

COMPLIANCE REPORT OF ENVIRONMENTAL CLEARANCE

**(E.C. Letter No.: F. No. J-11011/107/2013-IA II (I) Dated 03-07-2014)
(For the Period 1st October'2022 to 31st March'2023)**

FOR

**Gas based Captive Power Plant with installed steam & power
capacity of 880 TPH & 195 MW at Dahej Petrochemical Complex
M/s. ONGC Petro Additions Ltd.
Located at - Plot no. Z-1 & Z-83, Z-83/1, Dahej SEZ Ltd.
Village-Ambheta, Taluka – Vagra
Dist. – Bharuch (Gujarat)**



Government of India

Ministry of Environment, Forests and Climate Change

F. No. J-11011/107/2013- IA II (I)

Indira Paryavaran Bhawan

Jorbagh, Lodhi Road

New Delhi – 110 003

E-mail : tchand2003@yahoo.co.uk

Dated: 3rd July 2014

To

Dr. P S V Rao, Chief Executive Officer,
M/s ONGC Petro Additions Ltd. (OPaL)
1st Floor "OMKARA" above Bank of Baroda
Near Sai Chowkri, Manjalpur,
Vadodara, Gujarat

E-mail: drsambhuvrao@opalindia.in Fax No. : 0265-6192666.

Subject: Gas based Captive Power Plant with installed steam & power capacity of 880 TPH & 195 MW of M/s ONGC Petro Addition Ltd. (OPaL) at Dahej Petrochemical Complex, Village Ambhetha, Taluka Vagra, district Bharuch, Gujarat – Environmental Clearance reg.

Sir,

This is with reference to Terms of Reference accorded by the State Level Expert Appraisal Committee, (SEAC), Gujarat, vide letter No. EIA-10-2011-1151(A)E 448 dated 01.05.2012 and letter No. EIA-10-2011-1151(A)-E/516 dated 20.04.2013 of SEAC, Gujarat transferring the application to this Ministry for environmental clearance and your letter no. OPAL/BDA/EN/POW/001/2012-13 dated 25th March, 2013 along with project documents including EIA-EMP Report and subsequent communications vide your letter dated 14.08.2013 and 17.04.2014 seeking environmental clearance on the aforesaid subject.

Gas based thermal power plants < 500 MW listed in para 1(d) of schedule of EIA Notification, 2006 are covered under category 'B'. Since project is located in the existing petrochemical complex [listed in 5©] and integrated in nature, the proposal is treated as Category 'A' and appraised at Central level.

2. The Ministry of Environment and Forests has examined the application. It is noted that the proposal is for setting up of Gas based Captive Power Plant with installed steam & power capacity of 880 TPH & 195 MW of M/s ONGC Petro Additions Ltd. (OPaL) at Dahej Petrochemical Complex, Village Ambhetha, Taluka Vagra, district Bharuch, Gujarat. MoEF vide letter no J-11011/316/2006-IA II (I) dated 21st November, 2007 has issued environmental clearance to M/s ONGC Petro Additions Ltd. for Dahej Petrochemical complex. The present proposed is for installation of a captive power plant of configuration of 2x220 TPH Utility Boiler (UB) + 2x30 MW Steam Turbine Generator (STG) + 4 x 33.75 Gas Turbine Generators (GTGs) + 4 x110 TPH Heat Recovery Steam Generator (HRSG) and associated utilities. DG set (8.3 MW) and DG set (1650 KVA) will be installed. The CPP project will be implemented within the already allocated plot of area of 503 ha of Dahej Petrochemical Complex,

out of which greenbelt will be developed in 50 ha. Total cost of the CPP project is Rs. 1840 crores, out of which Rs. 280 crores and Rs. 35-50 crores respectively, are earmarked towards capital cost and recurring cost per annum for pollution control measures.

