



Assam Bio Refinery Private Limited

CIN : U74999AS2018PTC018547

Ref.: ABRPL/EHS/2024/12/03

Date: 19th Dec,2024

To,
The Inspector General of Forests (C)
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office,
4th Floor, HOUSEFED Building,
G.S.Road, Rukminigaon,
Guwahati -781022

Sub: Submission of Half Yearly Compliance report on Environment Stipulation of EC during the period April' 2024 to September' 2024 for Assam Bio Refinery Pvt. Ltd. (Bamboo based Ethanol Project).

Ref. No: 1) F. No. J-11011/274/2015-IA II (I) dated 19th November, 2019
2) F. No. J-11011/274/2015-IA II (I) dated 05th January, 2021

Dear Sir,

Kindly find enclosed herewith the point wise Half Yearly Compliance Status for the period April' 2024 to September' 2024, pertaining to the conditions of EC for Bio Refinery (Bamboo based Ethanol Project), ABRPL vide letter No F.No.J- 11011/274/2015-IA II (I) dated 19 Nov, 2019 from MoEF& CC.

Thanking You,

Yours faithfully


19/12/2024

Sidhartha Sankar Kowndilya
Assistant Manager-EHS,
Assam Bio Refinery Private Limited.

Encl.: 1. Six monthly compliance status of EC conditions.
2. Results of monitored data.

C.C.to:

1. **Central Pollution Control Board Regional Directorate Shillong:** "Tum-Sir". Lower Motinagar, Near Fire Brigade H.Q., Shillong 793014
2. **Assam State Pollution Control Board:** Pollution Control Board Assam, Bamunimaidam, Guwahati - 21
3. **Golaghat Regional Pollution Control Board:** Pollution Control Board, Assam College Tinali, Near Circuit House, Golaghat, PIN: 785621.

S.No	Special Conditions	Remarks as on date status
10 (a)	The final product shall be used only as a bio-fuel and not at all for human consumption	Noted the final product bio-fuel shall be used for blending with petrol.
10 (b)	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	The Consent to Establish (CTE) was received from ASPCB dated 25 Jan 2019. CTE extended for another five years from 14/11/2024.
10 (c)	As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged.	Currently the project is under construction phase and hence no liquid waste is being generated. Noted for Compliance.
10 (d)	Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.	Registration completed and application approved by Pollution Control Board for importing of plastic as packing material. Currently the project is under construction phase. Noted for Compliance with respect to other wastes in the future.
10 (e)	National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608 (E) dated 21st July, 2010 and amended from time to time shall be followed.	Currently the project is under construction phase. Noted for Compliance.
10 (f)	To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	Currently the project is under construction phase. Noted for Compliance.
10 (g)	Solvent management shall be carried out as follows: <ul style="list-style-type: none"> I. Reactor shall be connected to chilled brine condenser system. II. Reactor and solvent handling pump shall have mechanical seals to prevent leakage. III. The condenser shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery. IV. Solvents shall be stored in a separate space specified with all safety measures. V. Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. VI. Entire plant shall be flame proof. The solvent storage tanks shall be provided with breath valve to prevent losses. 	Currently the project is under construction phase. Noted for Compliance.

	VII. All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.	
10 (h)	Total fresh water requirement shall not exceed 2224 cum/day. Prior permission shall be obtained in this regard from the concerned regulatory authority.	NOC obtained for ground water abstraction. NOC No: CGWA/NOC/IND/ORIG/2022/14641
10 (i)	Process effluent/any waste water shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	Currently the project is under construction phase. Noted for Compliance.
10 (j)	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys, etc. Flame arrester shall be provided on tank farm and the solvent transfer through pumps.	Currently the project is under construction phase. Noted for Compliance.
10 (k)	Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.	Currently the project is under construction phase. Noted for Compliance.
10 (l)	The company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle ACT (MVA), 1989.	Currently the project is under construction phase. Noted for Compliance.
10 (m)	Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.	Currently the project is under construction phase. Noted for Compliance.
10 (n)	The company shall undertake waste minimization measures as below: <ul style="list-style-type: none"> i. Metering and control of quantities of active ingredients to minimize waste. ii. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. iii. Use of automated filling to minimize spillage. iv. Use of Close Feed System into batch reactors. v. Venting equipment through vapor recovery system. vi. Use of high pressure hoses for equipment clearing to reduce wastewater generation. 	Currently the project is under construction phase. Noted for Compliance.
10 (o)	The green belt of at least 10m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. As many as 25000 trees to be planted per year during first	Currently the project is under construction phase. Noted for Compliance.

