.E. Building	Plant East Boundary - EOEG	Parking Plaza	Kuhire Nursery area	CAAQM Station at Mat. Stores
1	PM10 (24 hrs)	µg/m3	100 (24 Hourly)	41.59	43.59	44.39	45.7	43.63	8.4	39.18	37.24	40.7	51.96	43.92	12.3	43.8	47.2	49	53	54	13.8
2	PM2.5 (24 hrs)	µg/m3	60 (24 Hourly)	15.05	15.8	15.93	18.93	16.84	4.7	13.07	14.57	14.5	18.79	15.82	5	12.25	16.35	23	20.25	21.5	6.5
3	Sulphur Dioxide (24 hrs)	µg/m3	80 (24 Hourly)	6.55	7.24	6.06	8.25	6.88	2.04	6.26	6.39	5.5	7.64	6.93	1.96	10	7.2	10.85	10.65	9.75	1.86
4	Oxides of Nitrogen (24 hrs)	µg/m3	80 (24 Hourly)	10.14	9.83	9.09	13.16	10.78	9.17	8.89	9.45	8.0	11.42	10.57	7.23	15	11.5	13.25	16.55	15.35	7.84
5	Carbon Monoxide (8hrs)	mg/m3	2 (8 Hourly)	0.82	1.01	0.72	0.81	0.98	0.53	0.86	0.99	0.76	0.81	0.92	0.57	0.92	0.96	0.85	0.93	0.89	0.56
6	Benzene (24 hrs.)	µg/m3	5 (Yearly)	2.15	2.91	2.55	2.08	2.13	0.01	1.96	2.76	2.2	2.16	2.04	0.08	2.4	2.15	1.9	2.25	2.15	0.08
7	Ammonia (24 hrs.)	µg/m3	400 (24 Hourly)	10.81	10.05	9.86	9.6	10.71	3.82	9.84	10.59	9.0	10.22	10.76	0.85	9.15	9.85	11.35	12.75	12.35	1.09
8	Ozone (8 hrs)	µg/m3	100 (8 Hourly)	5.45	8.38	6.75	7.36	6.18	10.91	5.14	7.8	6.4	7.48	5.76	7.89	3.55	4.7	6.2	6.15	6	8.22
9	Benzo- a - Pyrene (24 hrs)	ng/m3	1 (Yearly)	BDL	BDL	BDL	BDL	BDL	BDL	<0.5	<0.5	<0.5	<0.5	<0.5	BDL	<0.5	<0.5	<0.5	<0.5	<0.5	BDL
10	Lead (24 hrs)	µg/m3	1 (24 Hourly)	0.16	0.27	0.23	0.25	0.21	BDL	0.15	0.26	0.2	0.25	0.21	BDL	<0.1	<0.1	<0.1	<0.1	<0.1	BDL
11	Arsenic (24 hrs)	ng/m3	6 (Yearly)	BDL	BDL	BDL	BDL	BDL	BDL	<1.0	<1.0	<1.0	<1.0	<1.0	BDL	<1.0	<1.0	<1.0	<1.0	<1.0	BDL
12	Nickel (24 hrs)	ng/m3	20 (Yearly)	BDL	BDL	BDL	BDL	BDL	BDL	<5.0	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<5.0	<5.0	BDL

Ambient air is monitored weekly twice by third party vendor approved by MoEF - M/s Netel India
In addition, 1 Continuos Ambient Air Monitoring station is operational at a location approved by MPCB.

