



**Oil and Natural Gas Corporation Ltd**  
**Health Safety and Environment Deptt.**  
**Hazira Plant- Surat**  
**Phone no. 0261-2875778/5781/5780**

No: ONGC/HZR/HSE/ENV/Six Monthly Report /Oct23-March-24

Dated: 27/06/2024

To  
Deputy Director General of Forests (C)  
Ministry of Environment, Forest and Climate Change,  
Integrated Regional Office, Gandhi Nagar, A- Wing 407 & 409,  
Aranya Bhawan Near CH-3 Circle, Sector 10A, Gandhi Nagar- 382010

**Sub: Six monthly compliance status report of MoEFCC stipulation for the period 01/10/2023 to 31/03/2024.**

Sir,

Please find enclosed herewith Compliance of Stipulations for Environmental clearance accorded by MoEFCC vide letter No F.No.J-11011/149/2016-IA-II(I) dated 22/03/2018 for Expansion of Hazira Gas Processing Complex by adding Captive Combined Power Plant(CCPP).

With Regards,

Copy to :

(1)Corporate HSE, ONGC, 3rd floor, Tower A,  
Deen Dayal Urja Bhavan,5, Nelson Mandela Marg, New Delhi -110 070

*R. Ramkumar Babu*  
27/06/2024  
(R Ramkumar Babu)  
GM (P)-I/c Env. Cell

आर रामकुमार बाबु / R RAMKUMAR BABU  
महाप्रबंधक (उत्पादन) / GM (PROD.)  
ओ. एन. जी. सी. हजिरा संयंत्र, सुरत  
ONGC HAZIRA PLANT, SURAT.

**Environmental clearance Accorded by MoEFCC vide letter No. F.No.J-11011/149/2016-IA-II(I) dated 22/03/2018 for Expansion of Hazira Gas Processing Complex by adding Captive Combined Power Plant(CCPP)**

No	Stipulations	Implementation Status
i	<p>The company shall revamp the effluent treatment plant to treat the waste water generated from the additional facilities including waste water from sulphur recovery unit. (This is amended condition as per MoEF Letter dated 10/10/2012).</p> <p>The treated waste water shall comply with the standards notified in the Environmental (Protection) Rules 1986.</p>	<p><u>Stipulation condition is fully Complied.</u></p> <p>ETP revamping was carried out in 2012 and was informed during 35<sup>th</sup> expert appraisal committee on 11/12 May 2012.( Copy of MOM has been submitted earlier.)</p> <p>Later New Equalisation Tank System was installed in WWTP at Hazira Plant for steadier inlet loading of ETP units and better control on quality of treated effluent for disposal conforming to GPCB norms on pollution parameters.</p> <p>The treated waste water complies with the standards notified in the Environmental (Protection) Rules 1986.</p> <p>Effluent parameters are monitored :-</p> <ul style="list-style-type: none"> <li>• Continuously by Online metering system measuring flow, pH, COD,BOD ,TSS which is linked to CPCB server.</li> <li>• Daily by Quality &amp; Process Control Laboratory-in house Laboratory,</li> <li>• Thrice a year during yearly environmental Audit by GPCB nominated agency.</li> </ul> <p>(For 2023-24, GPCB had assigned M/s S.N. PATEL RESEARCH CENTRE, UMRAKH, SURAT</p> <p>Detailed Reports is attached (<b>Annexure 1</b>)</p>

ii	<p>The company shall comply with new standards/norms that are being proposed by the CPCB for petrochemical plants and refineries.</p> <p>Point wise status of CPCB guidelines are as follows :-  Vide CPCB directive ONGC is required to install online effluent quality monitoring system to monitor pH,BOD,COD and TSS ( for Oil industries) and connect it to GPCB/CPCB server.</p> <p>To install continuous stack and process emission monitoring system for PM, CO, NOx and SO2 and connect and upload emission data to CPCB server</p>	<p>Point wise status of CPCB conditions is given below</p> <p><u>Stipulation is fully complied.</u></p> <p>Online effluent quality monitoring system to monitor flow ,pH, BOD,COD and TSS has been installed and Connected to CPCB and GPCB server  Effluent report is attached at <b>Annexure 1</b> for your kind reference.</p> <p><u>Stipulation is fully complied.</u></p> <p>Online Continuous monitoring system has been installed at all stack of Hazira Plant which monitors CO, SO2, NOx and PM. The system is linked up to CPCB/GPCB server on real time basis. Their all data is available online at GPCB server.</p>
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**SPECIFIC CONDITIONS CONTINUE---**

No	Stipulations	Implementation Status
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iii.	<p>The process emissions (SO<sub>2</sub>, NO<sub>x</sub>, HC, VOCs and Benzene) from various units shall conform to the standards prescribed by the Gujarat State Pollution Control Board from time to time.</p> <p>At no time the emission levels shall go beyond the stipulated standards.</p> <p>In the event of failure of pollution control system(s) 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.</p>	<p><u>Stipulation condition is fully Complied.</u></p> <p>Yes.</p> <p>These parameters are being monitored form time to time, as per GPCB approval.</p> <p>Yes. Emissions are within the stipulated standards.</p> <p><u>For Process Emission through Stack (SO<sub>2</sub>, H<sub>2</sub>S and HC):</u> Reports is attached at <b>Annexure 2.</b></p> <p>Online stack monitors round give data of the Pollutants in flue gases. The data indicates PM, SO<sub>2</sub>, NO<sub>x</sub>, HC are very well within limit prescribed by GPCB.</p>
No	Stipulations	Implementation Status
iv.	<p>Quarterly monitoring of fugitive emissions shall be carried out as per the guidelines of CPCB by fugitive emission detectors and Reports shall be submitted to the Ministry's regional office at Bhopal .</p>	<p><u>Stipulation condition fully complied</u></p> <p>Fugitive emission is regularly checked by HC and H<sub>2</sub>S detectors.</p>

