

IPL/HAL/ENV/23-24/MOEF- ERO -01
Date: 21.11.2023

To,

The Director
Govt of India
MOEF&CC,
Integrated Regional Office, Kolkata, 1B-198,
Salt Lake City, Sector III, Kolkata- 700106

Subject: Half-yearly Compliance Report for compliance status of stipulated conditions of Environmental Clearance No. J-11011/136/2007-IA .II (I) as on Period April 23 –Sept 23

Dear Sir,

We are submitting herewith half yearly compliance report as per the stipulated conditions of the Environmental clearance granted for the replacement of furnace oil based hot air generator by fluidized bed biomass gasifier in the DAP-1 Plant of Indorama India Pvt Ltd. at Haldia, West Bengal.

Hope you will find this in order.

We are also uploading the EC compliance report in our company website in the following link.

<https://ircagro.com/compliance-report/>

Thanking You

Yours Sincerely
For Indorama India Pvt Ltd


Chandra Shekhar Prasad
Chief Operating Officer
Enclosures : Compliance status report



CC :-

- 1.The Scientist 'D' & In-charge, Central Pollution Control Board, Zonal Office, Kolkata Southernd Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata -700107
- 2.The Senior Environmental Engineer, EIM cell, West Bengal pollution Control Board, 10 A, Block-LA, Sector – III, Salt Lake City, Kolkata - 700106
3. Incharge & Environmental Engineer, Haldia Regional office.

HALF-YEARLY COMPLIANCE

Report of the Conditions of the Environmental Clearance of the replacement of furnace oil based hot air generator by fluidized bed biomass/Coal gasifier DAP-1 plant

Period- April 2023 – September 2023



Indorama India Pvt Ltd
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Name of the Project:- Replacement of Furnace oil based Hot air generator(HAG) by fluidized Bed Biomass Gasifier in the DAP1 plant of Indorama India Pvt. Ltd.

Clearance Letter no:- J-11011/136/2007-IA II (I) dated 20-07-2007

Period of compliance reports:- 1st April 2023 to 30th September 2023

Sr. No.	Conditions stipulated in Environmental Clearance	Compliance Status
AI Specific Conditions		
1.	<p>The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the W. B. State Pollution Control Board (WBPCB). All emissions including SPM, RPM, SO₂, and NO_x should be within permissible limits. At no time, particulate emissions from the unit shall exceed 100 mg/Nm³ and all the necessary air pollution control system shall be installed.</p> <p>Continuous on-line monitors for particulate emissions shall be installed in stacks. Interlocking facility shall be provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit (s) is shut down automatically.</p>	<p>The gaseous and particulate matter emissions from various units (Sulphuric acid plant (SAP1 & SAP2), Di-ammonium phosphate plant (DAP1 & DAP2), Single superphosphate plant (SSP) are within the permissible limit as per Consent to Operate.</p> <p>Continuous online analyzers are installed for Particulate matter (PM) in DAP plant (Di ammonium phosphate Plant), SSP plant (single superphosphate Plant). Further NH₃, HF analyzers in DAP plants and HF analyzer in SSP plant are installed and connected to CPCB server as per CPCB guidelines of CEMS system of fertilizer industry. Interlocking facility provided with the pollution control equipment in the plant such as interlocking facility provided with scrubber pumps. In DAP 1, DAP2 and SSP Plant. Monitoring reports of stack emission are provided in annexure-1.</p> <p>Full compliance.</p>

<p>2.</p>	<p>The Company shall install Adequate dust collection and extraction system at appropriate place to control fugitive dust emissions. Cyclone and Scrubbers shall be provided to control gaseous emissions from the stacks and gaseous emission shall be maintained within 100 mg/NM3</p>	<p>Dust collection and extraction system at all material transfer points and cyclone with bag filter is installed in DAP plant for capturing dust particle & send back to the process. High efficiency bag filter is installed in SSP ball mill grinding section by replacing the earlier one.</p> <p>Scrubbers have been installed for controlling gaseous emissions from the stack and maintaining emission level below the emission limit of 100 mg/nm3 for particulate matter. Online PM analyzers are also installed in all the stacks of the plant.</p> <p>Full compliance.</p>
<p>3.</p>	<p>Ambient air quality monitoring stations shall be set up as per statutory requirement in consultation with the WBPCB</p> <p>Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities.</p> <p>Monitoring of ambient air quality and shall be carried out regularly in consultation with WBPCB and data submitted to the CPCB and WBPCB regularly</p> <p>The instruments used for ambient air</p>	<p>We are monitoring ambient air quality of all the parameters as per National ambient air quality standards in two locations outside our factory premises and in two location inside our premises monthly twice in consultation with WBPCB. Compliance reports are also being sent to WBPCB. Ambient air quality reports are attached in annexure-2. Monitoring reports are attached for reference.</p> <p>Ambient noise being measured periodically in 4 locations. Reports attached in annexure-3 for the month of Apr'23-Sep'23.</p> <p>Calibration of the instruments measuring</p>