Annexure 3

Reliance Industries Limited , Nagothane Manufacturing Division

Half Yearly Report of Treated Effluent Analysis - Period: Apr'23 to Sept'23

Monthly Average data

Sl.No	Month	pH	TDS	TSS	S	O&G	COD	BOD	Chlorides	Sulphates
		–	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
1	Apr-23	8.0	2284.3	10.6	0.3	<4	44.4	15.8	506.5	991.0
2	May-23	8.1	3003.7	11.4	0.3	<4	56.9	19.9	104.3	314.5
3	Jun-23	8.2	2173.6	11.0	0.5	<4	58.5	14.1	550.7	952.4
4	Jul-23	8.0	1405.4	11.0	0.3	<4	48.4	12.6	267.2	643.0
5	Aug-23	8.0	1435.0	10.5	0.4	<4	49.2	18.2	608.4	1753.0
6	Sep-23	8.0	1948.2	11.2	0.3	<4	43.6	9.7	409.9	897.6
7	Min	8.0	1405.4	10.5	0.3	<4	43.6	9.7	104.3	314.5
8	Max	8.2	3003.7	11.4	0.5	<4	58.5	19.9	608.4	1753.0
9	Average	8.1	2041.7	10.9	0.4	<4	50.2	15.0	407.8	925.2
10	Permissible limit as per Consent	5.5 TO 9	-	100	2	10	250	100	-	-

Annexure 4

Reliance Industries Limited , Nagothane Manufacturing Division

Half Yearly Report of Noise Level Monitoring
Period: Apr'23 to Sept'23

Monthly average Noise Levels (dB)

Sl.No	Location	Apr-23		May-23		Jun-23		Jul-23		Aug-23		Sep-23	
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
1	Materials Gate	62.9	58.5	62.4	57.1	61.8	57.6	62.5	57.5	63.2	58.2	61.9	56.7
2	Stores	51.0	48.5	50.4	47.2	51.0	47.8	50.9	47.1	51.9	49.5	49.5	47.2
3	EO / EG End	66.8	64.4	66.1	64.1	67.3	64.5	65.7	62.8	66.2	64.2	64.7	62.5
4	F & A	60.6	58.0	60.0	56.5	59.8	57.1	59.1	56.3	60.1	57.0	57.2	55.0
5	Time Office	64.3	56.3	66.5	55.2	68.2	62.5	68.6	62.8	66.9	61.3	67.9	57.9
6	Pipe Line	49.6	46.8	49.4	45.3	49.2	46.7	48.0	45.8	49.5	47.1	47.7	45.4
7	Family Welfare Centre	54.0	50.0	53.0	48.3	53.1	47.6	51.6	47.4	52.0	47.4	50.9	45.9

Noise Standard as per MPCB : During Day time 75 dB(A) ; During Night time 70 dB(A)

Annexure 5

Reliance Industries Limited , Nagothane Manufacturing Division

Half Yearly Report of Ground water Monitoring - Apr'23 to Sept'23

Sl.No	Location	Jun-23				
		Medha - Dug well	Nagothane - Dug well	RIL Plant Well	Bense - Hand Pump	RIL Township - Well
1	pH Value	7.4	7.3	8.0	6.84	6.83
2	Turbidity, NTU	2.2	10	4.1	5.5	4.1
3	Total Hardness (as CaCO3), mg/l	56.1	58.1	184.2	78.5	80.5
4	Dissolved Solids (TDS), mg/l	85	80	512	135	139
5	Suspended Solids (TSS), mg/l	BDL	BDL	BDL	BDL	BDL
6	Alkalinity (as CaCO3), mg/l	63	76	55	52	81
7	Iron (as Fe), mg/l	BDL	0.5	0.3	0.9	BDL
8	Nickel as Nl, mg/l	BDL	BDL	BDL	BDL	BDL
9	Copper (as Cu), mg/l	BDL	BDL	BDL	BDL	BDL
10	Sulphate (as SO4), mg/l	7.8	8.1	23.4	11.4	20.2
11	Nitrate (as NO3-), mg/l	BDL	BDL	BDL	BDL	BDL
12	Fluoride (as F), mg/l	BDL	BDL	BDL	BDL	BDL
13	Phenolic compounds, mg/l	BDL	BDL	BDL	BDL	BDL
14	Lead (as Pb), mg/l	BDL	BDL	BDL	BDL	BDL
15	Zinc (as Zn), mg/l	BDL	BDL	0.12	BDL	BDL
16	Chromium (as Cr+6), mg/l	BDL	BDL	BDL	BDL	BDL
17	Vanadium, mg/l	BDL	BDL	BDL	BDL	BDL
18	Mineral Oil, mg/l	BDL	BDL	BDL	BDL	BDL
19	Total Coliforms, MPN/100 ml	4	5	Absent	2	5
20	Phosphates (as PO4), mg/l	BDL	BDL	BDL	BDL	BDL
21	Nitrite as (NO2), mg/l	BDL	BDL	BDL	BDL	0.2
22	Sodium, mg/l	BDL	BDL	BDL	BDL	BDL
23	Potassium, mg/l	BDL	BDL	BDL	BDL	BDL
24	Chlorides, mg/l	6.9	5.9	92.2	4.9	5.4
25	Dissolved Oxygen (DO), mg/l	6.5	6.4	5.3	5.9	6.1
26	Oil & Grease, mg/l	BDL	BDL	BDL	BDL	BDL
27	Phosphorous, mg/l	BDL	BDL	BDL	BDL	BDL
28	Salinity, ppth	0.04	0.04	0.14	0.04	0.04