v.	For control of fugitive emission all unsaturated hydrocarbon will be routed to the flare system and the flare system shall be designed for smoke less burning.	<u>Yes.</u> <u>Stipulation condition fully complied</u> .									
vi.	The company shall strictly follow all the recommendation mentioned in the charter on corporate responsibility for environmental protection (CREP).	<u>Stipulation Condition is complied.</u> All the recommendations of CREP are adhered to.									
vii.	Occupational health surveillance of worker shall be done on a regular basis and records maintained as per the factories Act.	Stipulation Condition is complied Occupational health surveillance of worker is being carried out on a regular basis by Occupational Health Centre at Hazira Plant. PME of all employees is done at regular interval depending upon age. PME (Occupational health surveillance Record) data for the period Oct-23 to March-24 available at OHC and tie up details with nearby hospital in case of any emergency is attached at <b>Annexure 3.</b>									
viii	Greenbelt shall be developed to mitigate the effect of fugitive emission all around the plant in a minimum 30% plant area in consultation with DFO as per CPCB guidelines.	<u>Stipulation condition is Complied</u> Yes. We have maintained green belt in 34% of project area .Greenbelt has been developed to mitigate the effect of fugitive emission all around the plant. In addition to designated green belts, Miscellaneous green areas include Additional plantation, gardens, lawns and golf course:- • Additional plantation inside campus includes- horticulture plantation coconut, Chikoo (sapota) ,jamun and mango plantation. • Annually we carry out plantation inside and outside plant. The greenbelt area in plant is given in table below;_									
		<table border="1"> <thead> <tr> <th>Direction</th> <th>Appro. width, length And area</th> <th>Estimated dry bushes and t</th> </tr> </thead> <tbody> <tr> <td>GREENBELT-I</td> <td>W=25 m,L=2.8 Km,A=7.0 Ha</td> <td>25% area i.e. 1.75 Ha</td> </tr> <tr> <td>GREENBELT-II</td> <td>W=250 m,L= 2.3 Km,A=57.5 Ha</td> <td>35% area i.e.20.13 Ha</td> </tr> </tbody> </table>	Direction	Appro. width, length And area	Estimated dry bushes and t	GREENBELT-I	W=25 m,L=2.8 Km,A=7.0 Ha	25% area i.e. 1.75 Ha	GREENBELT-II	W=250 m,L= 2.3 Km,A=57.5 Ha	35% area i.e.20.13 Ha
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GREENBELT-II	W=250 m,L= 2.3 Km,A=57.5 Ha	35% area i.e.20.13 Ha									

		GREENBELT-III	W=500 m,L=1.0 Km,A= 50 Ha	35% area i.e.20.12 Ha								
		GREENBELT-IV	W=300 m,L=3.0 Km,A= 90 Ha	30% area i.e.27 Ha								
		Area of green belt around periphery of plant	214.5 Ha	69 Ha								
		Miscellaneous green belt	25 Ha									
		Total area under Green belt	240 Ha									
		<p>Thus total area under green belt is appr.240 Ha, making 34 % of plant area. ONGC, Hazira is committed to maintain green belt area and tree plantation activities are carried out from time to time. 34% of Project area is covered by plants, However, it is submitted that the referred area is prone to high sea tide and monsoon flood so difficult to maintain permanent green cover in such area and hence patchy. Renewed efforts are being continued with mangrove plantation in the referred area. ONGC is committed to plant trees on vacant / unused land and suitable fund provision is being made. Green belt developed Layout plan is attached at <b>Annexure-4.</b></p>										
ix.	The Company shall make the suitable arrangement for disposal of catalyst waste and other wastes.	<p><u>Stipulation condition is fully complied</u>  Burnt oil, Ethyl mercaptane drums are sold through tendering to GPCB approved license holder agency.  Oily sludge, spent activated charcoal is disposed of to GPCB approved TSDF /CHWI facilities. Details of Hazardous waste authorization for storage, disposal is in page 5 CC &amp; A which is already been submitted for your kind reference.  Disposal of different varieties of waste in tabular form is given below:-</p> <table border="1"> <thead> <tr> <th>waste</th> <th>Mode of disposal</th> <th></th> <th>Copy of agreement</th> </tr> </thead> <tbody> <tr> <td>ETP sludge</td> <td>Collection, storage, transportation</td> <td>ONGC is member of GPCB approved</td> <td>GPCB XGN copy showing</td> </tr> </tbody> </table>			waste	Mode of disposal		Copy of agreement	ETP sludge	Collection, storage, transportation	ONGC is member of GPCB approved	GPCB XGN copy showing
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			Disposal at GPCB approved TSDF site.	TSDF/CHWI site-M/s Bharuch Enviro Infrastructure Ltd	TSDF site, GPCB authorization and membership have already been submitted.
		Asbestos gaskets and gland pickings	Collection, storage, transportation Disposal at GPCB approved TSDF site.	ONGC is member of GPCB approved TSDF site-M/s Bharuch Enviro Infrastructure Ltd	
		Used oil	Collection, storage, transportation & selling to GPCB approved refiners.		
		Discarded containers-ethyl mercaptan drums	Collection, storage and decontamination.		
		Used activated charcoal(spent carbon)	Collection, storage, transportation Disposal by incineration at GPCB approved CHWI site.	ONGC is member of GPCB approved TSDF/CHWI site-M/s Bharuch Enviro Infrastructure Ltd	
	The report of waste disposal shall be submitted to Ministry's Regional Office at Bhopal	ONGC is Member of M/s Bharuch Enviro Infrastructure Ltd. -GPCB approved TSDF and CHWI facility. Membership certificate of TSDF/CHWF site is attached at <b>Annexure-5.</b>			
x.	The company shall take necessary measures to prevent fire hazards, Containing oil spill and soil remediation as needed. At place of ground flaring the overhead flaring stack with knock out drums shall be installed to	<u>Stipulation condition is Complied.</u> Oil spill contingency plan is covered in our Disaster management Plan. Existing elevated flare stack with knock out drum is being used for this purpose. Ground flaring is not done at ONGC, Hazira. Details of firefighting facility are attached at <b>Annexure 6.</b> Obtaining of Fire NOC from Competent authority is under process.			

