BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
EASTERN ZONAL BENCH KOLKATA
IN

Original Application No.86/2025/EZ
(Earlier O.A. No.187/2025/PB)

IN THE MATTER OF

News Item titled "Assam environmentalist flags refinery effluent discharge into Dhansiri river" appearing in the New Indian Express dated 03.04.2025"

INDEX

Shantanu Dutta

(Dr. Shantanu Kr Dutta)
Scientist 'E' & RD Shillong
Central Pollution Control Board

Filed through Counsel

Dated: 11th August, 2025

Place: Shillong

Dr. Shantanu Kr. Dutta
Regional Director
Central Pollution Control Board
(Ministry of Environment, Forest & Climate Change, Govt. of India)
Regional Directorate - Shillong
BSNL NE - 1 Telecom Circle, CTO Building, Shillong-793001

SI/Instrument No 26
Date 11.8.2025

NOTARY
MELARIKA LYNGWA
EAST KHASI HILLS DISTRICT
REGD.:009
2025
GOVT OF MEGHALAYA

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
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REPLY ON BEHALF OF RESPONDENT NO. 1 i.e. CENTRAL POLLUTION CONTROL BOARD

1. That the Hon'ble National Green Tribunal Principal Bench vide order dated 28.04.2025 in Suo-moto matter in Original Application No. 187 of 2025 (PB), has directed Central Pollution Control Board (hereinafter referred to as "CPCB") to file Reply in the instant matter and transferred this matter to National Green Tribunal, Eastern Zonal Bench, Kolkata. Thereby, the reply is made in this instant Original Application in succeeding paragraphs.

2. That, CPCB is constituted under Section 3 of the Water (Prevention and Control of Pollution) Act, 1974. It performs the functions under the Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, and the Environment (Protection) Act, 1986.

3. That, this Suo-moto matter pertains to the alleged hazardous effluent discharge from Numaligarh Refinery Limited (NRL) into the Dhansiri river in Golaghat district, Guwahati.

4. That, the case was listed on 28.05.2025 in the Hon'ble NGT, Eastern Bench (EB). The counsel engaged by CPCB appeared before the Hon'ble EB and prayed for time for submission of affidavit. The Hon'ble NGT granted 4 weeks of time with effect from 28.05.2025 to all the respondents including CPCB to file the affidavit and fixed the next hearing on 15.08.2025.

NOTARY GOVT. MEGHALAYA
MELANKA LYNGWA
EAST KHASI HILLS DISTRICT
REGD.:009

REPLY:

4. That, it is humbly submitted that CPCB received a complaint by email dated 02.04.2025 from one Sh. Apurba Ballav Goswami, resident of Station Road, Ward No. 5 Golaghat, Assam (**Annexure-I**) informing about test report of a water sample collected on 11.03.2025 from Dhansiri river (Ponka Sapta Shahid Gaon), where NRL's effluent plant discharge falls in the river Dhansiri, analyzed by AGT Bio Sciences Pvt Limited , revealing exceedances of the effluent discharge standards for petroleum oil refineries notified by MoEF&CC vide GSR 186(E) dated 18.03.2008 under the Environment (Protection) Rules,1986 w.r.t. parameters BOD, COD and Oil & Grease and posing severe implications for aquatic life and the long-term health of the Dhansiri River.

5. It is humbly submitted that CPCB forwarded the above complaint to Assam Pollution Control Board (APCB) vide letter dated 09.04.2025 (**Annexure-II**) with request for investigating into the matter and taking appropriate action. Response from APCB is awaited.

6. That, the Unit has been operating with valid Consolidated Consent and Authorization (CCA) granted by Assam Pollution Control Board (APCB). The Copy of Consolidated Consent and Authorization dtd 29.07.2024 and its amendment order dtd 01.08.2025 are enclosed as **Annexure–III**/A and **Annexure–III**/B

7. That it is humbly submitted that Central Pollution Control Board (CPCB) has inspected M/s Numaligarh Refinery Limited (NRL) during **May 19-20, 2025** and collected effluent sample from ETP treated water discharge point. The collected effluent sample was analysed by M/s Greentech Environment Engineers and Consultants, an Environmental Laboratory accredited by NABL and recognized by Assam Pollution Control Board. The analytical results reveals that the effluent sample was meeting with Industry Specific effluent

discharge standards in respect of pH (7.74), BOD (11 mg/l), COD (88 mg/l) and Phenol (0.07 mg/l); however, the concentration of Oil and Grease (5.4 mg/l) and TSS (29 mg/l) was exceeding the standard of 5 mg/l and 20 mg/l respectively. The copy of the Analysis report is enclosed as **Annexure -IV.**

8. That in view of the above stated shortcomings, CPCB has requested Assam SPCB vide letter dated 08.08.2025 to direct the unit to take immediate action for rectification of the observed shortcomings **Annexure -V**.

9. That, M/s NRL uses about 50% of treated water in Fire water Line and remaining treated water is discharged through Storm drain to a stream called Sengajan, which finally discharges into the Dhansiri river, as reported by the Unit.

10. That, the answering respondent craves leave of the Hon'ble Tribunal to file additional reply, if required, in future.

11. That, in light of the above submission, it is respectfully submitted that this Answering respondent i.e. CPCB, shall abide by any order(s) or direction(s) passed by this Hon'ble tribunal in the instant Original Application.

Shantanu Dutta

(Dr. Shantanu Kr Dutta)
Scientist 'E' & RD Shillong
Central Pollution Control Board

Dr. Shantanu Kr. Dutta
Regional Director
Central Pollution Control Board
(Ministry of Environment, Forest & Climate Change, Govt. of India)
Regional Directorate - Shillong
BSNL NE - 1 Telecom Circle, CTO Building, Shillong-793001

NOTARY
MELANIKA LANGWA
EAST KHASI HILLS DISTRICT
REGD. NO.
GOVT OF MEGHALAYA

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
EASTERN ZONAL BENCH KOLKATA
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IN THE MATTER OF

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AFFIDAVIT

I, Shantanu Kr Dutta, Son of (L) Lalit Chandra Dutta, aged 53 years, having office at the Regional Directorate- Shillong, Central Pollution Control Board (CPCB), CTO Building (BSNL), Shillong 793 001 do hereby solemnly affirm and sincerely state as follows: -

That the deponent is authorized representative to represent the Respondent CPCB in the present case, and as such, I am well conversant with the facts and circumstances of the present case on the basis of the information derived from the official records, and hence, I am competent and authorized to verify, sign and swear this affidavit on behalf of the Respondent CPCB.

1. That the accompanying reply may be read part and parcel of the present affidavit as I am competent to swear this affidavit.
2. That the accompanying reply has been drafted and filed under my instructions and authority the contents thereof are true and correct on the basis of the record maintained during ordinary course of business of CPCB and available records and documents and the contents of the same are read over and explained to me and are not repeated herein for the sake of brevity.

IDENTIFIED BY ME

ADVOCATE

DEPONENT

Dr. Shantanu Kr. Dutta
Regional Director
Central Pollution Control Board
(Ministry of Environment, Forest & Climate Change, Govt. of India)
Regional Directorate - Shillong
BSNL NE - 1 Telecom Circle, CTO Building, Shillong-793001

NOTARY
MELARIKA LYNGWA
EAST KHASI HILLS DISTRICT
REGD.:009
2025
GOVT OF MEGHALAYA

VERIFICATION

Verified at Shillong on this day of 11th August, 2025 that the contents of the above reply are correct and true on the basis of the record of the cases as mentioned in the day-to-day affairs of the CPCB. Nothing has been concealed therefrom or mis-stated.

Verified at Shillong on this the 11th Day of August, 2025.