3. It is reported that no eco-sensitive areas such as National Parks, Wild Life Sanctuaries are located within 10 Km distance. The project is located at a distance of 7 Km from Sea coast and less than 1 Km distance from the river coast respectively. The project attracts CRZ notification, 2011. The Gujarat Coastal Zonal Management Authority vide clarification letter no. ENV-10-2013-33-E dated 17th April, 2014 regarding the applicability of CRZ Notification 2011 for petrochemical complex at Dahej, District Bharuch has clarified that proposed Captive Power plant is located within plot No.Z-1 only, which is outside the CRZ area, hence the Captive Power Plant is outside the CRZ area and does not attract the provisions of the CRZ Notification 2011.

4. Stack of adequate height will be provided to the gas turbine generator, heat recovery steam generators and boilers. Low NOx burner will be installed to minimize Nox emissions. Total water requirement will be 130,320 m³/day. Out of which, fresh water requirement from GIDC/DSL water supply will be 98400 m³/day and remaining water requirement (31920 m³/day) will be met from treated effluents. Total wastewater generation will be 35,520m³/day and treated in effluent treatment plant (ETP). Treated effluent (14400m³/day) will be recycled for cooling tower make up water and treated effluent (17520m³/day) will be reused as DM plant feed. High TDS effluent stream of 3600m³/day will be discharged in Gulf of Cambay. Domestic effluent will be treated in sewage treatment plant (STP). Waste oil, used batteries and tarry residues will be sold to authorized recyclers/re-processors.

5. M/s SEZ Dahej Ltd. is a JV of Gujarat Industrial Development Corp. (GIDC) and Oil & Natural Gas Commission (ONGC) was notified as a Multi-Product SEZ vide Notification dated 20.12.2006 of Ministry of Commerce and Industry, GoI. Public Hearing was conducted for M/s Dahej SEZ Ltd on 17.08.2007 and M/s SEZ Dahej Ltd. obtained an environmental clearance from MOEF vide letter dated 17.03.2010. In view of the above, Public Hearing / consultation has been exempted due to project being located in SEZ Dahej, as per stage Section 7 (i), III Stage (3), Para (i)(b) of the EIA Notification 2006.

6. The proposal for terms of reference was considered by the SEAC, Gujarat in its meeting held on 24th January, 2012. The EIA-EMP Report was considered by the Reconstituted Expert Appraisal Committee (Industry) in the MOEF in its 9th & 12th meetings held during 10th-11th June, 2013 and 30th September -1st October, 2013 respectively. Based on information submitted and presentation made by you and Environmental Consultant namely M/s NEERI, the Committee recommended the proposal for environmental clearance.

7. The Ministry of Environment and Forests, based on the recommendations of the EAC(I) hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14th September, 2006 subject to strict compliance of the following specific and general conditions:

A. SPECIFIC CONDITIONS:

- i) Only permissible activities shall be carried out with prior approval in the 1.05 ha of CRZ area.
- ii) All the conditions stipulated in the environmental clearance No. J-11011/316/2006-IA II (I) dated 21st November, 2007 accorded for the existing projects shall be implemented.

- iii) Adequate stack height shall be provided to gas turbine generator, heat recovery steam generators and boilers. Exit velocity of flue gases shall not be less than 22 m/sec. Low NOx burners shall be provided to control NOx emissions.
- iv) Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009. The company shall upload the results of monitored data on its 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 Gujarat Pollution Control Board (GPCB).
- v) In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. 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 GPCB.
- vi) The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Well designed acoustic enclosures for the DG sets and noise emitting equipments to achieve the desirable insertion loss viz. 25 dB(A) shall be provided.
- vii) Total fresh water requirement from GIDC/DSL water supply shall not exceed 98,400m³/day.
- viii) As proposed, industrial effluent generation shall not exceed 35,520m³/day. Industrial effluent shall be treated in ETP. Treated effluent (14400m³/day) shall be recycled for cooling tower make up water and treated effluent (17520m³/day) shall be reused as DM plant feed. High TDS effluent stream (3600 m³/day) shall be discharged into Gulf of Cambay through close pipeline of GIDC after conforming to the standards prescribed for the effluent discharge and obtaining permission from the GPCB. No process effluent shall be discharged in and around the project site.
- ix) High TDS effluent stream shall be passed through guard pond. Online pH meter, flow meter and TOC analyzer shall be installed.
- x) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xi) Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.
- xii) 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 GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire fighting facilities in case of emergency.
- xiii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.
- xiv) A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises
- xv) ESR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the