Annexure 5

Reliance Industries Limited , Nagothane Manufacturing Division

Half Yearly Report of Ground water Monitoring - Apr'23 to Sept'23

Sl.No	Location	Sep-23				
		Medha - Dug well	Nagothane - Dug well	RIL Plant Well	Bense - Hand Pump	RIL Township - Well
1	pH Value	7.77	7.89	6.8	7.76	6.77
2	Turbidity, NTU	19.4	5.3	2	2.2	3.2
3	Total Hardness (as CaCO3), mg/l	43.7	44.6	88.3	143.6	89.2
4	Dissolved Solids (TDS), mg/l	98	108	178	634	173
5	Suspended Solids (TSS), mg/l	9	<5	<5	<5	<5
6	Alkalinity (as CaCO3), mg/l	55.2	73.6	57.5	52.9	82.8
7	Iron (as Fe), mg/l	<0.1	<0.1	<0.1	<0.1	<0.1
8	Nickel as Nl, mg/l	<0.02	<0.02	<0.02	<0.02	<0.02
9	Copper (as Cu), mg/l	<0.04	<0.04	<0.04	<0.04	<0.04
10	Sulphate (as SO4), mg/l	1.7	<1.0	<1.0	28.3	1.2
11	Nitrate (as NO3-), mg/l	<0.5	<0.5	<0.5	<0.5	<0.5
12	Fluoride (as F), mg/l	<0.2	<0.2	<0.2	<0.2	<0.2
13	Phenolic compounds, mg/l	<0.5	<0.5	<0.5	<0.5	<0.5
14	Lead (as Pb), mg/l	<0.05	<0.05	<0.05	<0.05	<0.05
15	Zinc (as Zn), mg/l	<0.1	<0.1	<0.1	<0.1	<0.1
16	Chromium (as Cr+6), mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
17	Vanadium, mg/l	<0.5	<0.5	<0.5	<0.5	<0.5
18	Mineral Oil, mg/l	<0.5	<0.5	<0.5	<0.5	<0.5
19	Total Coliforms, MPN/100 ml	5	7	6	4	3
20	Phosphates (as PO4), mg/l	<3	<3	<3	<3	<3
21	Nitrite as (NO2), mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
22	Sodium, mg/l	7.9	8	17.9	96.8	11.7
23	Potassium, mg/l	<0.1	<0.1	<0.1	<0.1	<0.1
24	Chlorides, mg/l	4.4	4.9	4.9	162.6	4.9
25	Dissolved Oxygen (DO), mg/l	7.2	6.9	6.8	7.2	6.8
26	Oil & Grease, mg/l	<2	<2	<2	<2	<2
27	Phosphorous, mg/l	<1.0	<1.0	<1.0	<1.0	<1.0
28	Salinity, ppth	0.04	0.04	0.04	0.3	0.04

Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2022

Unique Application Number	***Submitted Date***
MPCB-ENVIRONMENT_STATEMENT-0000046023	19-09-2022