	minimize gaseous emission during flaring.	
xi.	The company shall carry out Risk assessment study and submit to the Ministry and its Regional Office Bhopal within 3 months from date of issue of this letter.	<u>Stipulation condition is Complied.</u>
xii	The company shall develop green belt in 33% area of the project as per the guidelines of the CPCB to mitigate the effect of fugitive emissions.	<u>Stipulation condition is Complied</u> Green belt developed Layout plan is attached at <b>Annexure-4.</b>
xiii.	To prevent fire and explosion at oil and gas facility, potential ignition sources should be kept to a minimum and adequate separation distance between potential ignition sources and flammable material shall be in place.	<u>Stipulation condition is Complied</u> Yes .The plant is designed as per OISD standard -118 based on safe layout principle and same is certified by PESO. It may kindly be noted that zone clarification are being mandatorily followed in the day to day O & M.
xiv	Provision shall be made for the housing of construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile, toilets, Mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	<u>Stipulation condition was Complied during construction phase.</u> Yes. It is certified that the plant is now completed is operational. As provisions laid down in Gujarat Factories Rules, 1963 were followed during construction of the unit and temporary structures have been removed, the stipulation may please be considered as complied.

**General Conditions:**



No	Stipulations	Implementation Status
i	The project authorities must strictly adhere to the stipulations made by the concerned state Pollution Control Board (SPCB) and the State Govt. and any other statutory body.	<p><u>Stipulation condition is Complied</u></p> <p>All the stipulations made by State Govt. and State Pollution Control Board are strictly adhered to.</p> <p>GPCB has given CC &amp; A No.AWH-129475 dated 04/10/2023 valid up to 22/04/2029. ONGC; Hazira has strictly adhered to its conditions.</p> <p>(1) Production is within limits of quantity given in CC &amp;A.</p> <p>(2) The effluent quantity and quality is within permissible limits.(<b>Annexure 1</b>)</p> <p>(3) Pollutants in Ambient Air are very much less than maximum permissible limit.</p> <p>(4) Flue gas emission is within permissible limits.</p> <p>(5) Generation of hazardous waste is less than permitted quantity. Hazardous waste is disposed to GPCB approved agencies.</p>
i	No further expansion or modification in the project shall be carried without prior approval of the Ministry of Environment and forests. In case of deviations or alterations in the project proposal from those submitted to the Ministry for clearance, a fresh reference shall be made to the Ministry.	<p>MoEF &amp; CC has granted EC for Modification in the process facilities of Gas and Condensate processing at Hazira plant vide F.No. J-11011/677/2008-IA.II (I) dated 27/04/2017 and MoEF &amp; CC has granted EC for Expansion of Hazira Gas Processing Complex by adding Captive Combined Power Plant (CCPP) vide F.No.J-11011/149/2016-IA-II(I) dated 22/03/2018.</p> <p>No further expansion or modification in the project shall be carried without prior approval of the Ministry of Environment and forests.</p>
i	<p>At no time, the emissions should go beyond the prescribed standards</p> <p>In the event of failure of any pollution control system, the respective well site should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.</p>	<p>Stipulation Condition is complied</p> <p>Stipulated conditions and recorded data for the period Apr-Sep-2023 is given in table below:-</p> <p>CC &amp; A ( AWH-129475 DATED 04/10/2023) accorded to ONGC, Hazira by GPCB has set following permissible limits-</p> <p>Online Continuous monitoring system has been installed at all stack of Hazira Plant which monitors CO, SO2, NOx and PM. The system is linked up to CPCB/GPCB server on real time basis. Their all data is available online at GPCB server. The data indicates CO, SO2, NOx and PM are very well within limit. Further H2S which is not in CC &amp; A is monitored by GPCB approved third party and is within limits.</p>

	Provision of adequate height of stack attached to DG sets and flare is to be done.	The data of last six months and all previous data indicate that the parameters are well within the permissible limits. If by any chance during any upsets, the parameters are deviating from their normal range, necessary corrective actions are taken to correct the parameters and it is ensured that the units are shut down before the prescribed limits are reached Height of flare/ stacks as per design is attached at <b>Annexure-7</b> . No DG set is installed in Plant.
N o	Stipulations	Implementation Status
i v .	Waste water shall be properly collected and treated so as to conform to the standards prescribed under EP Act and Rules and mentioned in the Consents provided by the relevant SPCB.	<u>Stipulation condition is fully Complied</u> Equalization tanks of capacity ensure proper collection and stabilization before treatment. The liquid effluents are being treated in WWTP and meet EP act, MINAS Standards and GPCB limits stipulated in CC & A Online monitoring system for final effluent discharged measuring flow, pH, COD, BOD ,TSS is linked to CPCB server. Further, effluent quality is <ul style="list-style-type: none"> <li>• Daily checked by in house Laboratory,</li> <li>• Three times a year during yearly Environmental Audit.</li> </ul> Detailed Reports of Effluent Analysis test reports is attached ( <b>Annexure 1</b> )
N o	Stipulations	Implementation Status
v	The overall noise level is and around the premises shall be limited within the prescribed standards (75 dBA) by providing; noise control measures including acoustic hoods, silencers enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules 1989 viz 75 dBA (day time) and 70 dBA (night time.).	<u>Stipulation condition is Complied</u> During Yearly environmental audit, Noise was recorded at 22 locations thrice in year. Data indicates noise level within permissible limits. Details of Noise level Recordings are in <b>Annexure 8</b> .  PPE such as Ear muffs/Ear plug are used in high noise areas as precaution. High noises prone are segregated with proper signage. Ear muff/ Ear Plugs have been provided to employees working in high noise areas. SOPs are in place to work in high noise areas.
v i	The project authorities must strictly comply with the provisions made in	<u>Stipulation condition is fully Complied</u> Prior approval under Factories Act and Explosives Act has been taken.