	five years. Selection of Plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.	
10 (p)	All the commitment made regarding issues raised during the Public Hearing/Consultation meeting held on 15 July, 2017 shall be satisfactory implemented.	Being Complied.
10 (q)	<p>At least 2.5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry Regional Office. (Original EC condition dated 6th November 2017</p> <p>At least 0.5% of the Project Cost shall be allocated for addressing issues raised during the Public hearing and 2% for sustainable babmoo feedstock value chain. Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry Regional Office. (Amended EC condition dated 5th January 2021)</p>	<p>Being Complied.</p> <p>Copy of detailed proposed ESC shared with last report (for the period of Apr'22-Sep'22).</p> <p>ESC spending against public hearing issues = Rs.22,20,883/-</p> <p>ESC spending against sustainable feedstock value chain = Rs.2,39,56,324/-</p>
10 (r)	For the DG sets, emission limits and the stack height shall be in conformity with the extent regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.	The project is under construction. There is no usage of DG sets for construction power. The required power is being supplied by NRL.
10 (s)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	Currently the project is under construction phase and fire fighting systems are being installed as per requirement at offices, porta-cabins and rest sheds. Noted for Compliance.
10 (t)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	The project is under construction. The Occupational health surveillance of the workers is undertaken as per BOCW norms.
10 (u)	A continuous online (24x7) monitoring system for stack emission shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. In case	Currently the project is under construction phase. Noted for Compliance.

	of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.	
S.NO	General Conditions	Remarks as on date status
10 (i)	The project authorities must strictly adhere to the stipulations made by the State pollution Control Board (SPCB) State Government and/or any other statutory authority.	Being Complied.
10 (ii)	No further expansion or modification in the project shall be carried out without prior approval from the Ministry. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance a, fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environment protection measures required if any.	Noted for Compliance.
10 (iii)	The locations of ambient air quality monitoring stations shall be decided in consultation with the SPCB and it shall be ensured that at least one stations is installed in the upwind and downwind direction as well as where maximum ground level concentration are anticipated.	Currently the project is under construction phase. Noted for Compliance, post commissioning.
10 (iv)	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826 (E) date 16th November, 2009 shall be complied with.	Being complied. Report attached.
10 (v)	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under PARA Rules,1989 viz. 75 dBA(day time) and 70 dBA (night time).	Currently the project is under construction phase. Noted for Compliance.
10 (vi)	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.	Currently the project is under construction phase. Noted for Compliance.
10 (vii)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Noted for compliance. Pre-employment and routine periodical medical examinations for all employees is being complied as per BOCW norms.

10 (viii)	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing shall be implemented.	Noted for Compliance.
10 (ix)	The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villagers, administration and other stake holders. Also eco-developmental measures shall be undertaken for overall improvement of the environment.	Noted for Compliance.
10 (x)	A separate Environmental Management Cell equipped with full-fledged laboratory facilities must be setup to carry out the environmental management on monitoring functions.	Currently the project is under construction phase. Noted for Compliance.
10 (xi)	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/pollution control measures shall not be diverted for any other purpose.	Noted for Compliance.
10 (xii)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat/Zila Parishad/Municipal Corporation/Urban Local Body and the local NGO if any, from whom suggestion/representation if, any, were received while processing the proposal.	Complied.
10 (xiii)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal office of CPCB and SPCB. A copy of Environmental Clearance and six Monthly compliance status report shall be posted on the website of the company.	Being Complied. Six monthly report on status of compliance of the stipulated environmental conditions including the results of monitored data report submitted to MoEF&CC, the respective Zonal office of CPCB and SPCB and posted in company website.
10 (xiv)	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986. As amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MoEF by e-mail.	Being Complied.

10 (xv)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locally concerned and a copy of the same shall be forwarded to the Regional Office of the Ministry.	Being Complied. Public notice was published on 18.11.2017 in DainikJanambhumi , Pratidin, Assam Tribune and Sentinel. Copy of the notice published sent to MoEF RO on 29.11.2017
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Format No.: ENV/R/TR/19/AA-01

Rev. No.: 00

TEST REPORT

ULR No.	NA		
Report No.	ENV/TR/ABRPL/24-25/A-01	Issue Date	28/09/2024
Order No.	NA	Order Date	NA
Report Issued To	ASSAM BIO REFINERY PRIVATE LIMITED Numaligarh, Dist.: Golaghat, Assam		