	quality monitoring shall be calibrated time to time.	ambient air quality done by third party. Full compliance.
4.	No additional water shall be used. Recycle and reuse of water through recirculation shall be ensured Efforts shall be made to adopt 'zero' discharge	Water consumption is as per CTO standard and no additional water is being used. The DAP-1/DAP2 plant & SSP plant is zero liquid effluent discharge plant. In Sept 22, an effluent recycling plant of 40m3/Hr has been installed. Major components of effluent recycling plants are: HRSCC (High rate solid contact clarifier), Multigrade filter , UF and RO system. The permeate water from RO is used in DM plant and cooling tower make up and reject water is used in DAP & SSP plant. This project has reduced the effluent discharge towards zero and fresh water consumption has also been reduced due to this. Total effluent recycled during this period : 1,42,752 m3. ETP reports are attached in annexure-4 Pictures of Effluent recycling plant is also attached in annexure -4. Full compliance.
5.	Solid / hazardous waste shall be properly disposed off and no solid waste shall be disposed off outside the premises. Fly ash generated due to burning of biomass /coal shall be used as filler in DAP manufacturing process	Spent V2O5 catalyst & acidic residue (Hazardous waste) which generates from sulfuric acid plant is disposed to West Bengal Waste management (Ramky). Sulphur sludge(Hazardous Waste) generates from filtration of Sulphur in sulphuric acid plant is sent to West Bengal Waste management. Used oil

		<p>(Hazardous waste) generates from maintenance activity is sold to WBPCB approved recycler. ETP sludge generated from effluent treatment plant operations also disposed to West Bengal Waste Management. Total 10.9 MT of spent catalyst, 21.22 MT of ETP sludge, 3.62 MT of used oil, 23.6 MT of Sulphur sludge generated during this period. Fly ash (Solid waste) generated due to burning of coal/biomass is used as a filler in DAP manufacturing process. Total 244.47MT of metal scrap generated during the period, which was sold to scrap dealer.</p> <p>Full compliance.</p>
<p>6.</p>	<p>All the recommendations mentioned in the Corporate Responsibility for Environmental Protection (CREP) of CPCB for fertilizer plants shall be implemented</p>	<p>The CREP compliance details attached in annexure-5</p> <p>Full compliance.</p>

7.	Rainwater harvesting measures shall be adopted. The company shall harvest the rainwater from the roof tops and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve the fresh water	As per Ground water authority SWID, we are not allowed to recharge ground water. Currently to conserve fresh water we are having small rain water sumps in various plants to collect and use rain water in process. Apart from that we have a 2500 m3 of HDPE lined pond for storing of rain water from where we use the rain water in SSP Plant process. We have constructed additional 2000 & 2700 m3 of HDPE lined concrete pond for rain water harvesting (storage and utilization) and improvement in storm water management. To strengthen the storm water collection system, we have roof top water collection system. Rain water is used in SSP plant process. Full compliance.
8.	Necessary other statutory clearances from other concerned Departments including 'No Objection Certificate' from the WBPCB shall be obtained	Complied. No objection certificate obtained from WBPCB. Full compliance.
9.	Pollution load due to replacement of Furnace Oil based Hot Air Generator (HAG) by fluidised bed bio-mass gassifier in the DAP-1 Plant shall be assessed and a compliance report shall be submitted to the Ministry's Regional Office at the Bhuvaneshwar, Orissa, CPCB and WBPCB	Pollution load calculations due to replacement of HAG for the period Apr'23-Sep'23 is attached in annexure -6. Full compliance.
10.	The company shall undertake eco-development measures including	Eco development measures and community welfare measures are attached in annexure-7

	community welfare measures in the project area	Full compliance.
B] General Conditions		
1.	The project authority shall adhere to the stipulations made by West Bengal Pollution Control Board (WBPCB) and State Government	The stipulations made by WBPCB being adhered. Full compliance.
2.	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry	We ensure that no further expansion or modification of the plant shall be carried out without prior approval. EC letter is attached in annexure - 8 Full compliance.
3.	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) 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 Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time)	Noise survey in and around the plant conducted periodically to ensure the compliance. They are within permissible limits We are also measuring the ambient noise, which is conforming to the standards prescribed under Environmental Protection act, 1986. Diesel generator rooms have acoustic enclosures. Full compliance.