	<p>Manufacture, Storage and import of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals etc. Necessary approvals from Chief Controller of Explosives must be obtained before commission of the expansion project. if required Requisite On-site and Off-site Disaster management Plans will be prepared and implemented.</p>	<p>Factory License – Valid till 31.12.2028  Explosive License –  Storage of ARN / NGL :- 31.12.28  Storage of SKO &amp; Diesel :- 31.12.28  Storage of HSD (NFU):- 31.12.27  Storage of HSD for Diesel dispensing unit:- 31.12.27  Storage of ATF :- 31.12.28  Storage of Methanol :-31.12.27  Storage of LPG Phase-I  (6 Nos. Spheres):- 30.09.27  Storage of LPG Phase-II  (3 Nos. Spheres):- 30.09.27  Storage of Propane:- 30.09.27</p> <p>Onsite and offsite Emergency plan attached at Annexure-10.</p>			
v ii	<p>Disposal of hazardous waste shall be as per the Hazardous Waste (Management and Handling) Rules 2003. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous waste.</p>	<p><u>Stipulation condition is Complied</u></p>			
		waste	Mode of disposal		Agreement copy
		ETP sludge	Collection, storage, transportation Disposal at GPCB approved TSDF site.	ONGC is member of GPCB approved TSDF/CHWI site-M/s Bharuch Enviro Infrastructure Ltd	GPCB approval of TSDF site has already been submitted
		Asbestos gaskets and gland pickings	Collection, storage, transportation Disposal at GPCB approved TSDF site.	ONGC is member of GPCB approved TSDF site-M/s Bharuch Enviro Infrastructure Ltd	
		Used oil	Collection, storage, transportation and selling to		

			GPCB approved refiners.		
		Discarded containers-ethyl mercaptan drums	Collection, storage and decontamination		
		Used activated charcoal(spent carbon)	Collection, storage, transportation Disposal by incineration at GPCB approved CHWI site	ONGC is member of GPCB approved TSDF/CHWI site- M/s BEIL	
		<p>CC&amp;A Authorization by GPCB for Hazardous waste and form IV has already been submitted for your kind reference.</p> <p>ONGC is Member of M/s Bharuch Enviro Infrastructure Ltd. -GPCB approved TSDF and CHWI facility.</p>			
v ii i	<p>The project authorities will provide adequate funds as non-recurring and recurring expenditure 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</p> <p>The funds so provided should not be diverted from any other purposes.</p>	<p><u>Stipulation condition is Complied</u></p> <p>Funds are not and shall not be diverted.</p>			
i x .	<p>The company shall develop rain water harvesting structures to harvest the runoff water for recharge of ground water.</p>	<p><u>Explored the possibility of Rain Water Harvesting but found not feasible</u></p> <p>In the past M/S Gujarat Water resources development corporation (A Government of Gujarat undertaking) was entrusted the job of feasibility study for carrying out rainwater harvesting at Hazira Plant.</p> <p>Feasibility study for carrying out rainwater harvesting at Hazira Plant, recommended that there is no feasibility of recharging the fresh groundwater aquifer as the shallow aquifer is already saturated.</p> <p>However, as advised, the matter shall be taken up with MoEFCC for necessary amendment.</p>			
x	<p>The stipulated conditions will be monitored by the concerned Regional Office of this Ministry /Central Pollution</p>	<p><u>Stipulation condition is Complied</u></p>			

	<p>Control Board/State Pollution Control Board.</p> <p>A six monthly compliance report and the monitored data should be submitted to them regularly.</p> <p>It will also be displayed on Website of the Company.</p>	<p>Six monthly compliance reports are being sent to Regional Office, MoEFCC Gandhi Nagar .</p> <p>Monthly Reports in prescribed format is sent to GPCB.</p> <p>The data is displayed on website of company-ongcindia.com</p>
xi	<p>The Project Proponent should inform the that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/Committees and may also</p> <p>be seen at Website of the Ministry of Environment and Forests at <a href="http://www.env.for.nic.in">http://www.env.for.nic.in</a>. This should 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 locally concerned and a copy of the same should be forwarded concerned Regional office of this Ministry.</p>	<p>Exemption for Public Consultation given by MOEFCC vide letter No. MoEF vide letter No. F.No.J-11011/149/2016-IA-II(I) dated 25<sup>th</sup> July 2017 as the project is in the Notified Industrial area.</p>
xi i	<p>A separate environment management cell with Full-fledged laboratory facilities to carry out various management and monitoring function shall be set up under the control of a senior executive.</p>	<p><u>Stipulation condition is Complied</u></p> <p>Environment Cell headed by GM(P) has been functioning at ONGC, Hazira and report to CGM –Head HSE(Health, Safety and Environment) who in turn is reporting directly to ED-Plant Manager, Hazira Plant,ONGC,</p> <p>Details of persons in Environment Cell with Name and designation are as:-</p> <ol style="list-style-type: none"> <li>1. Sh. A. E. Udapure CGM(P)-Head HSE</li> <li>2. Sh. Ram Kumar Babu GM(P)-Environment Cell.</li> </ol>

		<p>3. Sh. Setu Goyal CE( Environment)  4. Sh. Ravish Kumar Sahani AEE(Environment)</p> <p>Hazira has the laboratory facilities and skilled personnel environmental quality monitoring of various environmental components under the supervision of CGM (Prodn), who is directly reporting to Head Operations. Sulphur Recovery Unit (SRU) Lab and Gas Sweeting Unit (GSU) Lab monitors H2S and Hydrocarbons in various streams including vent gases. Effluent Lab monitors pH, TSS, Oil &amp; Grease, COD, BOD, Sulphide in Process Waste Inlet &amp; outlet (PWS I , PWS III, New ETP,SSTP,SCTP ), Final effluent and storm water drain. In addition pH, TSS, Sulphide and free chlorine in sanitary outlet is monitored. Details of Laboratory facilities have already been submitted for your reference.  In view of above it may be treated as complied</p>
xi ii	<p>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</p>	<p>The project was awarded to BHEL  &amp;  Projects are in final stages of completion.</p>