PART A

Company Information

Company Name	***Application UAN number***	
RELIANCE INDUSTRIES LIMITED	MPCB-CONSENT-0000083517	
Address		
PO: Petrochemical Township, Nagothane		
Plot no	***Taluka***	***Village***
2/1,2/2,A-1,A-1/1	PEN	Nagothane
Capital Investment (In lakhs)	***Scale***	***City***
136764.00	L.S.I	Raigad
Pincode	***Person Name***	***Designation***
402125	Sachin Bhagwat	Vice President - HSEF
Telephone Number	***Fax Number***	***Email***
9970050035	9970050035	sachin.bhagwat@ril.com
Region	***Industry Category***	***Industry Type***
SRO-Raigad II	Red	R57 Petrochemicals Manufacturing (including processing of Emulsions of oil and water)
Last Environmental statement submitted online	***Consent Number***	***Consent Issue Date***
yes	MPCB-CONSENT-0000083517	2020-11-09
Consent Valid Upto	***Establishment Year***	***Date of last environment statement submitted***
31.08.2023	1989	Sep 27 2021 12:00:00:000AM
Industry Category Primary (STC Code) & Secondary (STC Code)		

Product Information

Product Name	***Consent Quantity***	***Actual Quantity***	***UOM***
Ethylene	510000	451900	MT/A
Propylene	70000	29210	MT/A
Ethylene Glycol	70000	40768	MT/A
Ethylene Oxide	60000	58056	MT/A
Low Density Polyethylene(LDPE)	120000	97365	MT/A
Linear Low Density Polyethylene/High density Polyethylene/Metallocene (LLDPE/HDPE/Metallocene)	350000	277310	MT/A
Polypropylene (PP)	150000	114588	MT/A

Recycled Polyethylene Terephthalate (R_PET)	16000	501	MT/A
Power	85	51.09	Mwh

By-product Information

By Product Name	*Consent Quantity*	*Actual Quantity*	*UOM*
Mixed Oil (Pyrolysis Gasoline RARFS, Pyrolysis Fuel Oil)	38000	27191	MT/A
C4-cut	24000	21832	MT/A
Poly ethylene Glycol	7500	3967	MT/A
CO2	40000	26098	MT/A
Pre poly powder	30	20.34	MT/A
Oligomer	15000	0	MT/A

Part-B (Water & Raw Material Consumption)

1) Water Consumption in m3/day

Water Consumption for	*Consent Quantity in m3/day*	*Actual Quantity in m3/day*
Process	2500.00	750.16
Cooling	30800.00	15696.91
Domestic	11700.00	5643.00
All others	0.00	0.00
Total	45000.00	22090.07

2) Effluent Generation in CMD / MLD

Particulars	*Consent Quantity*	*Actual Quantity*	*UOM*
Trade Effluent including Sewage from Plant	10500	8069	CMD

2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)

Name of Products (Production)	*During the Previous financial Year*	*During the current Financial year*	*UOM*
ETHYLENE/PROPYLENE	0.418	0.383	
EO/EG	0.0236	0.0239	
LDPE	0.046	0.075	
LLDPE/HDPE/METALLOCENE	0.200	0.102	
POLYPROPYLENE	0.409	0.028	

3) Raw Material Consumption (Consumption of raw material per unit of product)

Name of Raw Materials	*During the Previous financial Year*	*During the current Financial year*	*UOM*
Ethylene in LLDPE	0.9847	0.9876	Ton/Ton
Ethylene in HDPE	0.9976	0.9983	Ton/Ton
Ethylene in LDPE	1.0084	1.0719	Ton/Ton
Ethylene in EOEG	0.7508	0.7401	Ton/Ton
Propylene in PP	1.0180	1.0073	Ton/Ton

4) Fuel Consumption

Fuel Name	*Consent quantity*	*Actual Quantity*	*UOM*

Gas Fuel used in Gas Cracker	361715	143634	MT/A
Gas and Liquid Fuel in CPP	498225	139341	MT/A
Liquid Fuel in R-PET furnace	179.58	10.945	MT/A