4.	Proper housekeeping and adequate occupational health programs shall be taken up	<p>We are maintaining proper housekeeping in our plant. Our senior management is also very focused to improve the GHK of the plant.</p> <p>We have occupational health center in our plant. We carry out periodic medical checkup for all regular employees, which includes clinic examination of relevant pathological tests (CBC, FBS, Liver function tests, lipid profile, Pulmonary function tests etc. From April 23-Sept 23, total 739 nos. of employees medical checkup was planned and 733 nos. completed i:e completion% is 99.18%</p> <p>Full compliance.</p>
5.	A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive	<p>A separate environment department is formed with qualified team headed by COO (Chief Operating Officer). The reporting hierarchy along with qualification details is mentioned in annexure-9.</p> <p>Full compliance.</p>
6.	Adequate funds shall be earmarked towards environmental pollution control measures and used judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose	<p>Yearly budgets are raised and approved by management for various functions including Environment Management. Apart from budgets, environmental performance improvement related capital projects are approved every year. Details are in annexure-10.</p> <p>Full compliance.</p>

7.	<p>The Regional Office of this Ministry at Bhubaneshwar / CPCB / SPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.</p>	<p>We are regularly submitting half yearly Compliance reports. An earlier half-yearly Compliance report has been submitted through letter No IIPL/HAL/ENV/23-24/MOEF-ERO -02 dated 08.05.23 (Hard copy and soft Copy) to MOEF&CC Integrated regional office and zonal office of CPCB and SPCB.</p> <p>Full compliance.</p>
8	<p>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 W. B. Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in. This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office at Bhubaneshwar</p>	<p>A public notice has been given to all through publishing the news for accord of Environmental clearances. Advertisement was published in local newspaper Bartaman (Bengali) and Statesman (English), which was sent to MOEF&CC, Bhubaneshwar office.</p> <p>Full compliance.</p>

Annexure - 1 Stack monitoring results

Month	DAP - 1			DAP - 2		
	PM (mg/NM3)	Fluoride as HF(mg/NM3)*	NH3 (mg/NM3)	PM (mg/NM3)	Fluoride as HF(mg/NM3)*	NH3 (mg/NM3)
Limit as per CTO (Jan2019-Dec 2023)	150	10	300	150	10	300
April	24	0.181	86.8	17	0.438	78.9
May	96.8	1.12	281.2	86.5	1.09	234
June	61	0.89	163	74	0.98	137
July	N/A	N/A	N/A	N/A	N/A	N/A
August	33	0.47	60.4	74	0.58	68.7
September	45	1.04	76.9	36	0.43	63.2

Month	SSP (Main scrubber)		SSP (Ball Mill)
	PM (mg/NM3)	Fluoride as HF (mg/NM3)*	PM (mg/NM3)
Limit as per CTO (Jan2019-Dec 2023)	125	20	125
April	79	0.7	42
May	21.8	2.62	52
June	44	1.08	56
July	29.5	2.30	52
August	37	0.45	NA
September	41	1.30	NA

Month	SAP - 1		SAP - 2	
	SO2 (mg/NM3)	Acid Mist (mg/NM3)	SO2 (mg/NM3)	Acid Mist (mg/NM3)
Limit as per CTO (Jan2019-Dec 2023)	1250	70	1250	70
April	88	32	79.7	16.3
May	184.7	32.6	117	37
June	108	38	75	12.8
July	221.2	35	105	42
August	74.3	14.2	71	13.6
September	NA	NA	91	27.9

Note:- *This is also measured in online analyzer installed in stack and connected to CPCB server. NA indicates plant was not available for stack monitoring for shutdown or any other reason.

Annexure-2

Ambient air monitoring results :-

Sl no	Location	Parameters
01	Priyangbada	PM10, PM2.5, SO2, NO2, NH3, SO3+ Acid mist, F, CO, Pb, Ni, As, Benzopyrene, Benzene, O3 (24 hour)
02	Durgachak	
03	Sanjana (Ammonia terminal facility)	
04	Near Main Gate Inside Plant	