## **ANALYSIS REPORT**

**Annexure-1:Quality of Treated Effluent**

Sr. No.	Parameters	Units	Consent Limit	Analysis Results 19/10/2023				Analysis Results 29/12/2023				Analysis Results 18/03/2024			
				Process Water Sump – I (I/L)	Process Water Sump – III(I/L)	FEDS-(O/L)	SCTP Outlet	Process Water Sump – I (I/L)	Process Water Sump – III(I/L)	FEDS-(O/L)	SCTP Outlet	Process Water Sump –I (I/L)	Process Water Sump – III(I/L)	FEDS-(O/L)	SCTP Outlet
1	pH	-	6.5 to 8.5	6.42	6.58	7.32	7.84	6.24	6.68	7.24	7.72	6.34	6.78	7.32	7.62
2	Temperature	°C	40	32	31	29	32	31	30	29	31	32	31	30	30
3	Colour	Pt. Co.	100	--	--	30	--	--	--	--	--	--	--	--	--
4	TSS	mg/L	300	72	58	24	72	78	64	28	82	84	72	26	74
5	Oil & Grease	mg/L	10	--	--	ND	--	--	--	04	--	--	--	--	--
6	Chloride	mg/L	600	--	--	426	--	--	--	--	--	--	--	--	--
7	Sulphate	mg/L	1000	--	--	438	--	--	--	--	--	--	--	--	--
8	Phenolic Compound	mg/L	1	--	--	ND	--	--	--	--	--	--	--	--	--
9	Sulphides	mg/L	2	-	--	0.45	--	--	--	0.03	--	--	--	--	--
10	Ammonical Nitrogen	mg/L	50	11.4	9.8	4.6	6.2	12.6	10.4	5.2	8.4	14	12	6	8
11	Total Chromium	mg/L	2	--	--	ND	--	--	--	--	--	--	--	--	--
12	Hexavalent Chromium	mg/L	0.1	--	--	ND	--	--	--	--	--	--	--	--	--
13	B.O.D.(5 days at 20 <sup>o</sup> C)	mg/L	30	102	78	16	24	108	84	22.5	25.5	98	74	18	24
14	C.O.D.	mg/L	100	240	226	48	74	282.67	245.33	56	88	264	210	48	75
15	TDS	mg/L	2100	1734	1560	1382	1436	1834	1684	1460	1626	2026	1830	1542	1748
16	Percent Sodium	mg/L	60	--	--	18	--	--	--	--	--	--	--	--	--
17	Copper	mg/L	2	--	--	ND	--	--	--	ND	--	--	--	ND	--
18	Nickel	mg/L	2	--	--	ND	--	--	--	ND	--	--	--	ND	--
19	Zinc	mg/L	5	--	--	ND	--	--	--	ND	--	--	--	ND	--
20	Cyanide	mg/L	0.2	--	--	ND	--	--	--	ND	--	--	--	ND	--
21	Fluoride	mg/L	1	--	--	ND	--	--	--	ND	--	--	--	ND	--
22	Mercury	mg/L	0.01	--	--	ND	--	--	--	ND	--	--	--	ND	--



**Annexure 2 - Quality of Flue Gas Stack**

Sr.No	Parameters	Geometric mean value for the month-February-2024	Consent Standard
	THERMAX BOILER		
1	PM mg/Nm <sup>3</sup>	2.08	150
2	SO <sub>2</sub> ppm	18.11	100
3	NO <sub>x</sub> ppm	16.96	50
	COGEN KTI BOILER		
1	PM mg/Nm <sup>3</sup>	7.4	150
2	SO <sub>2</sub> ppm	9.87	100
3	NO <sub>x</sub> ppm	0.08	50
	COGEN HRSG-3		
1	PM mg/Nm <sup>3</sup>	5.28	150
2	SO <sub>2</sub> ppm	1.86	100
3	NO <sub>x</sub> ppm	29.12	50
	COGEN HRSG-2		
1	PM mg/Nm <sup>3</sup>	5.1	150
2	SO <sub>2</sub> ppm	4.80	100
3	NO <sub>x</sub> ppm	38.08	50
	KRU-H901		
1	PM mg/Nm <sup>3</sup>	7.59	150
2	SO <sub>2</sub> ppm	10.60	100
3	NO <sub>x</sub> ppm	4.79	50
	KRU-H902		
1	PM mg/Nm <sup>3</sup>	1.92	150
2	SO <sub>2</sub> ppm	15.27	100
3	NO <sub>x</sub> ppm	3.63	50
	LPG FURNACE		
1	PM mg/Nm <sup>3</sup>	1.55	150

2	SO <sub>2</sub> ppm	27.27	100
3	NO <sub>x</sub> ppm	1.81	50
<b>COGEN HRSG-1</b>			
1	PM mg/Nm <sup>3</sup>	5.15	150
2	SO <sub>2</sub> ppm	7.60	100
3	NO <sub>x</sub> ppm	24.47	50
<b>IAEC BOILERS</b>			
1	PM mg/Nm <sup>3</sup>	3.49	150
2	SO <sub>2</sub> ppm	9.15	100
3	NO <sub>x</sub> ppm	6.33	50

**Process Stack Emission:**

Sr. No.	Description	Result			Consent Limit
		17/10/2023	27-28/12/2023	18/03/2024	
<b>SRU Trains - 61</b>					
1	PM mg/Nm <sup>3</sup>	--	ND	ND	150
2	SO <sub>2</sub> ppm	--	12.53	11.31	40
3	HC ppm	--	ND	ND	45
<b>SRU Trains - 62</b>					
1	PM mg/Nm <sup>3</sup>	ND	ND	--	150
2	SO <sub>2</sub> ppm	8.56	14.67	--	40
3	HC ppm	ND	ND	--	45
<b>SRU Trains - 63</b>					
1	PM mg/Nm <sup>3</sup>	ND	ND	ND	150
2	SO <sub>2</sub> ppm	10.39	11.61	10.70	40
3	HC ppm	ND	ND	ND	45
<b>SRU Trains - 64</b>					
1	PM mg/Nm <sup>3</sup>	ND	ND	ND	150
2	SO <sub>2</sub> ppm	9.17	16.50	18.64	40