Sample Ref. No.:	ABRPL/A-240918/01	Sample Source#:	East Side: Near Seuj Dwar	Sample Type#:	Ambient Air
Date of Sampling:	18.09.2024	Sample Receipt Date:	21.09.2024	Instrument Used:	ENV/AS/01, ENV/RDS/01, ENV/GSA/01
Analysis Start Date:	23.09.2024	Analysis End Date:	25.09.2024	Sampled By:	Bidyut Kalita, Envirocon
Environmental conditions during sampling:	T-35°C & RH-78%	Sampling Plan/Sapling Method:		ENV/SOP/A-01	

TEST RESULTS

Sl. No.	Parameters	Test Method	Results	Units	Limits*
1.	Particulate Matter (size less than 2.5 µm) or PM _{2.5}	IS 5182 (Part 24)	15.3	µg/m ³	60 (24 Hours Average)
2.	Particulate Matter (size less than 10 µm) or PM ₁₀	IS 5182 (Part 23)	47.6	µg/m ³	100 (24 Hours Average)
3.	Sulphur Dioxide (as SO ₂)	IS 5182 (Part 2)	6.3	µg/m ³	80 (24 Hours Average)
4.	Nitrogen Dioxide (as NO ₂)	IS 5182 (Part 6)	8.1	µg/m ³	80 (24 Hours Average)

NA: Not Applicable, BDL: Below Detectable Limit, MDL: Minimum Detectable Limit

Information provided by the customer for which laboratory has no control.

* Limits as per G.S.R. 826(E), 16.11.2009

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



Authorised Signatory: Mr. Pankaj Baroi (Director)

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- NOTE:**
1. Results reported are valid at the time of and under the prevailing conditions of measurement.
 2. Results refer only to the particular parameters tested.
 3. This test report shall not be reproduced except in full, without the written permission of ENVIROCON, I.O.C.L (AOD) New Market, Digboi – 786171, Assam.

TEST REPORT

ULR No.	NA		
Report No.	ENV/TR/ABRPL/24-25/A-02	Issue Date	28/09/2024
Order No.	NA	Order Date	NA
Report Issued To	ASSAM BIO REFINERY PRIVATE LIMITED Numaligarh, Dist.: Golaghat, Assam		

Sample Ref. No.:	ABRPL/A-240918/02	Sample Source#:	West Side: Near Acid-Alkali Neutralisation Pit	Sample Type#:	Ambient Air
Date of Sampling:	18.09.2024	Sample Receipt Date:	21.09.2024	Instrument Used:	ENV/AS/02, ENV/RDS/02, ENV/GSA/02
Analysis Start Date:	23.09.2024	Analysis End Date:	25.09.2024	Sampled By:	Bidyut Kalita, Envirocon
Environmental conditions during sampling:	T-35°C & RH-78%	Sampling Plan/Sapling Method:		ENV/SOP/A-01	

TEST RESULTS

Sl. No.	Parameters	Test Method	Results	Units	Limits*
1.	Particulate Matter (size less than 2.5 µm) or PM _{2.5}	IS 5182 (Part 24)	12.8	µg/m ³	60 (24 Hours Average)
2.	Particulate Matter (size less than 10 µm) or PM ₁₀	IS 5182 (Part 23)	43.7	µg/m ³	100 (24 Hours Average)
3.	Sulphur Dioxide (as SO ₂)	IS 5182 (Part 2)	5.6	µg/m ³	80 (24 Hours Average)
4.	Nitrogen Dioxide (as NO ₂)	IS 5182 (Part 6)	7.1	µg/m ³	80 (24 Hours Average)

NA: Not Applicable, BDL: Below Detectable Limit, MDL: Minimum Detectable Limit

Information provided by the customer for which laboratory has no control.

* Limits as per G.S.R. 826(E), 16.11.2009

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



Authorised Signatory: Mr. Pankaj Baroi (Director)

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Format No.: ENV/R/TR/19/AA-01

Rev. No.: 00

TEST REPORT

ULR No.	NA		
Report No.	ENV/TR/ABRPL/24-25/A-03	Issue Date	28/09/2024
Order No.	NA	Order Date	NA
Report Issued To	ASSAM BIO REFINERY PRIVATE LIMITED Numaligarh, Dist.: Golaghat, Assam		

Sample Ref. No.:	ABRPL/A-240918/03	Sample Source#:	North Side: Near Rajabari Village	Sample Type#:	Ambient Air
Date of Sampling:	18.09.2024	Sample Receipt Date:	21.09.2024	Instrument Used:	ENV/AS/03, ENV/RDS/03, ENV/GSA/03
Analysis Start Date:	23.09.2024	Analysis End Date:	25.09.2024	Sampled By:	Bidyut Kalita, Envirocon
Environmental conditions during sampling:	T-35°C & RH-78%	Sampling Plan/Sapling Method:		ENV/SOP/A-01	