IDENTIFIED BY ME

DEPONENT

ADVOCATE

Dr. Shantanu Kr. Dutta
Regional Director
Central Pollution Control Board
(Ministry of Environment, Forest & Climate Change, Govt. of India)
Regional Directorate - Shillong
BSNL NE - 1 Telecom Circle, CTO Building, Shillong-793001

NOTARY
MELARIKA LYNGWA
EAST KHASI HILLS DISTRICT
REGD.:009
GOVT OF MEGHALAYA

MELARIKA LYNGWA
NOTARY
East Khasi Hills District
Government of Meghalaya

ANNEXURE-I

Fwd: Urgent Complaint Regarding Harmful Effluent Discharge by Numaligarh Refinery Limited

as ashbir singh <ashbirsingh.cpcb@nic.in>
Mon, 07 Apr 2025 5:14:50 PM +0530

To "Parul Shahi" <parulshahi.cpcb@supportgov.in>, "Sandeep Kumar Tatapudi" <sandeepkumart.cpcb@gov.in>

Please put up

========== Forwarded message ==========
From: Nazim Uddin <nazim.cpcb@nic.in>
To: "ashbir singh"<ashbirsingh.cpcb@nic.in>
Date: Mon, 07 Apr 2025 16:35:26 +0530
Subject: Fwd: Urgent Complaint Regarding Harmful Effluent Discharge by Numaligarh Refinery Limited
========== Forwarded message ==========

========== Forwarded message ==========
From: Chairman CPCB <ccb.cpcb@nic.in>
To: "Nazim Uddin"<nazim.cpcb@nic.in>, "REKHA HEMBROM"<prc.cpcb@nic.in>
Cc: "MEMBER SECRETARY CPCB"<mscb.cpcb@nic.in>
Date: Wed, 02 Apr 2025 12:22:34 +0530
Subject: Fwd: Urgent Complaint Regarding Harmful Effluent Discharge by Numaligarh Refinery Limited
========== Forwarded message ==========

========== Forwarded message ==========
From: APURBA BALLAV Goswami <apurbaballavgoswami@gmail.com>
To: <mscb.cpcb@nic.in>
Cc: <ccb.cpcb@nic.in>, <chairman@pcbassam.org>, <membersecretary@pcbassam.org>
Date: Wed, 02 Apr 2025 12:01:28 +0530
Subject: Urgent Complaint Regarding Harmful Effluent Discharge by Numaligarh Refinery Limited
========== Forwarded message ==========

To Date 02-04-2025
The Member Secretary
Central Pollution Control Board (CPCB)
Parivesh Bhawan, East Arjun Nagar
Delhi - 110032
Email: mscb.cpcb@nic.in

Subject: Urgent Complaint Regarding Harmful Effluent Discharge by Numaligarh Refinery Limited Threatening Aquatic Life and the Dhansiri River Ecosystem

Dear Sir,

Most humbly and respectfully, I would like to introduce myself as Sri Apurba Ballav Goswami, Social worker, Environmentalist and senior journalist of Golaghat District, Assam. Among many others, my social services have been recognized by His Excellency, Hon'ble Ex Governors of Assam Sri P. B. Acharya and Sri Banwarilal Purohit and bestowed me with appreciation letters. I was conferred the prestigious award for "investigative journalism" by the Sentinel group of Assam. Different institutions like Rashtriya Sayank

Sevak (RSS), Assam Sahitya Sabha, Marwari Juwa Manch etc. have recognized my contributions, and have bestowed me with different awards at different times. I also filed different PILs in Hon'ble Gauhati High Court at different times on different issues. I single handedly fought against the sand mafia of Assam. Recently, I have been conferred with "Bharat Gourav Puraskar" instituted by Bharat Vikash Sangram.

I am writing to express my grave concern over the hazardous effluent discharge from Numaligarh Refinery Limited (NRL) into the Dhansiri River, Golaghat, Assam, which violates permissible standards and endangers the river's fragile aquatic ecosystem. As a resident of Golaghat deeply connected to this vital waterway, I submit evidence from a test report (Job Ref. No: AGT-RS387-24-25, dated March 25, 2025) by AGT Biosciences (OPC) Private Limited, analyzing a water sample collected from Dhansiri river, (Ponka Sapta Shahid Gaon) where NRL's effluent plant discharge falls in the river Dhansiri on March 11, 2025. The results reveal exceedances of the Central Pollution Control Board (CPCB) effluent discharge standards for petroleum oil refineries under the Environment (Protection) Rules, 1986, and subsequent guidelines, with severe implications for aquatic life and the long-term health of the Dhansiri River.

The analysis highlights the following violations:

- **Biochemical Oxygen Demand (BOD):** 18.0 mg/L (CPCB limit: ≤ 15 mg/L)
- **Chemical Oxygen Demand (COD):** 142.0 mg/L (CPCB limit: ≤ 125 mg/L)
- **Oil and Grease:** 11.5 mg/L (CPCB limit: ≤ 10 mg/L)

These exceedances are not isolated incidents but signal a potential pattern of pollution that threatens the Dhansiri River's biodiversity and the communities that depend on it. The elevated BOD indicates excessive organic matter, depleting dissolved oxygen levels critical for aquatic organisms. Fish species abundant in the Dhansiri, require oxygen levels above 4-6 mg/L to survive. A BOD of 18.0 mg/L risks creating hypoxic zones, leading to fish kills, suffocation of benthic invertebrates, and disruption of the river's food web. The high COD, at 142.0 mg/L, reflects a toxic cocktail of oxidizable pollutants from refinery processes, which can impair reproduction, stunt growth, and bioaccumulate in aquatic species, ultimately affecting predators like birds and mammals. The oil and grease content of 11.5 mg/L, though seemingly modest, forms a surface sheen that blocks oxygen exchange, coats fish gills, and smothers aquatic plants, further compounding the ecological stress.

Prolonged exposure to such pollution amplifies these threats. The Dhansiri River, a lifeline for Assam's biodiversity and local livelihoods, risks irreversible degradation if NRL's effluent discharge continues unchecked. Over time, oxygen depletion and toxic contamination could decimate sensitive species, reduce fish populations vital for fishermen, and degrade water quality downstream, affecting irrigation and drinking water sources. The river's ecosystem, already strained by industrial and agricultural pressures, may lose its resilience, transforming it from a thriving habitat into a polluted conduit—a loss that future generations will bear. The Dhansiri river falls into river Brahmaputra which flows through world renowned Kaziranga national park.

I urgently request the CPCB, in collaboration with the Assam Pollution Control Board, to:

1. Conduct a thorough investigation into Numaligarh Refinery Limited's effluent treatment practices and compliance with CPCB standards as of April 2025.

2. Assess the cumulative ecological impact of this discharge on the Dhansiri River's aquatic life and water quality, including long-term monitoring of oxygen levels and biodiversity.

3. Enforce stringent corrective measures to ensure NRL reduces BOD, COD, and oil and grease levels to permissible limits, safeguarding the river from further harm.

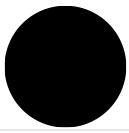
Attached is the test report for your scrutiny. Since the Dhansiri River's aquatic life and ecological integrity hang in the balance, I request you to please act swiftly to avert a preventable environmental tragedy.

Yours sincerely,

(Apurba Ballav Goswami)
Station Road, Ward No. 5
Golaghat, Assam
Phone: 9435053400
Email: apurbaballavgoswami@gmail.com
Attachment: Test Report (Job Ref. No: AGT-RS387-24-25)

CC: **1.** Chairman, CPCB. Email address: ccb.cpcb@nic.in
2. Chairman, Assam SPCB. Email address: chairman@pcbassam.org
3. The Member Secretary
Pollution Control Board, Assam
Bamunimaidam, Guwahati - 781021
Assam.
Email: membersecretary@pcbassam.org

1 Attachment(s) • Download as Zip



WATER SAMPLE RESULTS.jpg
Scanning Virus

GT BIOSCIENCES

#startupindia

ISO 9001:2015

TEST REPORT

Job Ref. No: AGT-RS387-24-25	**Date:** 25/03/2025
Name and address of the client: Apurba Ballav Goswami Station Road Ward No. 5 Golaghat	
Sample Type: Water **Sample ID:** ABG2	**Sample received date:** 11/03/2025
Environmental Condition: Temperature: 23.9°C, Humidity: 68%	

ANALYSIS RESULT

Sl. No.	Water quality Parameters	Unit	Result	Reference Method
1	BOD	mg/l	18.0	IS 3025 (Part44)1993 [Reaffirmed 2023]
2	COD		142.0	IS 3025 (Part 58)2006 [Reaffirmed 2023J
3	Oil and grease		11.5	IS 3025 (Part 39)1991 [Reaffirmed 2021J
4	Phenols		BDL	IS 3025 (Part43): 1992fReaffirmed 2000J

BDL: Below detection limits.

Note: The results contained in this test report pertainonly to the sample tested not to the whole lot. This report is intended only for your guidance, and not for legal purposes, commercial decisions, and for advertisement. Samples will be destroyedafter 7 days from the date of issue of the test certificate unless otherwise specified. Any complaint about this report should be communicated in writing within 7 days of the issue of this report. Total liability at AGT Biosciences (OPC) PrivateLimited/principal company is limited to the invoiced amount only.