Part-C

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

[A] Water

Pollutants Detail	***Quantity of Pollutants discharged (kL/day)***	***Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour***	***Percentage of variation from prescribed standards with reasons***		
	Quantity	***Concentration***	***%variation***	***Standard***	***Reason***
Total Dissolved Solids	2576.6	912.5	0	2100	NA
Total Suspended Solids	90.4	18.2	0	100	NA
COD	145.4	39.3	0	250	NA
BOD	67.8	18	0	100	NA
Oil and Grease	1.9	0.4	0	10	NA
Chloride	795.2	242	0	600	NA
Sulphate	1020.9	389.5	0	1000	NA
pH	0	7.9	0	5.5 to 9	NA

[B] Air (Stack)

Pollutants Detail	***Quantity of Pollutants discharged (kL/day)***	***Concentration of Pollutants discharged(Mg/NM3)***	***Percentage of variation from prescribed standards with reasons***		
	Quantity	***Concentration***	***%variation***	***Standard***	***Reason***
CPP - SO2	157.02	8.11	0	1700	NA
CPP- NOX	1191.35	61.86	0	350	NA
CPP- CO	173.88	9.12	0	150	NA
CPP - PM	50.6	2.61	0	150	NA
GC - SOX	16.16	2.12	0	50	NA
GC - NOX	666.24	67.04	0	350	NA
GC - CO	110.19	10.73	0	150	NA
GC - PM	2.55	0.95	0	10	NA
RPET - SOX	0.063	12.85	0	1700	NA
RPET - NOX	0.266	8.99	0	350	NA
RPET - CO	0.429	13.48	0	150	NA
RPET - PM	0.022	0.69	0	150	NA

Part-D

HAZARDOUS WASTES

1) From Process

Hazardous Waste Type	***Total During Previous Financial year***	***Total During Current Financial year***	***UOM***
5.1 Used or spent oil	51.29	88.165	MT/A

33.2 Contaminated cotton rags or other cleaning materials	3.41	5.715	MT/A
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	1402	7249	Nos./Y
Other Hazardous Waste	0	87	Nos./Y
1.4 Organic residues	0.5	0	Ton/Y
35.2 Spent ion exchange resin containing toxic metals	0	24.23	MT/A

2) From Pollution Control Facilities

Hazardous Waste Type	***Total During Previous Financial year***	***Total During Current Financial year***	***UOM***
1.3 Oily sludge emulsion	15.225	7.74	MT/A
35.3 Chemical sludge from waste water treatment	0	2.595	MT/A

Part-E

SOLID WASTES

1) From Process

Non Hazardous Waste Type	***Total During Previous Financial year***	***Total During Current Financial year***	***UOM***
Decoke Carbon	4.995	10.14	MT/A
Miscellaneous waste	125.55	189.18	MT/A
Metal Scrap	158.46	506.22	MT/A
Wooden Scrap	20.67	109.1	MT/A
Paper, cardboard , glass, rubber scrap	11.755	34.87	MT/A
Plastic waste	44.69	47.72	MT/A
Glass Scrap	0	2.305	MT/A

2) From Pollution Control Facilities

Non Hazardous Waste Type	***Total During Previous Financial year***	***Total During Current Financial year***	***UOM***
Biological Sludge	602.5	531.249	MT/A

3) Quantity Recycled or Re-utilized within the unit

Waste Type	***Total During Previous Financial year***	***Total During Current Financial year***	***UOM***
0	0	0	MT/A

Part-F

Please specify the characteristics(in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

1) Hazardous Waste

Type of Hazardous Waste Generated	***Qty of Hazardous Waste***	***UOM***	***Concentration of Hazardous Waste***
1.3 Oily sludge emulsion	500	MT/A	Contains 40% water, polymer powder and oil
5.1 Used or spent oil	200	MT/A	Used Lube / Transformer Oil
5.2 Wastes or residues containing oil	200	MT/A	Waste Oil which contains waste process oil/ black oil and waste residues containing oil which includes oily cotton rags.