Parameters	Limit as per CPCB notification, 18th Nov, 2009	Location 1 (Priyambada)				Location 2 (Durgachak)				Location 3 (ATO-1)				Location 4 (Near Main Gate Inside Plant)			
		September		August		September		August		September		August		September		August	
PM10 (µg/m ³)	100	31.1	36.8	48.4	56.7	42.1	39.6	41.1	40.7	34.4	48.2	62	68.7	44	45.3	66.6	48.5
PM2.5 (µg/m ³)	60	22.5	24.2	28.7	34.6	28.3	25.8	25.4	29.6	23.3	29.6	35.8	38.8	28.7	28.3	37.9	30.4
SO2 (µg/m ³)	80	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.1	<4.0	<4.0	<4.0	4.6	4.2
NO2 (µg/m ³)	80	17.5	17	19.3	19.9	18.4	18.8	21.0	20	17.5	21.2	23.5	22.6	21.8	21	22.6	19.9
NH3 (µg/m ³)	400	12.1	13.1	13.1	11.3	14.3	14.2	16.1	14.1	12.5	10	10.8	9.4	11.8	9.8	10.5	9
SO3+Acid Mist (µg/m ³)	–	15.4	15.4	11.4	15.6	18.3	18.3	14.6	16.1	39.6	39.6	36.3	35.4	27	27	23.8	21.4
F (µg/m ³)	–	10.1	10.1	8.2	9.4	8.6	8.6	7	8.8	14.8	14.8	12.7	10.9	12.4	12.4	10.8	7.6
CO (mg/m ³)	2	0.77	0.74	0.75	0.76	0.78	0.83	0.78	0.94	0.89	0.92	0.96	0.93	0.90	0.84	0.94	0.97
Pb (µg/m ³)	1	0.08 5	0.10 5	0.04 4	0.04 1	0.11 3	0.09 1	0.03 3	0.04 9	0.05 4	0.08 1	0.06 7	0.04 2	0.05 3	0.09 0	0.054	0.03 4
Ni (ng/m ³)	20	5.20	5.90	8.10	<5	<5.0	5.80	7.30	<5.0	<5.0	6.10	6.20	<5.0	6	3	6.10	<5.0
As (ng/m ³)	6	<0.2 5	<0.2 5	0.38	0.36	<0.2 5	<0.2 5	0.37	<0.2 5	0.47	0.24	<0.25	<0.2 5	0.35	0.25	<0.25	0.36
Benzo pyrene (ng/m ³)	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene (µg/m ³)	5	<1.0	<1.0	<1.0	1.41	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.34	<1.0	<1.0	<1.0	1.35
O3 (µg/m ³)	100	14.1	13.5	15.4	13.8	13.3	14.9	16.1	16.3	14.5	13.9	14.7	15.5	13.2	15.6	16.5	14.3

Parameter s	Limit as per CPCB notification, 18th Nov,2009	Location 1 (Priyambada)				Location 2 (Durgachak)				Location 3 (ATO-1)				Location 4 (Near Main Gate Inside Plant)			
		Month		July		June		July		June		July		June		July	
PM10 (µg/m3)	100	47.6	62.7	57	69.6	53.4	68.9	67.9	61.3	44.1	82.4	87.7	83.7	89.1	77.8	68.2	69.2
PM2.5 (µg/m3)	60	32.5	39.6	35.8	47.1	35.8	42.9	40.8	42.1	28.3	50.4	51.7	46.7	50.8	46.3	47.1	43.3
SO2 (µg/m3)	80	<4.0	<4.0	4.5	4.4	<4.0	<4.0	5.4	4.9	<4.0	<4.0	4	5.5	4.4	4.2	5.1	4.6
NO2 (µg/m3)	80	18.7	20.8	22.5	20.1	20.7	21.1	25	22.5	19.5	23.8	24	24	22.2	22.2	24.7	21
NH3 (µg/m3)	400	14.2	14.8	14.8	12.1	16.6	13.4	15.8	11.4	14.3	12	13.4	10.3	13.9	14.4	13.9	9.2
SO3+Acid Mist (µg/m3)	–	12.5	10.4	10	11.3	18.8	13.9	13.3	18.1	37.6	20.8	23.3	22.7	25	17.4	20	15.9
F(µg/m3)	–	6.3	12.5	8.3	13.9	10.4	8.3	12.5	19.4	14.6	25	25	25	12.5	16.7	16.7	15.3
CO (mg/m3)	2	0.56	0.81	0.77	0.93	0.94	0.97	0.86	0.85	1.05	1.09	0.91	0.92	1.16	1.01	0.96	0.92
Pb (µg/m3)	1	0.021	0.054	0.069	0.071	0.040	0.060	0.075	0.071	0.045	0.074	0.076	0.061	0.035	0.063	0.047	0.045
Ni (ng/m3)	20	<5.0	7.80	<5.0	<5.0	<5.0	10.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	8.70	8.70	<5.0	<5.0
As(ng/m3)	6	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.25
Benzo pyrene (ng/m3)	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene (µg/m3)	5	<0.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0
O3 (µg/m3)	100	18.5	18.4	19.2	17.9	18.2	17.4	18.3	17.6	18.5	17.7	18	18.2	15.9	16.1	17.5	17.5