The details are received from the customer on its own responsibility. AGT Biosciences does not Confirm about it and hence does not take any responsibility whatsoever.

ANNEXURE-II

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार.
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA.

CP-99/47/2022-IPC-I-HO-CPCB-HO

April 09, 2025

To,

Member Secretary
Assam Pollution Control Board,
Bamunimaidan,
Guwahati, Assam – 781021

Sub: Urgent Complaint Regarding Harmful Effluent Discharge by Numaligarh Refinery Limited- reg.

Sir,

This has reference to the Complaint dated 02.04.2025 received from Shri Apurba Ballav Goswami, Station Road, Ward No. 5, Golaghat, Assam regarding discharge of Effluent by Numaligarh Refinery Limited (non-complying to prescribed norm) to the Dhansiri River, Golaghat, Assam which is self-explanatory (copy enclosed).

It is, therefore, requested that the complaint may be investigated and the action taken report may be informed to complainant, under intimation to the CPCB at the earliest.

Encl: As above

Yours faithfully

(Ashbir Singh)
Sc. 'D'
IPC-I Division

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली – 110032.
Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032.
दूरभाष /Tel : 43102030, 22305792, वेबसाइट/Website: www.cpcb.nic.in

Pollution Control Board, Assam
(Department of Environment & Forests, Government of Assam)
অসম প্রদূষণ নিয়ন্ত্রণ পৰিষদ
(অসম চৰকাৰৰ বন আৰু পৰিৱেশ বিভাগ)
NABL Accredited Testing Laboratory : Certificate No. TC-11384

No. WB/GOL/T-205/11-12/137/1395 Dated Guwahati, the 29th July, 2024

"Consolidated Consent and Authorization (CCA)"

To,

M/s. Numaligarh Refinery Limited,
Pankagrant, Dist: Golaghat,
Assam-785699.

Sub: Consolidated Consent and Authorization (CCA) granted under provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981 and the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 framed under the Environment (Protection) Act, 1986.

A. CONSENT TO OPERATE

'CONSENT TO OPERATE' (CTO), under Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 as amended and Rules Framed thereunder is granted to:

i) Name of the Unit : **M/s Numaligarh Refinery Limited.**

ii) Name of the Applicant and Designation : Sri Alok Nayan Nath, Deputy General Manager.

iii) Address of the Unit : Pankagrant, Dist: Golaghat, Assam-785699.

iv) Cost of the Unit : Rs. 1142700.00 Lakhs

v) Type/Category of the Unit : i) Petroleum Oil Refinery, ii) Marketing Terminal, iii) Solid Waste Incinerator **(Red Category)**

vi) Capacity of Various Units:

Sl. No.	Name of unit	Installed Capacity
1	Crude Distillation Unit	3.00 MMTPA
2	Vacuum Distillation Unit	1.32 MMTPA
3	Delaying Coke Unit	0.306 MMTPA
4	Coke Calcination Unit	0.10 MMTPA
5	Paraffin Wax	43.00 TMTPA
6	Micro Crystalline Wax	4.50 TMT
7	MS Unit	324 TMTPA
8	Hydro Cracker Unit	1.45 MMTPA
9	Hydro Unit	67 KNM^3/HR (48.6 TMTPA)
10	Naphtha Splitter Unit	160.00 TMTPA
11	Diesel Hydro Treatment Unit	0.70 MMTPA
12	Sulphur Recovery Block	6.40 TMTPA
13	LPG Bottling Plant	42.00 TMTPA
14	Incinerator	200 Kg/hr

Contd. p/2

vii) Details of Products:

Sl. No.	Product	Production Capacity (MMTPA)
1	LPG	0.0521
2	MS EURO VI	0.6624
3	ATF	0.0351
4	SKO	0.0266
5	Wax	0.0476
6	MTO	0.0067
7	HSD EURO VI	2.135
8	RPC	0.0231
9	CPC	0.0602
10	Sulphur	0.0046

viii) Details of DG Set : 3 x 1000 KVA + 6 x 500 KVA + 2 x 250 KVA

TERMS AND CONDITIONS:

1. The Consent to Operate (CTO) has been accorded based on the particulars furnished by the applicant vide CCA Application **ID- 2517143** and subject to addition of further or more conditions if so warranted by subsequent developments. The Consent will automatically become invalid if any change or alteration or deviation is made in actual practice.
2. The CTO is valid for a period up to **31.03.2029**.
3. The CTO may be modified, suspended in whole or in part or withdrawn by the Board during its term for cause including, but not limited to the following:-
   a) Violation of any Terms and Conditions of this CTO;
   b) Obtaining the CTO by misrepresentation or failure to disclose fully all relevant facts;
   c) If any genuine complaint received.
4. The unit shall obtain prior 'Consent to Establish' from the Board for any expansion, alteration, modification, modernization of the process or product.
5. The unit shall develop a greenbelt/plantation area with native trees covering atleast 33% of the total plot area.
6. Proper housekeeping shall be maintained. The unit shall not burn any solid waste in the unit premises.
7. The project authority shall install a Display Board as per the Boards Notification no. PCBA/LGL-95/2021/Notification/01 dtd.11.11.2021 **(Appendix-A).**
8. The unit shall follow all the specific & general conditions as laid down in the Environment Clearance (EC) accorded by MoEF & CC vide **EC No. F. No. J-11011/274/2015-IAII (I) dated 27.07.2020.**
9. The unit shall apply for renewal of this CTO before expiry. The Board has decided to renew the CTO for validity of five (5) years after receiving due fees for the entire period.
10. As per the provisions of the Water (Prevention and Control of Pollution) Act, 1974 as amended and the Air (Prevention and Control of Pollution) Act, 1981, as amended, any Officer empowered by the Board on its behalf shall have without interruption, the right at any time to enter the unit premises for inspection, collection of sample for analysis and may call for any information as deemed necessary. Denial of this right will cause withdrawal of the CTO.

Specific Conditions:

A. Air Aspect:- (Refinery)

1. Leak Detection and repair (LDAR) shall be put in the plant.
2. The unit shall have permanent monitoring platform with proper monitoring facilities as per **CPCB Guideline for Emission Regulation Part-III (Appendix – B).**

Contd..p/3

3. The unit shall comply with noise level standards, **notified by MoEF & CC, GOI vide GSR 7, dated Dec.22, 1998** as mentioned herein under.

Area Code	Category of Area	Limit in dB (A) Leq.	
		Day time	Night time
A.	Industrial area	75	70

4. The unit shall comply with the **specific emission standards notified by MoEF & CC, GOI vide G.S.R.186(E) dated 18.03.2008 (Appendix-C)**
5. On-line Continuous Emission Monitoring System (OCEMS) for Particulate Matter (PM), SO_X, NOx, CO & H_2S shall be maintained and **OCEMS RT- DAS** data shall be transmitted to **Pollution Control Board, Assam** and Central Pollution Control Board.
6. The unit shall comply with the Standards and Guidelines for control of Noise Pollution from Stationary Diesel Generator Sets, notified by MoEF & CC, GOI vide **GSR 7, dtd. Dec. 22, 1998 (Appendix – D).**
7. The Ambient Air Quality, within the Plant premises shall be maintained within the National Ambient Air Quality Standards, notified by MoEF & CC, GOI vide G.S.R.826 (E) dtd.19.11.2009.

B. Air Aspect:- (Incinerator)

1. The unit shall comply with the emission limits, as per CPCB guidelines:

Particulates	50 mg/Nm3	Standard refers to half hourly average value
HCl	50 mg/Nm3	Standard refers to half hourly average value
SO2	200 mg/Nm3	Standard refers to half hourly average value
CO	100 mg/Nm3	Standard refers to half hourly average value
	50 mg/Nm3	Standard refers to daily average value
Total Organic Carbon	20 mg/Nm3	Standard refers to half hourly average value
HF	4 mg/Nm3	Standard refers to half hourly average value
NOx (NO & NO2 expressed as NO2)	400 mg/Nm3	Standard refers to half hourly average value
Total dioxins and furans	0.1 ng TEQ/Nm3	Standard refers to 6-8 hours sampling. Please refer guidelines for 17 concerned congeners for toxic equivalence values to arrive at total toxic equivalence.
Cd + Th + their compounds	0.05 mg/Nm3	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
Hg and its compounds	0.05 mg/Nm3	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
Sb + As + Pb + Cr + Co + Cu + Mn + Ni + V + their compounds	0.5 mg/Nm3	Standard refers to sampling time anywhere between 30 minutes and 8 hours.