TEST RESULTS

Sl. No.	Parameters	Test Method	Results	Units	Limits*
1.	Particulate Matter (size less than 2.5 µm) or PM _{2.5}	IS 5182 (Part 24)	9.5	µg/m ³	60 (24 Hours Average)
2.	Particulate Matter (size less than 10 µm) or PM ₁₀	IS 5182 (Part 23)	38.2	µg/m ³	100 (24 Hours Average)
3.	Sulphur Dioxide (as SO ₂)	IS 5182 (Part 2)	BDL[MDL=5.0]	µg/m ³	80 (24 Hours Average)
4.	Nitrogen Dioxide (as NO ₂)	IS 5182 (Part 6)	BDL[MDL=5.0]	µg/m ³	80 (24 Hours Average)

NA: Not Applicable, BDL: Below Detectable Limit, MDL: Minimum Detectable Limit

Information provided by the customer for which laboratory has no control.

* Limits as per G.S.R. 826(E), 16.11.2009

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



Authorised Signatory: Mr. Pankaj Baroi (Director)

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Rev. No.: 00

TEST REPORT

ULR No.	NA		
Report No.	ENV/TR/ABRPL/24-25/N-01	Issue Date	28/09/2024
Order No.	NA	Order Date	NA
Report Issued To	ASSAM BIO REFINERY PRIVATE LIMITED Numaligarh, Dist.: Golaghat, Assam		

Sample Ref. No.:	ABRPL/N-240918/01	Sample Category/Zone#:	Industrial Area	Sample Type#:	Ambient Noise Level
Date of Sampling:	18.09.2024	Sample Receipt Date:	21.09.2024	Instrument Used:	ENV/SLM/01, ENV/SLM/02, ENV/SLM/03
Analysis Start Date:	23.09.2024	Analysis End Date:	25.09.2024	Sampled By:	Bidyut Kalita, Envirocon
Environmental conditions during sampling:	T-35°C, RH-78%, Calm		Sampling Plan/Sapling Method:	ENV/SOP/N-01	

TEST RESULTS

Sl. No.	Locations	Time Duration (Hours)	Test Method	Result Leq dB (A)
1.	East Side: Near Seuj Dwar	Day Time (06:00 - 22:00)	IS 9989 (RA 2020)	56.4
2.	West Side: Near Sub - Station Building	Day Time (06:00 - 22:00)	IS 9989 (RA 2020)	58.3
3.	North Side: Near Rajabari Village	Day Time (06:00 - 22:00)	IS 9989 (RA 2020)	42.9
4.	East Side: Near Seuj Dwar	Night Time (22:00 - 06:00)	IS 9989 (RA 2020)	42.6
5.	West Side: Near Sub - Station Building	Night Time (22:00 - 06:00)	IS 9989 (RA 2020)	43.9
6.	North Side: Near Rajabari Village	Night Time (22:00 - 06:00)	IS 9989 (RA 2020)	34.6

NA: Not Applicable

Information provided by the customer for which laboratory has no control.

Limit :

Category of Area/ Zone	Limit in dB (A) Leq	
	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

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



Authorised Signatory: Mr. Pankaj Baroi (Director)

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Format No.: ENV/R/TR/19/DW-01

Rev. No.: 00

TEST REPORT

ULR No.	NA		
Report No.	ENV/TR/ABRPL/24-25/GW-01	Issue Date	28/09/2024
Order No.	NA	Order Date	NA
Report Issued To	ASSAM BIO REFINERY PRIVATE LIMITED Numaligarh, Dist.: Golaghat, Assam		

Sample Ref. No. :	ABRPL/GW-240919/01		
Sample Type# :	Ground Water	Sample Quantity :	2000 ml
Sample Source# :	Deep Tube-well, Assam Bio Refinery Pvt. Ltd.		
Date & Time of Sampling :	19.09.2024, 11:20 AM	Date & Time of Sample Receipt :	21.09.2024, 10:00 AM
Environmental Conditions During Sampling :	T- 33°C & RH- 75%	Sampling Plan/Sampling Method :	ENV/SOP/W-01
Instrument Used for Sampling :	PE Bottle	Sampled By :	Bidyut Kalita, Envirocon
Analysis Start Date :	23.09.2024	Analysis End Date :	27.09.2024