- development of project itself. Company shall provide separate budget for community development activities and income generating programmes.
- xvi) An Environmental Cell comprising of atleast one expert in environmental science / engineering, occupational health and social scientist, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the head of the organization who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.
 - xvii) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
 - xviii) Green belt shall be developed in 50 ha land out of the total plant area. Selection of plant species shall be as per the CPCB guidelines.
 - xix) All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.
 - 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.

B. GENERAL CONDITIONS:

- i. The project authorities shall strictly adhere to the stipulations made by the Gujarat Pollution Control Board.
- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. 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.
- 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 stations is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- iv. 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).
- v. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.

- vi. Usage of Personnel Protection Equipments (PPEs) by all employees/ workers shall be ensured.
 - vii. 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, risk mitigation measures and Public Hearing relating to the project shall be implemented.
 - viii. The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.
 - ix. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
 - x. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
 - 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 and Forests 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.
 - xii. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local Body and the local NGO, if any, from who suggestions/ representations, if any, were received while processing the proposal.
 - 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, the respective Zonal Office of CPCB and the Gujarat Pollution Control Board. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
 - 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 by e-mail.
 - 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 www.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.
 - 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.
8. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

9. The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.

10. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.



(Dr. T. Chandini)
Director

Copy to:

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar - 382 010, Gujarat.
2. The Additional Principal Chief Conservator of Forests(central), Ministry of Environment & Forests, Regional Office, E-5, Arera Colony, Link Road -3, Bhopal -462 016, M.P.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar-382 043, Gujarat.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Guard File/Monitoring File/Record File.

HALF YEARLY COMPLIANCE REPORT TO ENVIRONMENTAL CLEARANCE CONDITIONS (For the Period of: October'2022 to March'2023)

❖ **Gas based Captive Power Plant with installed steam & power capacity of 880 TPH & 195 MW.**

❖ **Status of Consent to Establish & Operate from GPCB:**

- Consent to establish was granted by GPCB vide reference letter CTE Order Ref. No.: GPCB/BRCH/NOC-3498/297116, Dated: 24-10- 2007 and amended letter CTE Order Ref. No.: GPCB/BRCH/NOC-3498/ID-30328/141778, Dated: 26-03-2013 which was valid up to 14-03-2018.
- Consent to establish (Amendment letter-II for setting up of an industrial Plant/activity) was granted by GPCB, CTE Amendment No.: 73651 (Ref. No. GPCB/BRCH/CCA-154 (3)/ID- 30328/334040), Dated: 07-12-2015.
- Consent to Establish (CTE) (Amendment) for laying (Installation) of LPG pipeline from GCPTCL storage tank to tank farm of the unit (OPaL) was granted by GPCB, CTE Amendment No.: GPCB/BRCH-B/CCA-154 (4)/ID-30328/497250, Dated: 08-03-2019.
- Consent to Establish (CTE) (Amendment) for laying (Installation) Naptha pipeline from ONGC Gas Processing Complex Hazira to OPaL Dahej, CTE Amendment No.: GPCB/BRCH-B/CCA-154 (5)/ID-30328/497542, Dated: 11-03-2019.
- Consent to Establish (NOC) (Amendment) for modification in industrial plant/activities to OPaL Dahej, CTE Amendment No.: GPCB/BRCH-B/CCA-154 (6)/ID-30328/555188, Dated: 19-02- 2020.
- Consent to Establish (NOC) (Amendment) (Provisional) for modification in industrial plant/activities to OPaL Dahej, vide CTE amendment no: 175601 Dated: 16.09.2020 for laying of additional Decoke pot at Dual Feed Cracker unit.
- Consent to Establish (NOC) (Amendment) for proposed changes in an industrial plant activity to OPaL Dahej, vide CTE amendment no: 109306., which is valid up to 15-09-2025.
- Consent to Establish (NOC) (Amendment) for setting up vapour recovery unit at Gantry- 2 & Gantry-5 area at OPaL, Dahej, vide CTE amendment no: 113596 dtd: 13.08.2021.
- Consent to Establish (NOC) (Amendment) for change in product mix for additional product and installation of effluent discharge line for deep sea disposal at OPaL, Dahej, vide CTE amendment no: 123008 dtd: 23.12.2022.
- Consent to Establish (NOC) (Amendment) for installation of additional flare stack in flare area at OPaL, Dahej, vide CTE amendment no: 123009 dtd: 04.03.2023.