2. Waste to be incinerated shall not be chemically treated with any chlorinated disinfectants.
3. Chlorinated plastics shall not be incinerated.
4. Toxic metals in incineration ash shall be limited with the regulatory quantities as specified in the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 as amended from time to time.
5. Only low sulphur fuel like LDO or LSHS or Diesel shall be used as fuel in the incinerator.
6. The CO_2 concentration in tail gas shall not be less than 7%.
7. All the facilities in twin chamber incinerators shall be designed to achieve a minimum temperature of 950°C in secondary combustion chamber and with a gas residence time in secondary combustion chamber not less than 2 (two) seconds.
8. Incineration plants shall be operated (combustion chambers) with such temperature, retention time and turbulence, as to achieve total Organic Carbon (TOC) content in the slag and bottom ashes less than 3% or their loss on ignition is less than 5% of the dry weight.

Contd....p4

C. Waste Water Aspect:

1. Source of Water:- Surface water (River Brahmaputra)
2. Details of consumption and effluent generation:-

SL NO.	NAME	QUANTITY
1	Raw water Consumption	800 m^3/hour
2	Effluent Generation	225 m^3/hour
3	Effluent recycled	12570 KLD
4	Capacity of ETP	OWS – 220 m^3/hour CRWS – 110 m^3/hour
5	Capacity of STP	2 x 400 KLD

3. The unit shall achieve zero liquid discharge. Treated industrial waste water shall be reused in process utilities. Sewage shall be disposed off through septic tank/ tank pit system.
4. i) Storm water shall not be allowed to mix with any effluent and/or floor washings.
   ii) Storm water within the battery limits of a unit shall be channelized through separate drain/pipe passing through an Oil and Grease catch pit.
   iii) For discharge of storm water, the unit shall comply with general effluent discharge standard, **notified by MoEF & CC, GOI vide G.S.R.422(E) dated 19.05.1993,** as mentioned herein under.

Sl. No.	Parameters	Tolerance Limit
i.	pH	6.0 to 8.5
ii.	Total Suspended solid	20 mg/l (max.)
iii.	Temperature	Shall not exceed 40^0 C
iv.	Bio-Chemical Oxygen Demand	30 mg/l (max.)
v.	Insecticides	Absent
vi.	Chemical Oxygen Demand	250 mg/l (max.)
vii.	Dissolved Oxygen	40% saturation value
viii.	Oil & Grease	5.0 mg/l (max.)
ix.	Other parameters	As per Schedule-VI inserted by Rule 2(d) of the Environment (Protection) Second Amendment Rules, 1993 notified vide G.S.R.422(E) dated 19.05.1993

5. Rain water harvesting facility shall be installed and maintained regularly.
6. On-line Continuous Effluent Monitoring System (OCEMS) for PH, TSS, BOD, COD, Oil and Grease shall be maintained and **OCEMS RT- DAS** data shall be transmitted to Pollution Control Board, Assam and Central Pollution Control Board.

C. Solid Waste Aspect:

1. Adequate facility shall be created for collection, storage, transportation, treatment and disposal of non-hazardous solid waste generated from the unit and residential colony.
2. Adequate system shall be adopted on reduction of waste generation and enhancement of re-utilization and recycling of waste materials.
3. Solid waste generated in the unit shall be disposed off as per the provisions of Solid Waste Management Rules, 2016.

D. Plastic Waste Aspect:

1. **The unit shall obtain Registration from the Board as producer/brand owner under Rule 13 of the Plastic Waste Management Rules, 2016 as amended through the centralized EPR portal immediately.**

Contd...p/5

2. Plastic waste generated in the unit shall be disposed off as per provisions under Plastic Waste Management Rules, 2016.
3. The unit shall submit the report regarding generation and disposal of Plastic Waste within 30th June every year.

E. E-Waste Aspects:

The unit shall comply with the provisions of the E-Waste (Management) Rules, 2022.

B. Authorization under the Provision of the Hazardous and Other Wastes (Management & Trans-boundary Movement) Rules, 2016)

(FORM-2)

1. Reference of application : 2517143
2. **M/s Numaligarh Refinery Limited**, Pankagrant, Dist: Golaghat, Assam-785699 is hereby granted the Authorization for generation, storage and transportation of Hazardous or Other wastes or both.

DETAILS OF AUTHORISATION

Sl. No.	Category of Hazardous Waste as per the Schedules-I, II & III of these rules	Authorized mode of disposal	Quantity
1	**Schedule-I, 4.1**: Oil sludge or emulsion	Generation, Storage, Transportation and disposal in secured landfill (SLF)/Bioremediation; Recyclable/Utilizable component (if any) may be transported to Authorized recycler/ Actual User.	2000 MT / Annum
2	**Schedule-I, 35.4**: Oil and grease skimming		12000 MT/ Annum
2	**Schedule- I, 4.2**: Spent Catalyst	Generation, Storage, Transportation to Authorized recycler/ Actual User.	500 MT/ Annum
3	**Schedule-I, 4.3**: Slop oil	Generation, Storage, Transportation and Processing/Utilization within the Plant; in case the quantity exceeds the utilizable capacity it may be transported to Authorized recycler/ Actual User.	80,000 MT/ Annum
4	**Schedule-I, 5.1**: Used or Spent oil		25 MT/ Annum
5	**Schedule-I, 33.1**: Empty barrels/ containers/liners contaminated with hazardous chemicals /wastes	Generation, Storage, Transportation and disposal to registered recycler.	14000 Drums
6	**Schedule-I, 35.1**: Exhaust Air or Gas cleaning residue	Generation, Storage, Transportation and disposal to authorized disposal facility/co-processing in cement plant.	3700 MT/ Annum
7	**Schedule-I, 35.3**: Chemical sludge from waste water treatment	Generation, Storage, Transportation and disposal to authorized disposal facility/co-processing in cement plant.	400 MT/ Annum

4. This Authorization shall be in force in force for the period up to **31.03.2029** unless otherwise revoked or withdrawn within this period.
5. The Authorization is subject to the following general and specific conditions:

Contd...p/6

ANNEURE

A. GENERAL CONDITIONS OF AUTHORISATION:

1. The authorized person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The Authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Pollution Control Board, Assam.
3. The person authorized shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorization.
4. The agencies should ensure that the barrels are decontaminated before collection in the premises of the occupier / generator equipped with adequate Effluent Treatment Plant.
5. Any unauthorized change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of this authorization.
6. The person authorized shall implement Emergency Response Procedure (ERP) for which this Authorization is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts.
7. The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty".
8. It is the duty of the authorized person to take prior permission of the State Pollution Control Board to close down the facility.
9. An application for the renewal of an Authorization shall be made as laid down under these Rules.
10. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
11. The unit shall register on the "National Hazardous Waste Tracking System" by logging in to the online portal-(https://geo.nic.in/nhwts/). The unit shall subsequently update all the relevant information pertaining to the unit and submit daily records of Hazardous Waste generation on the portal.

B. SPECIFIC CONDITIONS:

1. The unit shall maintain the records of Hazardous & Other Wastes in Form-3 under provision of Rules 6(5), 13(7), 14(6), 16(5) & 20(1)
2. The Unit Shall Provide The Transporter With The Relevant Information In Form-9 Regarding The Hazardous Nature Of The Wastes And Measures To Be Taken In Case Of An Emergency
3. The unit shall submit Annual Returns in Form-4 to State Pollution Control Board by 30th June of every year for the preceding period April to March.
4. The unit shall prepare 6 (six) copies of the manifest in From-10 as per Rules-19(1) for every transit of consignment of hazardous Waste under this authorization.
5. Any other conditions for compliance as per the guidelines issued by the Ministry of Environment, Forests & Climate Change, GOI. New-Delhi & Central Pollution Control Board, Delhi shall be complied.
6. The unit shall submit an Environmental Statement for the financial year ending on 31st March, in Form–V of the Environment (Protection) Rules, 1986 before 30th September every year.

Contd...p/7

7. Any occupier handling hazardous or other wastes and operator of the treatment, storage and disposal facility shall ensure that the hazardous and other wastes are packaged in a manner suitable for safe handling, storage and transport as per the guidelines issued by the Central Pollution Control Board from time to time. The labelling shall be done as per Form 8.

8. The unit shall submit the report on any accident occurs at their facility immediately to the state Pollution Control Board, in Form-11 of the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.