Parameters	Limit as per CPCB notification, 18th Nov,2009	Location 1 (Priyambada)				Location 2 (Durgachak)				Location 3 (ATO-1)				Location 4 (Near Main Gate Inside Plant)			
		Month		May		April		May		April		May		April		May	
PM10 (µg/m3)	100	56.9	67.7	61.1	56.4	58.5	53.7	59.1	63.2	61.3	69.3	75.9	61.1	85.4	73	88.1	75.1
PM2.5 (µg/m3)	60	31.7	41.7	36.7	33.3	35.4	36.3	38.7	38.3	32.5	42.5	46.7	36.2	52.1	45	48.7	47.5
SO2 (µg/m3)	80	4.5	5.0	4.5	4.1	5	5.2	5.3	5	4.9	5.2	4.7	4.3	5.1	5.1	5.1	5.3
NO2 (µg/m3)	80	23.6	21.8	21.8	20.8	23.2	20.7	23.2	23.3	25.3	23.2	23.2	23.6	24.2	24.4	27.4	26.5
NH3 (µg/m3)	400	11.6	12.7	12.3	12.9	13.2	14.2	14	13.6	13.5	11.6	12.4	12.7	12.2	11.2	11.8	11.9
SO3+Acid Mist (µg/m3)	–	6.8	13.6	10.2	10.2	10.2	20.4	15.3	17	27.2	30.6	27.2	23.8	20.4	23.8	18.7	20.4
F(µg/m3)	–	12.5	12.5	14.6	10.4	16.7	16.7	18.8	14.6	31.3	29.2	27.1	22.9	25	18.8	25	18.8
CO (mg/m3)	2	0.87	0.77	0.87	0.83	0.82	0.81	0.80	0.82	0.90	0.84	0.99	0.91	1.01	0.98	1.00	0.96
Pb (µg/m3)	1	0.093	0.053	0.037	0.044	0.060	0.042	0.037	0.062	0.078	0.053	0.058	0.057	0.085	0.073	0.068	0.049
Ni (ng/m3)	20	7.40	9.40	7.40	<5.0	6.40	8.40	5.30	7.60	8.70	6.60	<5.0	6.60	8.60	5.70	<5.0	7.20
As(ng/m3)	6	<0.25	<0.25	<0.25	<0.25	0.51	<0.25	<0.25	0.25	0.50	<0.25	0.89	<0.25	0.38	<0.25	0.89	<0.25
Benzo pyrene (ng/m3)	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene (µg/m3)	5	1.34	<1.0	<1.0	0.48	1.01	<1.0	<1.0	0.70	1.29	1.15	1.18	0.24	1.50	<1.0	1.34	1.13
O3 (µg/m3)	100	16.3	15.2	17.2	16.6	17.3	18.6	16.8	18	17.6	18.5	16.9	17.5	15.9	15.9	16.9	16.9

Note- The ambient air monitoring station (Location 1 & 2) are outside of the factory and surrounded by other industries and high traffic roads.

Annexure-3

Ambient Noise Monitoring results

Location	Back Side Of DG room	Near Parking Gate	Near Main Gate	Near DAP Gate
Monitoring Date (23.05.2023- 27.05.2023)				
Results in Leq dB(A) Day Time	59.6	55.1	56	62.3
Results in Leq dB(A) Night Time	53.7	49.9	53	53.8
Location	Back Side Of DG room	Near Parking Gate	Near Main Gate	Near DAP Gate
Monitoring Date (31.07.2023-04.08.2023)				
Results in Leq dB(A) Day Time	53.1	55.4	56.5	62.1
Results in Leq dB(A) Night Time	50.8	50.9	51.8	53

Annexure - 4

ETP discharge results:-

Month	ETP Water Outlet Form Final Outlet Drain									
	pH (mg/l)	BOD (mg/l)	COD (mg/l)	(TSS) (mg/l)	Fluoride (F) (mg/l)	Phosphate (as P) (mg/l)	Oil & Grease (mg/l)	Ammoniacal nitrogen as N (mg/l)	Kjeldahl Nitrogen as N (mg/l)	Free ammoniacal nitrogen as N (mg/l)
Limit as per CTO(Jan2019 -Dec 2023)	6.5-8.5	30	250	100	10	5	10	50	75	4
April	7.83	8.7	32	10	0.68	0.29	<5.0	<0.1	<0.3	<0.1
May	7.14	<2.0	8.0	8.4	0.4	0.34	<5.0	<0.1	<0.3	<0.1
June	8.15	2.3	10	6.4	0.3	0.38	<5.0	<0.1	<0.3	<0.1
July	7.40	4.4	16	5.9	0.65	0.26	<5.0	3.1	4.4	2.4
August	7.53	3.2	12	12	0.89	1.8	<5.0	2.2	3.4	0.72
September	7.90	6.6	24	12	0.46	<0.05	<5.0	3.6	6.4	1.3