❖ **Status of consolidated consent and Authorization from GPCB:**

- CCA amendment no: AWH – 118700 dtd: 17.11.2022
- CCA renewal consent order no.: AWH - 109305 valid till 07.07.2025
- Consolidated Consent & Authorization (CC&A) was granted by GPCB vide consent order No.: AWH-73652, Dated: 07- 12-2015, which was valid up to 07-07-2020.

- Consolidated Consent and Authorization (CC&A) Amendment for HC Feed Pipeline and Hazardous waste disposal. (CC&A) was granted by GPCB vide consent order No.: GPCB/BRCH- B/CCA-154(4)/ID-30328/454577, Dated: 08-05-2018, which was valid up to 07-07-2020.

❖ **CPP Project status:**

As on 31.03.2023, the Project has been 100% commissioned.

<u>Sr. No</u>	<u>UNIT</u>	<u>EPC</u>	<u>DATE OF COMMENCEMENT (ACTUAL &/OR PLANNED)</u>	<u>DATE OF COMPLETION (ACTUAL &/OR PLANNED)</u>	<u>PROGRESS STATUS (%)</u>	<u>DETAILED PROGRESS REPORT</u>
1.	STEAM POWER GENERATION SYSTEM [SPTG (2 STG + 2 UB) PHASE I & (4 GTG + 4 HRSG) PHASE II]	M/s BHEL	23.09.2010 (Phase-I) / 15.04.2011 (Phase-II)	1 st Unit: 15.02.2013 Complete CPP: 15.12.2013	100%	The project has been 100% commissioned

❖ **Compliance to Conditions of Environmental Clearance:**

Sr. No.	Point	Compliance status											
A	Specific conditions												
i.	Only permissible activities shall be carried out with prior approval in the 1.05 ha of CRZ area.	Noted and being complied with											
ii.	All the conditions stipulated in the environmental clearance No. J-11011/316/2006- IA II (I) dated 21 st November, 2007 accorded for the existing projects shall be Implemented.	Being complied											
iii.	Adequate stack height shall be provided to gas turbine generator, heat recovery steam generators and boilers. Exit velocity of flue gases shall not be less than 22 m/sec. Low NOx burners shall be provided to control NOx emissions.	Being complied											
iv.	Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009. The company shall upload the results of monitored data on Its 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 Gujarat Pollution Control Board (GPCB).	Ambient air quality data of OPaL Complex collected as per NAAQMS standard notified by Ministry vide G.S.R. No. 826(E) dated 16 th November, 2009. Results of monitored data being uploaded at CPCB/GPCB server and displayed at main entrance gate, and submitted to regional office of MoEF, Zonal office of CPCB and Gujarat Pollution Control Board (GPCB). The results of Ambient air quality monitoring are provided in the Table no.1 mention below:											
Table.No.1: Ambient Air Quality Monitoring Data													
Max. and Min. of Ambient Air Quality Monitoring Data (Period: October - 2022 to March - 2023)													
LOCATION	Max. / Min.	Parameter with Results (µg/m ³)											
		PM ₁₀ (ug/ m ³)	PM _{2.5} (ug/ m ³)	SO ₂ (ug/ m ³)	NO ₂ (ug/ m ³)	CO (mg/ m ³)	O ₃ (ug/ m ³)	NH ₃ (ug/ m ³)	Pb (ug/ m ³)	As (ng/ m ³)	Ni (ng/ m ³)	C ₆ H ₆ (ug/ m ³)	B(a)P (ng/ m ³)
AAQM-1 (Near 220 KV Switch Yard Control Room)	Max.	88	33	19.4	22.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Min.	71	18	11.1	13.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
AAQM-2 (Near Sub Station:11)	Max.	88	32	18.9	26.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Min.	71	18	12.4	15.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
AAQM-3 (Near Sub Station:15)	Max.	86	34	18.9	23.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Min.	64	14	10.4	12.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Permissible Limit as per NAAQMS		100	60	80	80	2.0	100	400	1.0	6.0	20	5.0	1.0
<p>NOTE: 1) Ambient Air Monitoring carried out for 24 hours' time period, 2) NAAQMS: National Ambient Air Quality Monitoring Standard, 3) BDL: Below Detection Limit. Minimum Detection Limits: CO (1.0 mg/m³), O₃ (5.0 µg/m³), NH₃ (5.0 µg/m³), Pb (0.5 µg/m³), As (1.0 ng/m³), Ni (1.0 ng/m³), C₆H₆ (1.0 µg/m³), B(a)P (0.1 ng/m³) Ambient Air quality monitoring was carried out by NABL accredited laboratory M/s. UniStar Environment and Research Labs Pvt. Ltd., Vapi, NABL Certificate No. TC-7753, NABL Valid Until: 22.09.2024.</p>													
v.	In plant control measures for checking fugitive emissions from all the vulnerable sources shall be	Being Complied											