9. The transport of the hazardous and other waste shall be in accordance with the provisions of Rule 18 of Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

10. The unit shall install a display board in the prescribed format in accordance with PCBA notification vide WB/T-237/19-20/95 dated 17.08.2020 and regularly update the same.

The unit shall submit compliance report of the mandated conditions by April 15 of every year to Member Secretary, PCBA as well as to Regional Office, Golaghat, PCBA. The Board will have the liberty to withdraw the CCA if adequate pollution control and safety measures are not taken.

(Shantanu Kr. Dutta)

Member Secretary

Appendix-A

Pollution Control Board, Assam
Bamunimaidam, Guwahati-21

NOTIFICATION

No. PCBA/LGL-95/2021/Notification/01 Dated Guwahati, the 11th Nov, 2021

In exercise of the powers conferred under Section-5 of the Environment (Protection) Act, 1986 as amended till date and keeping in view the need of public interest towards dissemination of vital information regarding Consent/Authorization of this Board, all industries are hereby directed to install a Display Board of minimum size 5'x4', near the main entrance gate.

The format of the display board is given below:

Name and Address of the Unit : M/s.

Description of Consent/Authorization	Details
Consent to Establish (CTE)	No.: Date of Issue:
Consent to Operate (CTO)	No.: Date of validity:
Authorization under Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016 (if applicable)	No.: Date of Issue: Date of validity:

Member Secretary

Memo No. PCBA/LGL-95/2021/Notification/01-A/993 Dated Guwahati, the 11th Nov, 2021

Copy to:

1. The Commissioner & Secretary to the Govt. of Assam, Department of Environment & Forest, Dispur for kind information.
2. P.A. to the Chairman, PCBA for kind appraisal of the Hon'ble Chairman.
3. The All Regional Heads, PCBA for information & necessary action.
4. M/S APS Advertising Pvt. Ltd, Guwahati-1. They are requested to publish the "NOTICE" in "the Assam Tribune" and "Dainandin Barta" on **12.11.2021**.
5. Notice Board, Head Office / Website (www.pcbassam.org), PCBA.

Member Secretary

Appendix-B

Location of sampling port as per CPCB's emission regulation guideline part-III

2.5.0 Location of Sampling Port

To ensure laminar flow the sampling ports shall be located at atleast 8 times chimney diameter down stream and 2 times up stream from any flow disturbance. For a rectangular cross section the equivalent diameter (De) shall be calculated from the following equation to determine up stream, down stream distances.

$$De = \frac{2LW}{L+W}$$

Where L = Length in m, W = width in m.

Sometimes it may so happen for existing chimneys that sufficient physical chimney height is not available for desired sampling location in such cases additional traverse points shall be taken as given under 2.4.0.

The sampling port should be preferably provided on the delivery side of duct or chimney and not on the suction side.

MINISTRY OF ENVIRONMENT AND FORESTS

NOTIFICATION

New Delhi, the 18th March, 2008

G.S.R. 186(E).—In exercise of the powers conferred by Sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely :—

1. (1) These rules may be called the Environment (Protection) Amendment Rules, 2008.

(2) They shall come into force on the date of their publication in the Official Gazette.

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

(i) in Schedule –I, -

(a) for serial number 3, relating to 'OIL REFINERY INDUSTRY' and entries relating thereto, the following serial number and entries shall be substituted, namely:-

S. No.	Industry	Parameter	Standard
1	2	3	4
"3	Petroleum Oil Refinery	A. Effluent	
			Limiting value for concentration (mg/l except for pH)
		1. pH	6.0 –8.5
		2. Oil & Grease	5.0
		3. $BOD_{3\ days,\ 27^{0}C}$	15.0
		4. COD	125.0
		5. Suspended Solids	20.0
		6. Phenols	0.35
		7. Sulphides	0.5
		8. CN	0.20
		9. Ammonia as N	15.0
		10. TKN	40.0
		11. P	3.0
		12. Cr (Hexavalent)	0.1
		13. Cr (Total)	2.0
		14. Pb	0.1
		15. Hg	0.01
		16. Zn	5.0
		17. Ni	1.0
		18. Cu	1.0
		19. V	0.2
		20. Benzene	0.1
		21. Benzo (a) – Pyrene	0.2
		Notes.- (i) Concentration limits shall be complied with at the outlet, discharging effluent (excluding discharge from sea water cooling systems) to receiving environment (surface water	

1	2	3	4
		Bodies, marine systems or public sewers). In case of application of treated effluent directly for irrigation/horticulture purposes (within or outside the premises of refinery), make-up water for cooling systems, fire fighting, etc., the concentration limits shall also be complied with at the outlet before taking the effluent for such application. However, any use in the process such as use of sour water in desalter is excluded for the purpose of compliance. (ii) In case of circulating seawater cooling, the blow-down from cooling systems shall be monitored for pH and oil & grease (also hexavalent & total chromium, if chromate treatment is given to cooling water) and shall conform to the concentration limits for these parameters. In case of reuse of treated effluent as cooling water make-up, all the parameters (as applicable for treated effluent) shall be monitored and conform to the prescribed standards. (iii) In case of once through cooling with seawater, the oil & grease content in the effluent from cooling water shall not exceed 1.0 mg/l.	

B. Emissions

			Limiting concentration in mg/Nm³, unless stated	
		Fuel Type	Existing refineries	New Refinery/Furnace/ Boiler
(Furnace, Boiler and captive Power Plant)	Sulphur Dioxide (SO_2)	Gas	50	50
		Liquid	1700	850
	Oxides of Nitrogen (NOx)	Gas	350	250
		Liquid	450	350
	Particulate Matter (PM)	Gas	10	5
		Liquid	100	50
	Carbon Monoxide (CO)	Gas	150	100
		Liquid	200	150
	Nickel and Vanadium (Ni+V)	Liquid	5	5
	Hydrogen Sulphide (H_2S) in fuel gas	Liquid / gas	150	150
	Sulphur content in liquid fuel, weight %	Liquid/ gas	1.0	0.5
	Notes.- (i) In case of mixed fuel (gas and liquid) use, the limit shall be computed based on heat supplied by gas and liquid fuels. (ii) All the furnaces/boilers with heat input of 10 million kilo calories/hour or more shall have continuous systems for monitoring of SO_2 and NO_x. Manual monitoring for all the emission parameters in such furnaces or boilers shall be carried out once in two months. (iii) All the emission parameters in furnaces/boilers having heat			

1	2	3	4
		input less than 10 million kilo calories/hour will be monitored once in three months. (iv) In case of continuous monitoring, one hourly average concentration values shall be complied with 98% of the time in a month. Any concentration value obtained through manual monitoring, if exceeds the limiting concentration value, shall be considered as non-compliance. (v) Data on Nickel and Vanadium content in the liquid fuel (in ppm) shall be reported. Nickel and Vanadium in the liquid fuel shall be monitored at least once in six months, if liquid fuel source & quality are not changed. In case of changes, measurement is necessary after every change.	

	(FCC Regen-erators)		**Limiting concentration in mg/Nm³, unless stated**		
			Existing refineries		**New Refinery /FCC Commissioned**
			hydro processed FCC feed	Other than Hydro processed FCC feed	
		Sulphur Dioxide (SO_2)	500	1700	500 (for hydro-processed feed) 850 (for other feed)
		Oxides of Nitrogen (NO_x)	400	450	350
		Particulate Matter (PM)	100	100	50
		Carbon Monoxide (CO)	400	400	300
		Nickel and Vanadium (Ni+V)	2	5	2
		Opacity, %	30	30	30
		Notes: (i) In case part feed is hydro-processed, the emission values shall be calculated proportional to the feed rates of untreated and treated feeds. (ii) FCC regenerators shall have continuous systems for monitoring of SO_2 and NO_x. One hourly average concentration values shall be complied with 98% of the time in a month, in case of continuous monitoring. Manual monitoring for all the emission parameters shall be carried out once in two months.			

1	2	3	4
		(iii) Any concentration value obtained through manual monitoring, if exceeds the limiting concentration value, shall be considered as non-compliance. (Iv) Data on Sulphur (weight in %), Nickel (PPM) and Vanadium (PPM) content in the feed to FCC shall be reported regularly. (V) Limit of Carbon Monoxide emissions shall be complied with except during annual shut down of CO boiler for statutory maintenance.	