Effluent Recycling Plant:



Annexure-5

Details information on compliance of CREP

Sl no	Conditions of CREP	Compliance status
1.	Efforts will be made for conservation of water, particularly with a target to have consumption less than 8.12 and 15 m ³ tons of urea produced for plant based on gas, naphtha and fuel oil, respectively. In case of plants using Naphtha and Gas both as feedstocks, water consumption target of less than 10m ³ /tonne will be achieved.	We don't have an ammonia, urea plant. So this point is not applicable to us.
2.	Use of arsenic for CO ₂ absorption in ammonia plants and chromate based chemicals for cooling system, which is still continuing in some Industries, will be phased out and replaced with non- arsenic and non- chromate systems.	Chromate and arsenic based chemicals are not used in our industry. Zinc and phosphate based chemicals is used in cooling water treatment.
3.	Adequate treatment for removal of oil, chromium (till non- chromate based cooling system is in place) and fluoride will be provided to meet the prescribed standards at the source (end respective process unit) itself.	We don't use any chromate based cooling system in our industry. No effluent is generated from SSP plant and DAP/NPK plant. Effluent is generated from RO plant reject, DM plant regeneration and cooling tower blowdown. Fluoride level in the effluent generated from SAP(Sulfuric acid plant) & DM /RO plant remains within the permissible limit.

4.	Proper and complete nitrification and de-nitrification will be ensured wherever such process used for effluent treatment	For industrial effluent treatment plant this is not applicable. For sewage treatment plant we are ensuring this.
5.	Ground water monitoring around the storage facilities and beyond the factory premises will be carried out at regular intervals Particularly for pH.	We are conducting ground water monitoring by third party Lab once in a quarter. Reports are attached herewith in annexure -11 . Full compliance.
6.	No effluent arising from process plants and associated facilities will be discharged to the storm water drain. The quality of storm water will be regularly monitored by all the industries.	No effluent is discharged into storm water drain. Effluent drain and storm water drains are separate. The quality of storm water is regularly monitored. Full compliance.
7.	The industries, where waste water/ effluent flows through the storm water drains even during the dry season will install continuous Systems for monitoring the storm water quality for pH, ammonia and fluoride. If required, storm water will be routed through effluent treatment plant before discharging	Wastewater / effluent is not being discharged into storm water drain. Storm water drains are separate from effluent drain. Full compliance.
8.	The sulphuric acid plants having SCSA system will switch over to DCDA system by March 2004 to meet the emission standard for SO ₂ as 2kg/ton of H ₂ SO ₄ produced	We have two sulfuric acid plants and both are DCDA process. Emission of SO ₂ is maintained as per CTO and it is less than 2kg/Ton of H ₂ SO ₄ . Full compliance.
9.	Sulphuric acid plants having DCDA system will improve the Conversion and absorption efficiencies of the system as well as scrubbers to achieve SO ₂ emission of 2kg tonne of acid produced in case of plants having capacity above 300 tpd and 2.5 kg	In both the sulphuric acid plants conversion is more than 99 %. In SAP1 plant & SAP2 plant SO ₂ emission /MT of sulphuric acid is much less than 2Kg/Ton of acid produced. Full compliance.

	tonne in case of plants having capacity upto 300tpd	
10.	Stack height for sulphuric acid plants will be provided as per the guidelines.	Stack height for SAP1 & SAP2 plant is 40 meter which follows the Sulphuric acid plant emission guidelines. Full compliance.
11.	An action plan for providing proper dust control systems rock Phosphate grinding unit in phosphoric acid plants/ single superphosphate plants, so as to achieve particulate emission of 150 mg/Nm ³ will be submitted by September 2003 and complied with by March 2004.	We have installed bag filter in rock grinding section in SSP plant and particulate emission from grinding unit stack is well below the permissible limit as per CTO. Stack analysis data is tabulated in annexure-1 . Online analysers for particulate matter also being installed in the SSP plant grinding unit stacks (ball mill) and connected to CPCB server. Full compliance.
12.	Particulate as well as gaseous fluoride will be monitored and adequate control systems will be installed by June 2004 to achieve the norms on total fluoride emissions (25 mg/Nm ³).	We are monitoring both gaseous and particulate fluoride and fluorine scrubbers are installed in SSP and DAP plants to keep the emission within prescribed limits. Full compliance.
13.	Continuous SO ₂ emission monitoring systems will be installed in sulphuric acid plants (having capacity 200 tpd and above) by March 2004.	We have online continuous SO ₂ emission monitoring system in both sulfuric acid plants and connected to CPCB server. SO ₂ analyzer has remote calibration facility. Full compliance.
14.	Regular monitoring of ambient air quality with regard to SO ₂ NO _x , PM, SO ₃ , fluoride	Ambient air monitoring of SO ₂ , NO _x , PM, SO ₃ , Fluoride, Acid mist being