	provided.																					
	Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system.	Being Complied																				
	Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions.	There is no dust emission in loading and unloading area.																				
	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 GPCB.	Being Complied																				
vi.	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards.	Adequate stack height provided in the D.G. sets.																				
	Well-designed acoustic enclosures for the DG sets and noise emitting equipment's to achieve the desirable Insertion loss viz. 25dB (A) shall be provided.	Acoustic enclosures are provided in DG sets to achieve the desirable insertion loss. At other sources of noises, noise control measures like acoustic hoods, silencers, enclosures are also provided.																				
vii.	Total fresh water requirement from GIDC/DSL water supply shall not exceed 98400 m ³ /day.	Being complied. <table border="1"> <thead> <tr> <th colspan="2">Last six-Month Fresh Water supply</th> </tr> <tr> <th>Month</th> <th>Qty. In M³</th> </tr> </thead> <tbody> <tr> <td>October-2022</td> <td>1217883</td> </tr> <tr> <td>November-2022</td> <td>1348274</td> </tr> <tr> <td>December-2022</td> <td>1242992</td> </tr> <tr> <td>January-2023</td> <td>1131089</td> </tr> <tr> <td>February-2023</td> <td>1089246</td> </tr> <tr> <td>March-2023</td> <td>1210114</td> </tr> <tr> <td>Total for Six Month, in M3</td> <td>7239598</td> </tr> <tr> <td>Water supplied M3 per day</td> <td>39778.01</td> </tr> </tbody> </table>	Last six-Month Fresh Water supply		Month	Qty. In M ³	October-2022	1217883	November-2022	1348274	December-2022	1242992	January-2023	1131089	February-2023	1089246	March-2023	1210114	Total for Six Month, in M3	7239598	Water supplied M3 per day	39778.01
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viii.	As proposed, Industrial effluent generation shall not exceed 35,520 m ³ /day. Industrial effluent shall be treated in ETP.	Industrial effluent generation well within the limit, and industrial effluent treated in dedicated effluent treatment plant including primary, secondary and tertiary treatment. <table border="1"> <thead> <tr> <th colspan="2">Last six-month Effluent generation</th> </tr> <tr> <th>Month</th> <th>Quantity (M³)</th> </tr> </thead> <tbody> <tr> <td>October-2022</td> <td>241767</td> </tr> <tr> <td>November-2022</td> <td>199869</td> </tr> <tr> <td>December-2022</td> <td>354174</td> </tr> <tr> <td>January-2023</td> <td>391789</td> </tr> <tr> <td>February-2023</td> <td>367787</td> </tr> <tr> <td>March-2023</td> <td>445997</td> </tr> <tr> <td>Total effluent generation for Six Month, in m3</td> <td>2001383</td> </tr> </tbody> </table>	Last six-month Effluent generation		Month	Quantity (M ³)	October-2022	241767	November-2022	199869	December-2022	354174	January-2023	391789	February-2023	367787	March-2023	445997	Total effluent generation for Six Month, in m3	2001383		
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Total effluent generation for Six Month, in m3	2001383																					