			Plant capacity (Tonnes/day)	Existing SRU	New SRU or Refinery Commissioned
	{Sulphur Recovery Units (SRU)}	Sulphur recovery, %	Above 20	98.7	99.5
		H_2S, mg/Nm^3		15	10
		Sulphur recovery, %	5-20	96	98
		Sulphur recovery, %	1-5	94	96
		Oxides of Nitrogen (NO_x), mg/Nm^3	All capacity	350	250
		Carbon Monoxide (CO), mg/Nm^3	All capacity	150	100
		Notes: (i) Sulphur recovery units having capacity above 20 tonnes per day shall have continuous systems for monitoring of SO_2. Manual monitoring for all the emission parameters shall be carried out once in a month. (ii) Data on Sulphur Dioxide emissions (mg/Nm^3) shall be reported regularly. (iii) Sulphur recovery efficiency shall be calculated on monthly basis, using quantity of sulphur in the feed to SRU and quantity of sulphur recovered.		

C - Fugitive Emission

Storage of Volatile Liquids : General Petroleum Products

(1) Storage tanks with capacity between 4 to 75m³ and total vapour Pressure (TVP) of more than 10 kpa should have Fixed Roof Tank (FRT) with pressure valve vent.

(2) Storage tanks with the capacity between 75 to 500 m³ and total vapour Pressure (TVP) of 10 to 76 kpa should have Internal Floating Roof Tank (IFRT) or External Floating Roof Tank (EFRT) or Fixed Roof Tank with vapour control or vapour balancing system.

(3) Storage tanks with the capacity of more than 500 m³ and total vapour Pressure (TVP) of 10 to 76 kpa should have Internal Floating Roof Tank or External Floating Roof Tank or Fixed Roof Tank with vapour control system.

(4) The tanks with the capacity of more than 75 m³ and total vapour Pressure (TVP) of more than 76 kpa should have Fixed Roof Tank with vapour control system.

(5) Requirement for seals in Floating Roof Tanks:

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

(b) Primary seal shall be liquid or shoe mounted for EFRT and vapour mounted for IFRT. Maximum seal gap width will be 4 cm and maximum gap area will be 200 cm²/m of tank diameter.

(c) Secondary seal shall be rim mounted. Maximum seal gap width will be 1.3 cm and maximum gap area will be 20 cm²/m of tank diameter.

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

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

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

Storage of Volatile Liquids : Benzene Storage

(1) FRT with vapour to incineration with 99.9% of removal efficiency for volatile organic compounds (VOC) shall be provided.

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

Solvents for Lube-Base Oil production (Furfural, NMP, MEK, Toluene and MIBK)

IFRT with double seals and inert gas blanketing with vapour removal efficiency of at least 97% shall be provided.

Emission control for Road tank truck/ Rail tank wagon loading			
	Loading of Volatile Products	Gasoline and Naphtha: (i) VOC reduction, % (ii) Emission, gm/m³	(i) 99.5 ii) 5
		Benzene: (i) VOC reduction, % (ii) Emission, mg/m³	(i) 99.99 (ii) 20
		Toluene/Xylene: (i) VOC reduction, % (ii) Emission, mg/m³	(i) 99.98 (ii) 150
		Note: (i) It shall be applicable for Gasoline, Naphtha, Benzene, Toluene and Xylene loading. (ii) Road tank Truck shall have Bottom loading and Rail tank wagon shall have Top submerged loading. (iii) Annual leak testing for vapour collection shall be done.	

Standards for Equipment Leaks

(1) Approach: Approach for controlling fugitive emissions from equipment leaks shall have proper selection, installation and maintenance of non-leaking or leak-tight equipment. Following initial testing after commissioning, the monitoring for leak detection is to be carried out as a permanent on-going Leak Detection and Repair (LDAR) programme. Finally detected leaks are to be repaired within allowable time frame.

(2) Components to be Covered: Components that shall be covered under LDAR programme include (i) Block valves; (ii) Control valves; (iii) Pump seals; (iv) Compressor seals; (v) Pressure relief valves; (vi) Flanges – Heat Exchangers; (vii) Flanges – Piping; (viii) Connectors – Piping; (ix) Open ended lines; and (x) Sampling connections. Equipment and line sizes more than 1.875 cm or ¾ inch are to be covered.

(3) Applicability: LDAR programme would be applicable to components (given at 2 above) for following products/compounds: (i) hydrocarbon gases; (ii) Light liquid with vapour pressure @ 20°C > 1.0 kPa; and (iii) Heavy liquid with vapour pressure @ 20°C between 0.3 to 1.0 kPa.

(4) While LDAR will not be applicable for heavy liquids with vapour pressure < 0.3 kPa, it will be desirable to check for liquid dripping as indication of leak.

(5) Definition of leak: A leak is defined as the detection of VOC concentration more than the values (in ppm) specified below at the emission source using a hydrocarbon analyzer according to measurement protocol (US EPA – 453/R-95-017, 1995 Protocol for equipment leak emission estimates may be referred to:

Component	General Hydrocarbon (ppm)		Benzene (ppm)	
	Till 31st Dec. 2008	w.e.f. January 01, 2009	Till 31st Dec. 2008	w.e.f. January 01, 2009
Pump/Compressor	10000	5000	3000	2000
Valves/Flanges	10000	3000	2000	1000
Other components	10000	3000	2000	1000

(6) In addition, any component observed to be leaking by sight, sound or smell, regardless of concentration (liquid dripping, visible vapor leak) or presence of bubbles using soap solution should be considered as leak.

(7) Monitoring Requirements and Repair Schedule: Following frequency of monitoring of leaks and schedule for repair of leaks shall be followed:

Component	Frequency of monitoring	Repair schedule
	Quarterly (semiannual after two consecutive periods with < 2% leaks and annual after 5 periods with < 2% leaks)	Repair will be started within 5 working days and shall be completed within 15 working days after detection of leak for general hydrocarbons. In case of benzene, the leak shall be attended immediately for repair.
Pump seals	Quarterly	
Compressor seals	Quarterly	
Pressure relief devices	Quarterly	
Pressure relief devices (after venting)	Within 24 hours	
Heat Exchangers	Quarterly	
Process drains	Annually	
Components that are difficult to monitor	Annually	
Pump seals with visible liquid dripping	Immediately	Immediately
Any component with visible leaks	Immediately	Immediately
Any component after repair/replacement	Within five days	-

(8) The percentage leaking components should not be more than 2% for any group of components, monitored excluding pumps/compressors. In case of pumps/compressors, it should be less than 10% of the total number of pumps/compressors or three pumps and compressors, whichever is greater.

(9) Emission Inventory: Refinery shall prepare an inventory of equipment components in the plant. After the instrumental measurement of leaks, emission from the components will be calculated using stratified emission factors (USEPA) or any other superior factors. The total fugitive emission will be established.

(10) Monitoring: Following types of monitoring methods may be judiciously employed for detection of leaks: (i) Instrumental method of measurement of leaks; (ii) Audio, visual and olfactory (AVO) leak detection; and (iii) Soap bubble method.

(11) Data on time of measurement and concentration value for leak detection; time of repair of leak; and time of measurement & concentration value after repair of leak should be documented for all the components.

(12) Pressure relief and blow down systems should discharge to a vapour collection and recovery system or to flare.

(13) Open-ended lines should be closed by a blind flange or plugged.

(14) Totally closed-loop should be used in all routine samples.

(15) Low emission packing should be used for valves.

(16) .High integrity sealing materials should be used for flanges.

D. Emission Standards for VOC from Wastewater Collection and Treatment

(1) All contaminated and odorous wastewater streams shall be handled in closed systems from the source to the primary treatment stages (oil-water separator and equalization tanks).

(2) The collection system shall be covered with water seals (traps) on sewers and drains and gas tight covers on junction boxes.

(3) Oil-water separators and equalization tanks shall be provided with floating/fixed covers. The off-gas generated shall be treated to remove at least 90% of VOC and eliminate odour. The system design shall ensure safety (prevention of formation of explosive mixture, possible detonation and reduce the impact) by dilution with air/inert gas, installing LEL detector including control devices, seal drums, detonation arrestors, etc. The system shall be designed and operated for safe maintenance of the collection and primary treatment systems.

(4) Wastewater from aromatics plants (benzene and xylene plants) shall be treated to remove benzene & total aromatics to a level of 10, 20 ppm respectively before discharge to effluent treatment system without dilution."