20.2 Spent solvents	800	MT/A	Mainly contains spent solvent from the process plants which is used as fuel in Captive power plant and also contains spent chemicals used in the plants.
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	25000	Nos./Y	Empty barrels, container and carboys that once contained hazardous material/ chemical.
35.3 Chemical sludge	100	MT/A	Chemical Sludge generated from primary treatment of ETP. Contains 40% Water and rest settled solids with coagulant.
1.6 Spent catalyst and molecular sieves	100	MT/A	Incidental Generation
33.2 Oily cotton waste and rags	15	MT/A	Cotton rags includes traces of oil used for cleaning
Other Hazardous Waste	3170	Nos./Y	Contains Dry lead acid and Ni Cd batteries generated occasionally
Other Hazardous Waste	50	MT/A	Spent resin used in DMW plant.

2) Solid Waste

Type of Solid Waste Generated	***Qty of Solid Waste***	***UOM***	***Concentration of Solid Waste***
Decoked Carbon	32	MT/A	Solid carbon particles generated during the decoking operation.
Activated Carbon and Charcoal	50	MT/A	Used in DMW plant in water filtration
Discarded Alumina	90	MT/A	used as filter media in air drier
Ceramic balls	10	MT/A	used as filter media in air drier
Metal Scrap	1300	MT/A	Generated from plant during maintainance etc.
Miscellaneous waste	450	MT/A	No saleable waste like small bits of paper, cotton, rubber
Biological sludge	1200	MT/A	Generated from Biological treatment in ETP
Wooden Scrap	300	MT/A	Generated from plant during maintainance etc.
Paper Glass Rubber scrap	80	MT/A	Generated from plant during maintainance etc.
Plastic Waste	300	MT/A	GenerateGenerated from plant during maintainance etc.

Part-G

Impact of the pollution Control measures taken on conservation of natural resources and consequently on the cost of production.

Description	***Reduction in Water Consumption (M3/day)***	***Reduction in Fuel & Solvent Consumption (KL/day)***	***Reduction in Raw Material (Kg)***	***Reduction in Power Consumption (KWH)***	***Capital Investment(in Lacs)***	***Reduction in Maintenance(in Lacs)***
Treated effluent reuse in Horticulture and fire Water make up	2876	0	0	0	0	0.0
UFRO treated water recycling in process	1152	0	0	0	0	0.0

Part-H

Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution.

[A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection	***Environmental Protection Measures***	***Capital Investment (Lacks)***
Monitoring for Ambient air, Ambient noise, Stack monitoring ,Waste Water & Treated Effluent, Ground Water, Meteorological parameters	APC	35.0
ISO Certification (Surveillance)	Env. Audit	2.4

NIO (Amba estuary monitoring)	WPC	35.0
CAAQMS and CEMS maintenance	APC	28.05
IWWTP operation and maintenance	WPC	294
World Environment day	Env. Awareness	0.5
Haz waste, biomedical waste Incineration, land fill	Waste Management	15.0
Horticulture (Tree plantation & Maintenance)	Green Belt	828

[B] Investment Proposed for next Year

Detail of measures for Environmental Protection	***Environmental Protection Measures***	***Capital Investment (Lacks)***
Monitoring for Ambient air, Ambient noise, Stack monitoring ,Waste Water & Treated Effluent, Ground Water, Meteorological parameters	APC	35.0
NIO (Amba estuary monitoring)	Environment Monitoring	35.0
ISO certification and Other Audits and Awards	Env. Awareness	3
Haz waste, biomedical waste Incineration, land fill	Waste Management	10
Horticulture (Tree plantation & Maintenance)	Green Belt	400

Part-I

Any other particulars for improving the quality of the environment.

Particulars

a) RIL commenced sustainability reporting, annually, on its triple-bottom line performance i.e. Communication of in-depth information on Environmental, Social and Economic Performance to all Stakeholders), from FY 2004-05. b) All its sustainability reports are externally assured and are Global Reporting Initiative (GRI) checked. The maiden report received ‘in-accordance’ status from GRI and all subsequent reports are ‘GRI Checked A+’ application level reports . C) RIL- NMD Completed 40 km of R

Name & Designation

Sachin Bhagwat Head -HSEF

UAN No:

MPCB-ENVIRONMENT_STATEMENT-0000046023

Submitted On:

19-09-2022