		Effluent generation in m3 per day	10996.61																				
	Treated effluent {14400m ³ /day) shall be recycled for cooling tower make up water and treated effluent (17520m ³ /day) shall be reused as DM plant feed.	The treated effluent is recycled as make-up water to cooling towers and reused in DM plant feed.	<table border="1"> <thead> <tr> <th>Month</th> <th>Water recycle Quantity (M³)</th> </tr> </thead> <tbody> <tr> <td>October-2022</td> <td>181286</td> </tr> <tr> <td>November-2022</td> <td>145758</td> </tr> <tr> <td>December-2022</td> <td>248209</td> </tr> <tr> <td>January-2023</td> <td>304087</td> </tr> <tr> <td>February-2023</td> <td>274156</td> </tr> <tr> <td>March-2023</td> <td>337898</td> </tr> <tr> <td>Total water recycles for Six Month, in m3</td> <td>1491394</td> </tr> <tr> <td>Water recycle in m3 per day</td> <td>8194.47</td> </tr> </tbody> </table>	Month	Water recycle Quantity (M ³)	October-2022	181286	November-2022	145758	December-2022	248209	January-2023	304087	February-2023	274156	March-2023	337898	Total water recycles for Six Month, in m3	1491394	Water recycle in m3 per day	8194.47		
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	High TDS effluent stream (3600 m ³ /day) shall be discharged into Gulf of Cambay through close pipeline of GIDC after conforming to the standards prescribed for the effluent discharge and obtaining permission from the GPCB. No process effluent shall be discharged Inland and around the project site.	Being complied Treated high TDS stream discharged in to Gulf of Cambay through close pipeline of GIDC after conforming to the GPCB prescribed standards.	<table border="1"> <thead> <tr> <th colspan="2">Last six Month Treated effluent discharge</th> </tr> <tr> <th>Month</th> <th>Quantity (M3)</th> </tr> </thead> <tbody> <tr> <td>October-2022</td> <td>69362</td> </tr> <tr> <td>November-2022</td> <td>75858</td> </tr> <tr> <td>December-2022</td> <td>91938</td> </tr> <tr> <td>January-2023</td> <td>98660</td> </tr> <tr> <td>February-2023</td> <td>88113</td> </tr> <tr> <td>March-2023</td> <td>104898</td> </tr> <tr> <td>Total treated effluent discharge for Six Month, in m3</td> <td>528829</td> </tr> <tr> <td>Treated effluent discharge in m3 per day</td> <td>2905.65</td> </tr> </tbody> </table>	Last six Month Treated effluent discharge		Month	Quantity (M3)	October-2022	69362	November-2022	75858	December-2022	91938	January-2023	98660	February-2023	88113	March-2023	104898	Total treated effluent discharge for Six Month, in m3	528829	Treated effluent discharge in m3 per day	2905.65
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ix.	High TDS effluent stream shall be passed through guard pond. Online pH meter, flow meter and TOC analyzer shall be installed.	High TDS effluent stream is being passed through final collection tank. Online pH meter, flow meter and TOC analyzer are installed.																					
x.	Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	There is no mixing of process effluent with storm water and dedicated arrangement is made to separately collect effluent from process areas and to direct it to ETP for its treatment and discharge. Separate storm water channels network is laid which is finally passed through to 02 nos. of oil catchers.																					
xi.	Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained.	The source of surface water is taken by GIDC water supply. Which is being metered and recorded regularly. Pl. refer condition no. vii.																					