3	HC ppm	ND	ND	ND	45
<b>SRU Trains - 66</b>					
1	PM mg/Nm <sup>3</sup>	ND	ND	ND	150
2	SO <sub>2</sub> ppm	10.70	15.89	16.81	40
3	HC ppm	ND	ND	ND	45

**Ambient Air Monitoring:**

Sr. No.	Parameter (µg/Nm <sup>3</sup> )	Result		Consent Limit
		17-18/10/2023	27-29/12/2023	
<b>SRU Gate</b>				
1	PM <sub>10</sub>	72.45	68.73	100
2	PM <sub>2.5</sub>	51.38	48.88	60
3	SO <sub>2</sub>	28.68	26.58	80
4	NO <sub>x</sub>	33.52	31.53	80
<b>COGEN Gate</b>				
1	PM <sub>10</sub>	84.77	74.27	100
2	PM <sub>2.5</sub>	54.63	51.72	60
3	SO <sub>2</sub>	32.52	29.48	80
4	NO <sub>x</sub>	37.03	32.65	80
<b>Training Centre/Administration</b>				
1	PM <sub>10</sub>	48.48	45.38	100
2	PM <sub>2.5</sub>	31.44	29.86	60
3	SO <sub>2</sub>	19.28	20.73	80
4	NO <sub>x</sub>	23.59	25.74	80
<b>LPG Gate</b>				
1	PM <sub>10</sub>	78.33	67.54	100
2	PM <sub>2.5</sub>	52.44	54.71	60
3	SO <sub>2</sub>	26.73	28.32	80
4	NO <sub>x</sub>	32.33	33.43	80

**Annexure-3: PME Data of ONGC Hazira Plant**

<b>Particulars</b>	<b>Number</b>
General PME of regular employees	61
Six Monthly Target group PME(Regular employees)	NIL
Six Monthly Target group PME(Contractual employee)	360

### Medical hospital Empanelment in the city

SN	Name	Address	Contact
1	Anand Hospital	1/5, 68b, Athughar Street, Timaliawad, Nanpura, Surat	2474268; 2474229; 9879044491
2	Banker's Cardiology Pvt Ltd	Opp. Lakeview Garden B/H Shardashayan School Floral Park Road, Umra, Surat	2324004; 2320404; 2252123; 8511174103
3	Baps Pramukhswami Hospital	Shri Pramukh Swami Maharaj Marg, Adajan Char Rasta, Surat.	2781000; 9879373901
4	Harsh Hospital & Maternity Home	Shakuntal "B" Apt., Nr. Sanghvi Tower, Gujarat Gas Circle, Adajan Road, Surat.	2781652; 9978987222; 9374593366
5	Metas Of Seventh-Day Adventist Mission Hospital	Athwalines, Surat-1	2667591-95; 3047777; 9574002121
6	Nirmal Multispecialty Hospital	Ring Road, Surat-395002	2333999; 2332999; 2331999; 9909945476; 9909940905