(b) Serial number 35, relating to 'oil refineries (sulphur oxide) and entries relating thereto shall be omitted;

(ii) in Schedule VI, in Part C, -

(a) serial number 1 relating to 'Oil Refinery Industry' and entries relating thereto, the following serial number and entries shall be substituted, namely :-

"**1. Petroleum Oil Refinery :**

Parameter 1	Standard 2
	Quantum limit in Kg/ 1,000 tonne of crude processed
1. Oil & Grease	2.0
2. $BOD_{3\ days,\ 27^0C}$	6.0
3. COD	50
4. Suspended Solids	8.0
5. Phenols	0.14
6. Sulphides	0.2
7. CN	0.08
8. Ammonia as N	6.0
9. TKN	16
10. P	1.2
11. Cr (Hexavalent)	0.04
12. Cr (Total)	0.8
13. Pb	0.04

Parameter 1	Standard 2
	Quantum limit in Kg/ 1,000 tonne of crude processed
14. Hg	0.004
15. Zn	2.0
16. Ni	0.4
17. Cu	0.4
18. V	0.8
19. Benzene	0.04
20. Benzo (a) – Pyrene	0.08

Notes :

(i) Quantum limits shall be applicable for discharge of total effluent (process effluent, cooling water blow down including sea cooling water blow down, washings, etc.) to receiving environment (excluding direct application on land for irrigation/horticulture purposes within the premises of refinery).

(ii) In order to measure the quantity of effluent (separately for discharge to receiving environment, application for irrigation/horticulture purposes within the premises of refinery & blow-down of cooling systems), apropriate flow measuring devices (e.g. V-notch, flow meters) shall be provided with.

(iii) Quantum of pollutants shall be calculated on the basis of daily average of concentration values (one 24-hourly composite sample or average of three grab samples, as the case may be), average flow of effluent during the day and crude throughput capacity of the refinery.

(iv) Limit for quantity of effluent discharged (excluding blow-down from seawater cooling) shall be 400 m^3/1000 tonne of crude processed. However, for refineries located in high rain fall area, limit of quantity of effluent only during rainy days shall be 700 m^3/1000 tonne of crude processed.".

[F. No. Q-15017/15/2007-CPW]

R. K. VAISH, Jt. Secy.

Note : - The principal rules were published in the Gazette of India vide number S.O. 844 (E) 19th November, 1986 and subsequently amended vide S.O. 433 (E) dated 18th April, 1987, S.O. 64 (E) dated 18th January, 1988, S.O. 3 (E) dated 3rd January, 1989, S.O. 190 (E) dated 15th March, 1989, G.S.R. 913 (E) dated the 24th October, 1989, S.O. 12 (E) dated the 8th January, 1990, G.S.R. 742 (E) dated the 30th August, 1990, S.O. 23 (E) dated the 16th January, 1991, G.S.R. 93 (E) dated the 21st February, 1991 G.S.R. 95 (E) dated the 12th February, 1992, G.S.R. 329 (E) dated the 13th March, 1992, G.S.R. 475 (E) dated the 5th May, 1992 G.S.R. 797 (E) dated the 1st October, 1992, G.S.R. 386 (E) dated the 28th April, 1993, g.s.r. 422 (e) dated the 19TH May, 1993, G.S.R. 801 (E) dated the 31st December, 1993, G.S.R. 176 (E) dated the 3rd April, 1996, G.S.R. 631 (E) dated the 31st October, 1997, G.S.R. 504 (E) dated the 20th August, 1998, G.S.R. 7 (E) dated the 2nd January, 1999, G.S.R. 682 (E) dated the 5th October, 1999, G.S.R. 742 (E) dated the 25th September, 2000, G.S.R. 72 (E) dated the 6th February, 2001, G.S.R. 54 (E) dated the 22nd January, 2002, G.S.R. 371 (E) dated the 17th May, 2002, G.S.R. 489 (E) dated the 9th July, 2002, S.O. 1088 (E) dated the 11th October, 2002 and G.S.R. 849 (E) dated the 30th December, 2002, G.S.R. 520 (E) dated 1st July, 2003, G.S.R. 92 (E) dated 29th January, 2004, G.S.R. 448 (E) dated 12th July, 2004, Corrigenda G.S.R. 520 (E) dated 12th August, 2004, G.S.R. 272 (E) dated 5th May, 2005, G.S.R. 315 (E) dated 16th May, 2005, G.S.R. 546 (E) dated 30th August, 2005, G.S.R. 46 (E) dated 3rd February, 2006, G.S.R. 464 (E) dated 7th August, 2006 , G.S.R. 566 (E) dated 29th August, 2007 and G.S.R. 704 (E) dated 12th November, 2007.

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(1)

APPENDIX –D

1.66.0 STANDARDS AND GUIDELINES FOR CONTROL OF NOISE POLLUTION FROM STATIONARY DIESEL GENERATOR (DG) SETS.

(A) Notes standards for DG sets (15-500KVA)

The total sound power level LW of DG set should less than 94 + 10 log 10KVA, dB (A), at the manufacturing stage, whether; KVA is the nominal power rating of a DG set.

This level should fall by 5dB (A) every five years, till 2007, i.e. in 2002 and then in 2007.

(B) Mandatory Acoustic enclosure/Acoustic treatment of room for stationary DG sets (5KVA and above):

Noise from the DG set should be controlled by providing an acoustic enclosure on by treating the room acoustically.

The acoustic enclosure/acoustic treatment of the room should be designed for minimum 25 dB (A) insertion Loss or for meeting the ambient noise standards, which ever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure/acoustic treatment. Under circumstances the performance may be checked for noise reduction up to actual ambient noise level, preferably, in the night time). The measurement for insertion Loss may be done at different points at 0.5 from the acoustic enclosure/room, and then averaged. (See the Schematic Diagram).

The DG set should also be provided with proper exhaust muffler with Insertion Loss of minimum 25 dB (A).

Guidelines for the manufacturers Users of DG sets 5KVA and above:

- The manufacture should offer to the user a standard acoustic enclosure of 25dB (A). Insertion Loss and also a suitable exhaust muffler with Insertion Loss of 25dB (A).
- The user should make efforts to bring down the noise levels due to the DG set, outside his premises, within the ambient noise requirements by proper sitting and control measures.
- The manufacturer should furnish noise power levels of the unsalaried DG sets as per standards prescribed under (A).
- The total sound power level of a DG set, at the user's and, shall be within 2dB(A) of the total sound power level of the DG set, at the manufacturing stage, as prescribed under (A).
- Installation of DG set must be strictly in compliance with the recommendation of the DG set manufacture.
- A proper routines and preventive maintenance procedure for the DG set manufacturer which would help prevent noise levels of the DG set from deteriorating with use.

2.44.0 NOISE (AMBIENT STANDARDS)

Area Code	Category of Area	Limit in dB (A) Leq.	
		Day time	Night time
A.	Industrial area	75	70
B.	Commercial area	65	55
C.	Residential area	55	45
D.	Silence Zone	50	40

Note – 1 : Day time is reckoned in between 6.00 A.M. and 9.00 P.M.

Note – 2 : Night time is reckoned in between 9.00P.M. and 6.00 A.M.

Note – 3 : Silence zone is defined as areas up to 100 meters around such premises as hospitals, educational institutions and courts. The silence zones are to be declared by the competent Authority.

Note – 4 : Mixed categories of areas should be declared as one of the four above mentioned categories by the competent Authority and the corresponding standard shall apply.

Source: EPA, 1986
[GSR 7, dated Dec.22, 1998]

Source: EPA, Notification
[GSR 1063 (E), dated Dec., 26, 1998]

3.22.0 DIESEL GENERATOR SETS : STACK HEIGHT

1. The minimum stack height to be provided with each generator set shall be worked out as per the following formula: - H = h + 0.2 √KVA, where H = Total height of stack in meter.

h = Height of the building in meters where generator set is installed.

KVA = Total generator capacity.

Adequate fire fighting measures have to be provided by the occupier of the premises. Based on the above formula the minimum stack height to be provided with different range of generator sets may be categories as follows:

Range of Generator sets	Minimum Stack Height
50 KVA	Ht. of the building + 1.5 metre.
50 – 100 KVA	Ht. of the building + 2.0 metre.
100 -150 KVA	Ht. of the building + 2.5 metre.
150 - 200 KVA	Ht. of the building + 3.0 metre.
200 - 250 KVA	Ht. of the building + 3.5 metre.
250 - 300 KVA	Ht. of the building + 3.5 metre.

Similarly for higher KVA rating a stack height can be worked out using the above formula.