	The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	Ground water quality is being monitored at fixed monitoring points with required parameters considering heavy metals content on regular basis. Report of analysis is enclosed herewith as Annexure-I .
xii.	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 GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF.	OPaL have obtained authorization from GPCB vide CCA order no. AWH-109305 dated 08/07/2020 valid up to 07/07/2025. Copy of TSDF membership is placed as Annexure-II .
	Measures shall be taken for firefighting facilities in case of emergency.	Emergency Response & Control Procedure with firefighting facilities is considered for OPaL's petrochemical complex and details of the same are enclosed as Annexure- III .
xiii.	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.	OPaL has made arrangement for Protection of possible fire hazards during manufacturing process in material handling. • Firefighting system as per the norms. Details are given in ERCP plan which is enclosed as Annexure- III .
xiv.	A well-designed rainwater harvesting system shall be put in place within six months, which shall comprise of rainwater collection from the built up and open area In the plant premises.	Rain water harvesting measures have been provided for roof top rainwater harvesting from buildings. Rain Water from the Process unit areas is pumped to the Effluent Collection and Treatment System (ECTS) and is treated in a dedicated Contaminated Rain Water Treatment section. The treated rain water is reused in the plant premises.
xv.	ESR schemes identified based on need assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. Company shall provide separate budget for community development activates and income generating programmes.	Details of the expenditure under the Corporate Social responsibilities are enclosed as Annexure- IV .

xvi.	An Environmental Cell comprising of at least one expert. In environmental science/engineering, occupational health and social scientist, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the head of the organization who would be accountable for implementation of environmental regulations and social impact Improvement/mitigation measures.	Being Complied
xvii.	Training shall be Imparted to all employees on safety and health aspects of chemicals handling.	Being Complied
	Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis.	Pre-employment and routine periodical medical examinations for employees are being carried out on regular basis.
	Occupational health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health Surveillance of the workers carried out on regular basis and records maintained as per the Factories Act.
xviii.	Green belt shall be developed In 50 ha land out of the total plant area. Selection of plant species shall be as per the CPCB guidelines.	Being complied
xix.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be Implemented.	All Recommendations made in the rapid risk assessment report, disaster management plan and safety guidelines are complied with.
xx	Provision shall be made for the housing for the construction labor within the site with all necessary Infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, creche etc. The housing may be In the form of temporary structure to be removed after the completion of the project.	Not applicable since site is operational.
	All the construction wastes shall be managed so that there is no Impact on the surrounding Environment.	Noted
B	General Conditions	
i	The project authorities shall strictly adhere to the stipulations made by the Gujarat Pollution Control Board.	Noted
ii	No further expansion. or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. 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	Noted

	add additional environmental protection measures required, if any.						
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 stations is Installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Being complied					
iv	<p>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.</p> <p>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).</p>	<p>We regularly monitor noise level within the premises through NABL accredited laboratory. Noise control measures like acoustic hoods, silencers, enclosures etc.</p> <p>The ambient noise level is well within the permissible limit prescribed under Environment (protection) Act, 1986 Rules,1989 viz. 75 dBA (day time) and 70 dBA (night time). The results of which are enclosed herewith as Annexure: I.</p> <p>The Summary of noise level monitoring is provided in the Table no.2 mention below:</p>					
Table No.2: Noise Monitoring Data							
Noise Monitoring Data (Period October - 2022 to March - 2023)							
Month	Max./ Min.	NM-1, (Near Gate No.1)	NM-2, (Near Gate No.2)	NM-3, (Near Gate No.3)	NM-4, (Near Gate No.4)	NM-5, (Near Oil Catcher-01 Area)	NM-6, (Near Oil Cather-02 Area)
		Result dB (LEQ)					
October-22	Day time	65.2	54.3	51.7	62.4	61.8	57.2
	Night time	55.1	52.6	51.7	52.1	51.8	52.6
November-22	Day time	68.4	56.7	55.2	61.4	66.7	58.1
	Night time	52.4	48.6	52.3	54.7	51.6	50.7
December-22	Day time	67.2	58.8	61.1	62.3	64.7	57.2
	Night time	54.2	51.1	55.3	58.6	52.4	51.7
January-23	Day time	65.2	66.1	56.8	52.4	61.7	58.3
	Night time	55.4	52.7	54.6	51.7	52.7	51.6
February-23	Day time	68.2	62.4	58.2	61.7	58.7	61.4
	Night time	51.8	54.2	51.6	51.4	52.2	53.6
March-23	Day time	67.3	64.2	54.2	62.8	66.3	64.7
	Night time	52.3	54.6	52.7	54.6	51.8	54.1
Max.		68.4	66.1	61.1	62.8	66.7	64.7
Min.		51.8	48.6	51.6	51.4	51.6	50.7
<p>NOTE: Permissible Limit CPCB (Day Time): <75 Db(A), Permissible Limit CPCB (Night Time): <70 Db(A) Noise monitoring was carried out by NABL accredited laboratory M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi, NABL Certificate No. TC-7753, NABL Valid Until: 22.09.2024.</p>							
v.	<p>Training shall be Imparted to all employees on safety and health aspects of chemicals handling.</p> <p>Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis.</p>	Being complied					