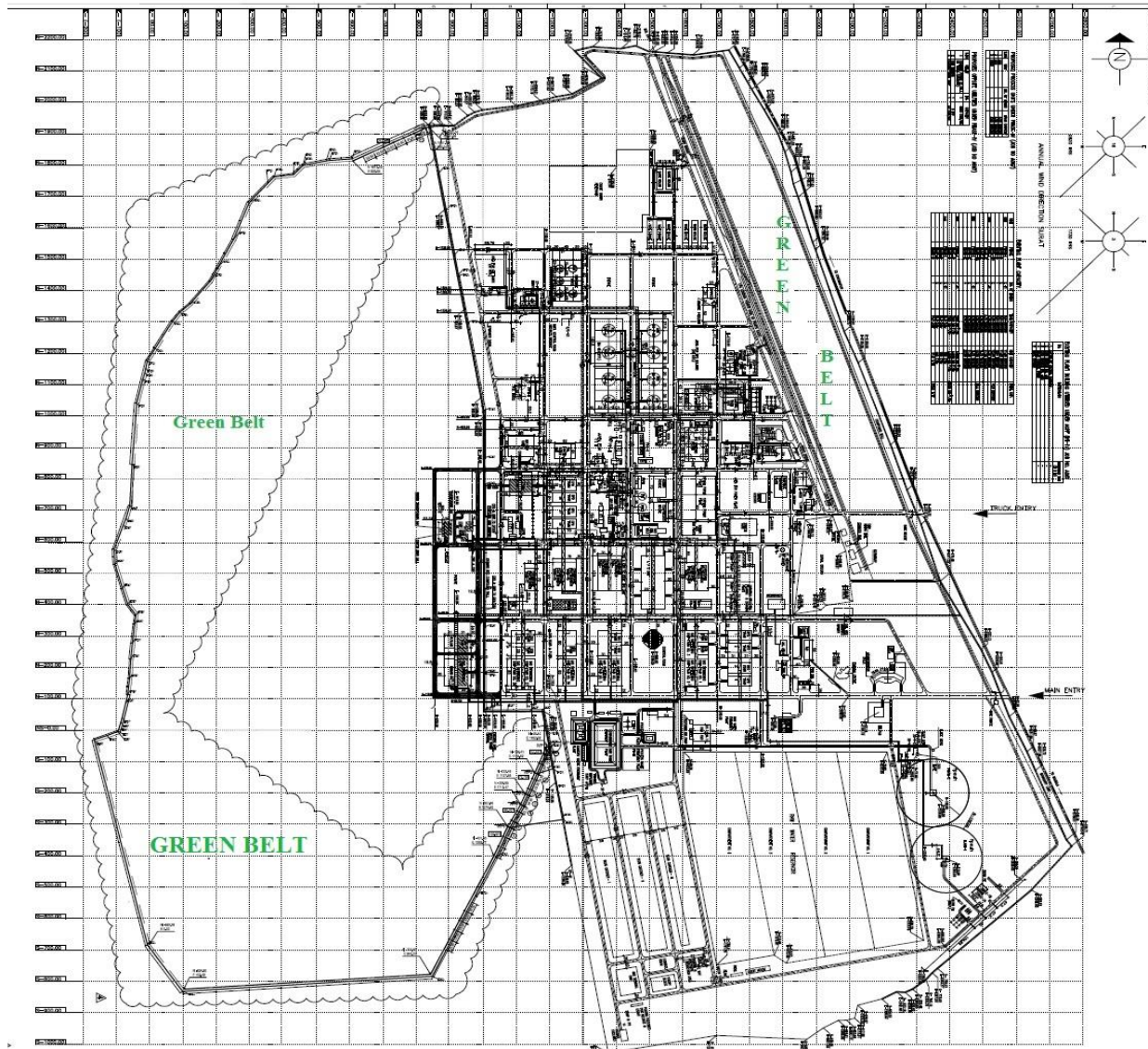


7	Bombay Maternity & Surgical Hospital	202, 2nd Floor, Bhagwati Ashish-2, Above New Janta Ice-Cream, Prem Prakash Circle, City Light Road, Surat	2253954
8.	Me & Mummy Hospital	3rd Floor, Jainidhi Complex, Opp. Bahumali Bldg., Nanpura, Surat	2471111; 2472222; 6777000; 9909091444
9.	Kadhiwala Orthopaedic Hospital	Athu 14gar Street , Near Sbi Bank, Nanpura, Surat	2464344; 2474344; 9712912735
10.	Surat Life Care Pvt. Ltd (Unique Hospital)	Opp. Kiran Motor, Nr. Canal, Civil Char Rasta, Sosyo Circle Lane, Off Ring Road, Surat	0261 6776600, 2636318/19
11	INS Hospital	Nr. Valentino Business Hub Opp. Khatodra BRTS Bus Stand Surat	0261- 2706000/270 6060
12.	Green Leaf Hospital (unit of Surat Medicare llp)	3rd & 4th Floor, Western Vesu Point, Vesu Char Rasta, Surat	0261 2203550-99
13.	Kiran Multi Super Specialty & Research Centre	Nr Sumul Diary, Katargam Surat	0261- 7161111
14	Shivam Retina Clinic & Eye Hospital	Hg-1-G, ITC Building, Majura Gate, Ring Road, Surat-395001	02612464414 /489441
15.	Param Hospital	Canal(brts) Road, Near Polaris Mall, Punagam, Surat-394530	9624240933/ 44/55
16	United Green Hosptial	Green Atria, Beside Silver Park Society In Front Of Sneh-Sankul Wadi, Anand Mahal Road, Adajan, Surat	02617199000 /001
17.	Nirali Cancer Hosptial	AM Naik Health Care Complex Survey No. 1522/p/2, Opp. GIDC Kabilpore, NH-48, Ganesh Sisodra, Dist. Navsari	9106067269

*Surat*

18.	Vision Eye super-specialty Hospital	3rd Floor, Union Point, Nr. Kakadia Complex, Parle Point, Ghod-dod Road, Surat - 395 007	9879207604
19.	Eye Q Vision Pvt. Ltd	2/3rd Floor, Raina Arcade, Nr. Navyug College, Rander Road, Surat	07824015453 /9722527141

# Annexure-4: GREEN BELT ONGC HAZIRA PLANT LAYOUT





**Annexure-5 : membership certificate of TSDF/CHWI site**

DATE. 07/04/2000

M/s. Oil and Natural Gas Corporation Ltd.  
(Hazira Gas Processing Complex)  
ONGC Nagar.  
P.O. Surat - 394 518.

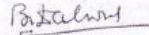
Sub : Membership Certificate for Common Solid Waste  
Disposal Facility.


Dear Sir,

We hereby certify that you have become member for the common Solid/Hazardous Waste Disposal Facility of Bharuch Enviro Infrastructure Ltd. at GIDC, Ankleshwar. You have booked solid waste quantity of 44 MT/year. You have also paid your capacity commitment charges. Your Membership No. is Oth./28

Thanking you,

Yours faithfully,  
for BHARUCH ENVIRO INFRASTRUCTURE LTD.

  
B.D. DALWADI  
Chief Manager (Works)

  
SUSADH KUMAR  
CE (E)  
ONGC HAZIRA

**Annexure-6: FIRE FIGHTING FACILITIES AT HAZIRA PLANT**

**A. DETAILS OF FIXED FIRE FIGHTING SYSTEM / NETWORK**

Sr. No	Item Description	Qty. (Nos.)	Capacity
1.	Fire water tank (Main FWPH)	02	4500 m <sup>3</sup> each tank
2.	Fire water tank (Addl. FWPH)	02	5000 m <sup>3</sup> each tank
3.	Electrical Driven Pumps	04(M) / 02(A)	410 m <sup>3</sup> /hr / 616 m <sup>3</sup> /hr
4.	Diesel Driven Pumps	04(M) / 04(A)	410 m <sup>3</sup> /hr / 616 m <sup>3</sup> /hr
5.	Jockey Pumps	02(M) / 01(A)	50 m <sup>3</sup> /hr

**B. DETAILS OF MOBILE FIRE APPLIANCES :**

Sr. No	Item Description	Qty. (Nos.)	Year of Purchase	Pump Capacity	Tank Capacity		
					Water	Foam	DCP
1.	Multipurpose F/T (25 TON)	04	2016-18	450	4500 lts	5500 lts	800 kg
2.	Foam Nurser (16 TON)	01	2016	560 lpm	N/A	8000 ltrs	N.A
3.	DCP Tender (16 TON)	01	2022	N/A	N/A	N/A	2000 Kg.
4.	Rescue Tender ( 25 TON)	01	2022				
	Total	07					