TEST RESULTS

Sl. No.	Parameters	Test Method	Results	Units	Acceptable Limit*	Permissible Limit* in the Absence of Alternate Source
1.	Colour	IS 3025 (Part 4)	3	PCU	5	15
2.	Odour	IS 3025 (Part 05)	Odourless	-	Agreeable	Agreeable
3.	Taste	IS 3025 (Part 07)	Tasteless	-	Agreeable	Agreeable
4.	Turbidity	IS 3025 (Part 10)	0.17	NTU	1	5
5.	pH	IS 3025 (Part 11)	6.76 at 25.6°C	-	6.5 – 8.5	No Relaxation
6.	Total Dissolved Solids	IS 3025 (Part 16)	89	mg/l	500	2000
7.	Aluminium (as Al)	IS 3025 (Part 55)	BDL[MDL=0.001]	mg/l	0.03	0.2
8.	Boron (as B)	IS 3025 (Part 57)	BDL[MDL=0.001]	mg/l	0.5	1.0
9.	Calcium (as Ca)	IS 3025 (Part 40)	17	mg/l	75	200
10.	Chloride (as Cl)	IS 3025 (Part 32)	8.1	mg/l	250	1000
11.	Copper (as Cu)	IS 3025 (Part 42)	BDL[MDL=0.001]	mg/l	0.05	1.5
12.	Fluorides (as F)	IS 3025 (Part 60)	0.2	mg/l	1.0	1.5
13.	Free Residual Chlorine	IS 3025 (Part 26)	BDL[MDL=0.01]	mg/l	0.2	1
14.	Iron (as Fe)	IS 3025 (Part 53)	0.19	mg/l	0.3	No Relaxation
15.	Magnesium (as Mg)	IS 3025 (Part 46)	11	mg/l	30	100
16.	Manganese (as Mn)	IS 3025 (Part 59)	BDL[MDL=0.001]	mg/l	0.1	0.3
17.	Zinc (as Zn)	IS 3025 (Part 49)	BDL[MDL=0.01]	mg/l	5.0	15
18.	Nitrate (as NO ₃)	IS 3025 (Part 34)	1.3	mg/l	45	No Relaxation
19.	Phenolic Compound (as C ₆ H ₅ OH)	IS 3025 (Part 43)	BDL[MDL=0.001]	mg/l	0.001	0.002
20.	Sulfate (as SO ₄)	IS 3025 (Part 24)	24	mg/l	200	400



Authorised Signatory: Mr. Pankaj Baroi (Director)

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Order No.	NA	Order Date	NA
Report Issued To	ASSAM BIO REFINERY PRIVATE LIMITED Numaligarh, Dist.: Golaghat, Assam		

TEST RESULTS

Sl. No.	Parameters	Test Method	Results	Units	Acceptable Limit*	Permissible Limit* in the Absence of Alternate Source
21.	Total Alkalinity(as CaCO ₃)	IS 3025 (Part 23)	78	mg/l	200	600
22.	Total Hardness, (as CaCO ₃)	IS 3025 (Part 21)	146	mg/l	200	600
23.	Cadmium (as Cd)	IS 3025 (Part 41)	BDL[MDL=0.001]	mg/l	0.003	No Relaxation
24.	Cyanide (as CN)	IS 3025 (Part 27)	BDL[MDL=0.001]	mg/l	0.05	No Relaxation
25.	Lead (Pb)	IS 3025 (Part 47)	BDL[MDL=0.001]	mg/l	0.01	No Relaxation
26.	Mercury (Hg)	IS 3025 (Part 48)	BDL[MDL=0.001]	mg/l	0.001	No Relaxation
27.	Nickel (as Ni)	IS 3025 (Part 54)	BDL[MDL=0.001]	mg/l	0.02	No Relaxation
28.	Total Arsenic (as As)	IS 3025 (Part 37)	BDL[MDL=0.001]	mg/l	0.01	0.05
29.	Total Chromium, (as Cr)	IS 3025 (Part 52)	BDL[MDL=0.001]	mg/l	0.05	No Relaxation
30.	Total Coliform Bacteria	CPCB Guidelines	Absent	MPN/100 ml	Absent	Absent
31.	E. Coli	CPCB Guidelines	Absent	MPN/100 ml	Absent	Absent

NA: Not Applicable, BDL: Below Detectable Limit, MDL: Minimum Detectable Limit

Information provided by the customer for which laboratory has no control.

* Limits as per IS 10500:2012.

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



Authorised Signatory: Mr. Pankaj Baroi (Director)

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- NOTE:**
1. Results reported are valid at the time of and under the prevailing conditions of measurement.
 2. Results refer only to the particular parameters tested.
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