	Training to all employees on handling of chemicals shall be imparted.	
vi.	Usage of Personnel Protection Equipment's (PPEs) by all employees/ workers shall be ensured.	Being complied.
vii.	The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. The recommendations made in the EIA, EMP in respect of environmental management, risk mitigation measures and Public Hearing relating to the project shall be Implemented.	Being complied.
viii.	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by Involving local villages and administration.	Details of CSR initiatives and activities by OPaL are enclosed in Annexure-IV .
ix.	The company shall undertake eco- developmental measures including community well fare measures in the project area for the overall Improvement of the environment.	Details of CSR initiatives and activities by OPaL are enclosed in Annexure-IV .
x.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	OPaL has a separate Environmental Cell comprising of required personnel /expert and also has a in-house lab capable to perform all required environment analysis.
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 and Forests 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.	As a part of HSE budget, environment budget is taken for various activities for environment management.
xii.	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local Body and the local NGO, if any, from who suggestions/ representations, if any, were received while processing the proposal.	The acknowledged copy of submitted EC letter copy to Panchayat, Zila Parisad/Municipal Corporation, Urban local Body is enclosed as Annexure- V .
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, the respective Zonal	We regularly submit Comprehensive EC compliance report for the period of April to September and October to March to the IRO Gandhinagar, respective Zonal Office of CPCB and the Gujarat Pollution Control Board well within the stipulated date.

	Office of CPCB and the Gujarat Pollution Control Board. A copy of Environmental Clearance and six-monthly compliance status reports shall be posted on the website of the company.	The copy of Environmental Clearance and six-monthly compliance status reports is being posted on the website of the company.
xiv	The environmental statement for each financial year ending 31 st 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 by email	We regularly submit the environmental statement for each financial year ending 31 st March in Form- V to the Gujarat Pollution Control Board.
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 www.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.	Advertisement for accorded EC, has given in local newspaper as English language in Times of India and Gujarati language in Divya Bhaskar on 10/07/2014. A copy of public notes for obtained EC in two local newspapers is placed as Annexure-VII .
	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.	Financial closure of entire commissioning amounts done Final approval of the project by the concerned authorities - Consolidated Consent & Authorization (CC&A) has been renewed by GPCB vide consent order No.: AWH-109305, Date of issue: 08.07.2020, which is valid till 07.07.2025 which is valid till 07.07.2025. A Copy of Consent to Established is placed as Annexure-VII & Consolidated Consent and Authorization is placed as Annexure-VIII . The date of start of project is 23.09.2010.

List of Annexure

No. of Annexure	Name of Annexure
I.	Monitoring Reports
II.	Copy of TSDF membership
III.	Copy of Emergency Response and Control Procedure.
IV.	Details of CSR activities.
V.	The acknowledged copy of submitted EC letter copy to Panchayat, Zila Parisad/Municipal Corporation, Urban local Body.
VI.	A copy of public notes for obtained EC in two local newspapers
VII.	Copy of Consent to Establish
VIII.	Copy of Consolidated Consent and Authorization