Source : Evolved by CPCB
[Emission Regulations Part-IV: COINDS/26 1986-87]

4. A .32.0 Part – C

Sl. No. 1 Stack Gas : PM – 150 µg/Nm^3

B. Ambient Air Standards:

Residential Area	Industrial Area	Sensitive Area
SO_2 : 80* µg/m^3	120* : µg/m^3	30* : µg/m^3
NO_2 : 80* µg/m^3	120* : µg/m^3	30* : µg/m^3
CO : 2.0** µg/m^3	5.0** : µg/m^3	1.0** : µg/m^3
***24 hourly; ** 8 hourly**		

5. SCHEMATIC DIAGRAM OF D.G. SET IN AN ACOUSTIC ENCLOSURE No. Process/71/1998-99.

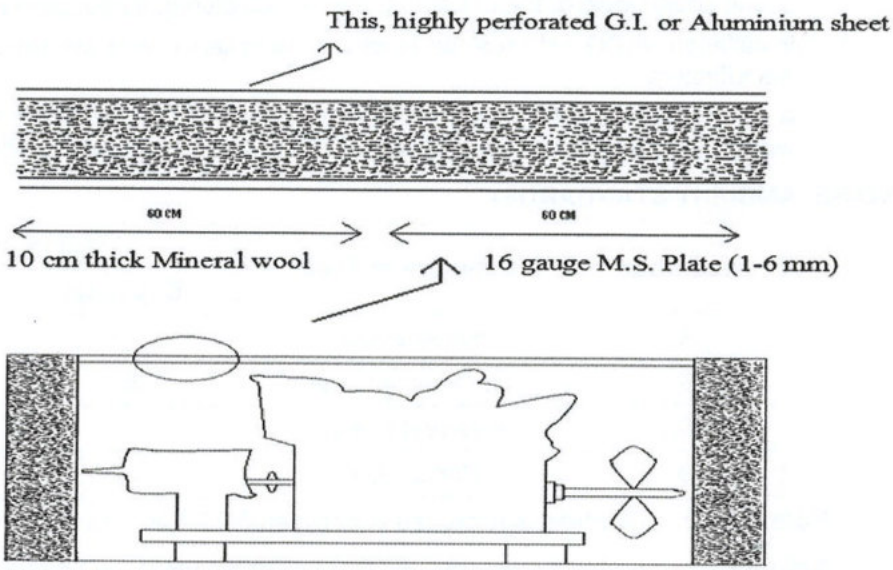

Fig. 4 Schematic Diagram of the DG set in an Acoustic Enclosure

Air required for the ventilation and breathing of the engine will have to be provided by means of intake louvers and exhaust louvers (called parallel baffie mufflers) projecting out of the enclosure.

(Shantanu Kr. Dutta)
Member Secretary
Pollution Control Board, Assam

Assam Pollution Control Board
(Department of Environment, Forest & Climate Change, Govt. of Assam)
অসম প্রদূষণ নিয়ন্ত্রণ পৰিষদ
(অসম চৰকাৰ বন, পৰিৱেশ আৰু জলবায়ু পৰিৱৰ্তন বিভাগ)
NABL Accredited Testing Laboratory : Certificate No. TC-16428

No.TECH-12011/(18)/3/2025-CCA-PCBA **Dated Guwahati, 01.08.2025**

Amendment of Consolidated Consent and Authorization (CCA)

In partial modification of **Consolidated Consent and Authorization (CCA)** order issued in favour of M/s Numaligarh Refinery Limited vide **Office Order No. WB/GOL/T-205/11-12/137/$_{1395}$ dated 29.07.2024(Copy enclosed)** with validity upto **31.03.2029** , the specific condition under **Sl. No. C (Water Aspects), Point No. 3** is replaced as mentioned herein under:

"Treated industrial waste water shall be reused in process utilities. Sewage shall be disposed off through septic tank/ tank pit system."

All other terms and conditions stipulated in the original Consolidated Consent and Authorization (CCA) Order shall remain unchanged and will continue to be in effect as per the provisions outlined therein.

This is issued in consideration of the request made by M/s Numaligarh Refinery Limited vide letter No NRL/ENV/PCBA/25-26/05 dated 30.07.2025.

Enclo:As stated

Digitally signed by
Gautam Kr Misra
Date: 01-08-2025
15:34:35

(G.K. Misra)
Member Secretary

No.TECH-12011/(18)/3/2025-CCA-PCBA **Dated Guwahati, 01.08.2025**

Copy to:

1. M/s Numaligarh Refinery Limited, Pankagrant, Dist: Golaghat, Assam, 785699,Email:**bimlesh.gupta@nrl.co.in**

(e-signed)
Member Secretary

গ্রীনটেক্ এনভাইৰনমেন্টল ইঞ্জিনিয়াৰ এণ্ড কন্সালটেন্টছ
GREEN TECH ENVIRONMENTAL ENGINEER AND CONSULTANTS
(A Unit of XEUJ ABHIJANTRIK LLP)
House No-11, Champaknagar, Narayan Path, Bhetapara, Guwahati-781028, www.greentecheec.in
Mobile: 9435046677, 9954089052, E-mail: green_pranjal@hotmail.com, info@greentecheec.in

TC-15242

Format No.: GEEC/FM/50D

DRAFT TEST REPORT

ULR Number: TC152422500000750F			
Ref. No.: GEEC/FL/23/2025/05/71		Date of Reporting:	30/05/2025
Customer Name:	CPCB	Lab. ID No.:	GEEC/WS/2025/05/71
Customer Address:	CPCB Regional Directorate (North East) CTO Building, Ground Floor Shillong 793001	Date of Sampling:	20/05/2025
Sampling Location:	ETP Outlet NRL	Sample Receipt Date:	21/05/2025
Sample Description:	Treated Waste Water	Test Start Date:	21/05/2025
Sample Drawn By:	Client	Test Completion Date	28/05/2025
Sample Condition:	Sealed	Sampling Method:	-------

SL. NO.	PARAMETERS	METHOD	UNIT	RESULTS	LIMITS
1	pH measurement	IS 3025 Part 11: 2022	–	7.74	----
2	Suspended Solids	IS 3025 Part 17: 2022	mg/l	29	----
3	BOD	IS 3025 Part 44 2023	mg/l	11	----
4	COD	IS 3025 Part 58: 2023	mg/l	88	----
5	Oil & Grease	IS 3025 Part 39 2021	mg/l	5.4	----
6	Phenol	IS 3025 Part 43 1992	mg/l	0.07	----

Checked by :

Dr. Belinda Lahon
Quality Manager

GREEN TECH Environmental Engineer & Consultants

Reviewed by:

Mr. Pranjal Buragohain
Authorised Signatory

********** End of Report **********

* The results relate only to the item tested.
* The test report shall not be reproduced except in full, without written approval of the laboratory.
* The test report cannot be used as an evidence in a court of law without prior written approval of the laboratory.

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार.
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA.

By Speed Post & Email

File No.: CM-13014/4/2025-TECH-RD-SHILLONG-RD (Shillong) Date: 08.08.2025

To,

The Member Secretary,
Pollution Control Board Assam,
Bamunimaidan,
Guwahati – 781021
Assam

Sub: Inspection of M/s Numaligarh Refinery Limited by CPCB - reg.

Sir,

In reference to a complaint / application filed in Hon'ble NGT (Original Application No.86/2025/EZ) in which CPCB is a respondent, CPCB has inspected M/s Numaligarh Refinery Limited during May 19-20, 2025 and collected treated effluent The effluent sample was analysed by M/s Greentech Environment Engineers and Consultants, a laboratory accredited by NABL and recognized by Pollution Control Board Assam. The analytical results reveal that the treated effluent was meeting with prescribed effluent discharge standards in respect of pH (7.74), BOD (11 mg/l), COD (88 mg/l) and Phenol (0.07 mg/l), however, the concentration of Oil and Grease (5.4 mg/l) and Suspended solids (29 mg/l) were found exceeding the standard of 5 mg/l and 20 mg/l respectively. The copy of the Analysis report is enclosed.

Further, it was reported by the unit that it is recycling some treated effluent in Fire water Line and remaining treated effluent is discharged through storm water drain to a stream called Sengajan, which finally discharges into the Dhansiri river.

In view of the above stated shortcomings, you are requested to direct the unit to take immediate action for rectification of the observed shortcomings. The action taken report may please be provided to CPCB at the earliest.

Yours faithfully
8/8/2025
(Nazimuddin)
Sc. F & DH, IPC-I

Copy to :

The Regional Director
Central Pollution Control Board
BSNL , NE -I Telecom Circle,
CTO Building, Ground Floor,
Shillong – 793001

(Nazimuddin)