	and acid mist will be carried out	monitored twice in month outside factory premises and inside factory premises. Full compliance.
15.	Gypsum will be effectively managed by providing proper lining, dykes with approach roads and monitoring of groundwater quality around storage facilities. Accumulated gypsum will be properly capped.	We don't have any gypsum storage. This is not applicable for us.
16.	An action plan for proper handling, storage and disposal of spent catalyst having toxic metals will be submitted by June 2003 and Implemented by September 2003. The industry will also explore recovery/buy-back of spent catalyst by September 2003.	Spent V2O5 catalyst is being generated from Sulfuric acid plant during annual shut down. Spent V2O5 catalyst is being disposed to West Bengal Waste Management Pvt. Ltd (Ramky) as per Hazardous Waste Authorization & CTO. Full compliance.
17.	Carbon slurry, sulphurmuck and chalk will be properly managed and disposed of in properly designed landfill either within premises or in common facility	Sulphur sludge/ muck is disposed to BWML as per CTO & Hazardous waste authorization. Full compliance.

Annexure- 6

Emission load of DAP-1 plant after scrubber for Biomass/Coal based HAG

Month	RH	Production	Gas flow (Nm3/Hr)	Particulate matter (mg/Nm3)	Pollution load (SPM) (kg)	Specific Emission (kg SPM/MT of Production)
Apr-23	274.50	10819.93	167921	24	1106.26	0.102
May-23	665.75	26961.15	192700	96.8	12418.47	0.461
Jun-23	613.75	22842.80	181711	61	6803.03	0.298
Jul-23	613	22965.22	181379	96.6	10740.50	0.468
Aug-23	540	21382.98	174870	33	3116.18	0.146
Sep-23	625	24975.11	179149	45	5038.57	0.202
	555.33	129947.19	179621.67	59.40	39223.02	0.30
Average specific emission kg particulate matter/MT of production 0.30						

Note :-Apr'23–Sep'23 particulate matter (PM) values are sampled and analyzed by third party (NABL) accredited lab.

Annexure-7

Annexure-7 Eco sustainability measures (Oct'22 – Mar'23)

CSR Report (April'23 – September'23)

We believe in creating synergy between business and the society at large by working closely with the local communities for the purpose of improving the quality of life of the communities we serve through long term stakeholder value creation. We believe in positively impacting the environment and supporting the communities we operate in, focusing on sustainability of our programs and empowerment of our communities.

➤ **Livelihood**

- **Beautician & Tailoring training**



Empowering women from underprivileged community and create opportunity for employment through tailoring and beautician training. 77 underprivileged women from marginalized communities of South Kolkata have completed beautician & tailoring training with the collaboration of Hope Kolkata Foundation. After completion of the training each trainee have receive the certificate and start-up kit.



- Different species of trees planted inside factory as a part of Eco Sustainability measures:



500 saplings were distributed to local residents in collaboration with 'Paschim Banga Bigyan Mancha', one of the largest people science organizations in West Bengal in the occasion of Environment Day.



300 nos. of Foxtail palm tree planted outside the factory boundary wall



500 trees planted inside plant in July'23



550 no of trees planted in factory and Township in June 23, during environment day celebration.

➤ **Installation of Solar Power :**

Solar panel of 500 kWp installed to increase the use of renewable energy as a part of Eco Sustainability measures.



Annexure-8**Copy of Environmental Clearance**

F. No. J-11011/136/2017-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan
Jal Wing, 3rd Floor, Jor Bag Road,
New Delhi -110003

Dated: 6th January, 2021

To,

M/s Indorama India Private Limited,
P.S. Srijan Tech Park, Dn-52, Unit No. A & B,
14th Floor, Sector-V, Salt Lake, Kolkata

Sub: Replacement of Furnace Oil based Hot Air Generator (HAG) by fluidised Bed Biomass Gassifier in the DAP-1 Plant of Tata Chemicals Ltd. at Haldia, West Bengal by M/s Tata Chemicals Ltd. - Transfer of Environment Clearance regarding.

Sir,

This has reference to your online proposal No. IA/WB/IND2/162727/2020 dated 06th November, 2020 regarding transfer of environmental clearance to the above project, from M/s Tata Chemicals Limited to M/s Indorama India Private Limited.