**C. DETAILS OF OTHER FIRE PUMPS:**

<b>Sr. No</b>	<b>Item Description</b>	<b>Qty. (Nos.)</b>	<b>Year of Purchase</b>	<b>Pump Capacity</b>
1.	Trailer Fire Pump	01	2018	2250 lpm
2.	Trailer Fire Pump	01	2012	1800 lpm
3.	Portable Fire Pump	03	2008	275 lpm
4.	Floating Pump	01	--	275 lpm

#### **D. DETAILS OF FIRE FIGHTING EQUIPMENT**

<b>Sr. No</b>	<b>Activity/Equipment</b>	<b>Qty</b>
1.	Fire Extinguisher	2245
2.	Hydrants & Monitors	1147 & 245
3.	HVLR	46
4.	Deluge valve along with spray system	56
5.	ROV along with spray system	136
6.	FOAM Pourer system	70
7.	Rim Seal Fire Protection system	08
8	IG-514	02
9	NOVEC-1230	13
10	CO2 Total flooding system	06
11	MPFT/RT/FT	09
12	SCBA Sets	269
13	Wind socks	50
14	Eye wash station	104
15	ELSA	80

#### **E. LIFE SAVING EQUIPMENT**

<b>Sr.No:</b>	<b>Equipment</b>	<b>QTY</b>
1.	Self-contained breathing apparatus (SCBA)	269
2.	Emergency Life Saving Apparatus (ELSA)	625

## Annexure-7:

Stack Height and Permissible limits of parameters for Process Stack and Flue Gas Stack as per Consent

Stack No.	Stack attached to	Stack Height in Meter	Air Pollution Control System	Parameter	Permissible limit
1	Steam Boiler (58 TPH)	32	----	Particulate Matter SO <sub>2</sub> NO <sub>x</sub>	150 mg/Nm <sup>3</sup> 100 ppm 50 ppm
2	HRSB Boiler-1	30	----	Particulate Matter SO <sub>2</sub> NO <sub>x</sub>	150 mg/Nm <sup>3</sup> 100 ppm 50 ppm
3	HRSB Boiler-2	30	----	Particulate Matter SO <sub>2</sub> NO <sub>x</sub>	150 mg/Nm <sup>3</sup> 100 ppm 50 ppm
4	HRSB Boiler-3	30	----	Particulate Matter SO <sub>2</sub> NO <sub>x</sub>	150 mg/Nm <sup>3</sup> 100 ppm 50 ppm
5	KTI Boiler	25	----	Particulate Matter SO <sub>2</sub> NO <sub>x</sub>	150 mg/Nm <sup>3</sup> 100 ppm 50 ppm
6	IAES Boiler-3 Nos.	25 (Each)	----	Particulate Matter SO <sub>2</sub> NO <sub>x</sub>	150 mg/Nm <sup>3</sup> 100 ppm 50 ppm
7	LPG Furnace	32	----	Particulate Matter SO <sub>2</sub> NO <sub>x</sub>	150 mg/Nm <sup>3</sup> 100 ppm 50 ppm
8	KRU-1 Furnace	25	----	Particulate Matter SO <sub>2</sub> NO <sub>x</sub>	150 mg/Nm <sup>3</sup> 100 ppm 50 ppm

9	KRU-2 Furnace	27	----	Particulate Matter SO <sub>2</sub> NO <sub>x</sub>	150 mg/Nm <sup>3</sup> 100 ppm 50 ppm
10	HRSB Boiler	43	----	Particulate Matter SO <sub>2</sub> NO <sub>x</sub> Mercury	30 mg/Nm <sup>3</sup> 100 mg/Nm <sup>3</sup> 100 mg/Nm <sup>3</sup> 0.03 mg/Nm <sup>3</sup>

### Process emission through the stack attached to the Incinerator

Stack No.	Stack attached to	Stack Height in Meter	Air Pollution Control System	Parameter	Permissible limit
1	SRU Incinerator	70	Alkali Scrubber	Particulate Matter	150 mg/Nm <sup>3</sup>
2	SRU Trains (61 to 66)	28	Alkali Scrubber	SO <sub>2</sub> HC	40 ppm 45 ppm

### Ambient Air Parameters and permissible limit

Parameters	Permissible limit $\mu\text{g}/\text{m}^3$	
	Annual	24 Hrs Average
PM 10	60	100
PM 2.5	40	60
SO <sub>2</sub>	50	80
NO <sub>x</sub>	40	80

## Annexure-8: NOISE MEASUREMENT

<b>Sr. No.</b>	<b>Location</b>	<b>Noise d(B)[A] 29/12/2023</b>
1	Main Gate	69
2	ETP Area	64
3	SRU Plant	71

**Annexure-9: ONSITE & OFFSITE EMERGENCY PLAN**

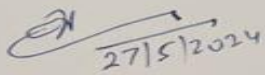

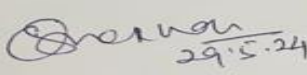
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**ON-SITE EMERGENCY PLAN**

(May - 2024)



**ONGC, Hazira Plant, Surat**

Reviewed by	Co-Reviewed by	Approved by
 27/5/2024 V A Rao GM(P)-HSE	 27/5/2024 A E Udapure CGM-Head HSE	 29.5.24 Chandra Shekhar ED-Plant Manager

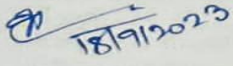
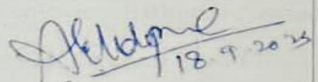
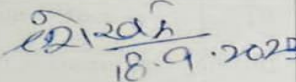


No. HZR/Offsite/EP/11

# Offsite Emergency Plan Of Hazira Plant (Revision-13)



Updated September, 2023

Prepared by	Reviewed by	Approved by
 18/9/2023 V A Rao GM(P)-HSE	 18.9.2023 Anant Udapure Head HSE (offsite)	 18.9.2023 Chandra Shekhar Plant Manager

Oil and Natural Gas Corporation Limited, Hazira Plant,  
PO. ONGC Nagar, District Surat – 394518.