2. Ministry of Environment, Forests and Climate Change vide letter No. J-11011/136/2007-IA II (I) dated 20th July, 2007 was granted environmental clearance to Tata Chemicals Limited for replacement of Furnace Oil based Hot Air Generator (HAG) by fluidised Bed Biomass Gassifier in the DAP-1 Plant of Tata Chemicals Ltd. at Haldia, West Bengal.

3. Now, M/s Indorama India Private Limited has informed that the Name of the company has been changed from M/s Tata Chemicals Limited to IRC Agrochemicals Private Limited in June, 2018. Again the name of company has been changed from M/s IRC Agrochemicals Private Limited to M/s Indorama India Private Limited in 18th February, 2020 without change of ownership or management of company. In this regard, a copy of Certificate of Incorporation registered with the Registrar of Companies, Kolkata (West Bengal) with CIN:U74999WB2017FTC222920 is also submitted.

4. M/s Indorama India Private Limited has also submitted a copy of NOC given by Shri Rajiv Chandan, Company Secretary of M/s Tata Chemicals Limited to transfer the above EC in the name of new company and a copy of undertaking as an affidavit signed by Shri Chandra Shekhar Prasad, Factory Manager of M/s Indorama India Private Limited to abide by the terms and conditions prescribed in the environmental clearance dated 20th July, 2007.

5. As per the relevant provisions of the EIA Notification, 2006, the environmental clearance to the project for replacement of Furnace Oil based Hot Air Generator (HAG) by fluidised Bed Biomass Gassifier in the DAP-1 Plant of Tata Chemicals Ltd. at Haldia, West Bengal granted by this Ministry

vide letter of even No. dated 20th July, 2007 is hereby transferred **from** M/s Tata Chemicals Limited **to** Indorama India Private Limited, on the same terms and conditions under which prior environmental clearance was initially granted.

6. This issues with approval of the competent authority.

37/01/2024
02/01/2024
(Ashok Kr. Pateshwary)
Director

Copy to:-

1. The Addl. Principal Chief Conservator of Forests (C), Ministry of Env., Forest and Climate Change, Regional Office (EZ), A/3, Chandrasekharpur, Bhubaneswar-751023
2. The Member Secretary, West Bengal Pollution Control Board, Paribesh Bhawan 10A, Block-LA, Sector-III Bidhannagar, Kolkata-700 105
3. The Member Secretary, CPCB, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 32
4. Monitoring Cell, MoEF&CC, Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi.
5. Guard File/Monitoring File/ Parivesh Portal/Record File

—
(Ashok Kr. Pateshwary)
Director

F. No. J-11011/136/2007- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi – 110 003

E-mail : pb.rastogi@nic.in
Telefax : 011: 2436 7668
Dated 20th July, 2007

To,
M/s Tata Chemicals Ltd.
P.O. Durgachak, Haldia,
East Midnapore – 721 602
West Bengal

E-mail : ?? ; Fax No. : 03224-252220/252223

Sub: Replacement of Furnace Oil based Hot Air Generator (HAG) by fluidised Bed Biomass Gassifier in the DAP-1 Plant of Tata Chemicals Ltd. at Haldia, West Bengal by M/s Tata Chemicals Ltd.

Sir,

Kindly refer your letter no. nil dated 29th December, 2006 alongwith duly filled Form I regarding above mentioned project.

2.0 The Ministry of Environment and Forests has examined your application. It is noted that the proposal is for the replacement of Furnace Oil based Hot Air Generator (HAG) by fluidised bed bio-mass gassifier in the DAP-1 Plant of Tata Chemicals Ltd. at Haldia, West Bengal. Total cost of the project is Rs. 1.73 Crores.

3.0 During the operating stage, hot air generated will be passed through a cyclone separator and existing scrubber for removal of dust particles. Scrubbed gases will be discharged through the stack of existing DAP plant. Hot air generated will be passed through cyclone separator and the scrubber for removal of dust particles before discharge. Emissions will be within the permissible limit. No extra water will be required for the proposed facility. Due to burning of biomass/coal, fly ash (108 TPM) will be generated which will be used as filter in DAP manufacturing process.

4.0 After considering the facts mentioned above and with due diligence, the Ministry of Environment and Forests accords environmental clearance under the provisions of EIA Notification, 2006 subject to strict compliance to the following specific and general conditions :

A. Specific Conditions :

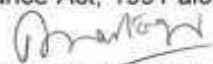
- i. The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the W. B. State Pollution Control Board (WBPCB). All emissions including SPM, RPM, SO₂, and NO_x should be within permissible limits. At no time, particulate emissions from the unit shall exceed 100 mg/Nm³ and all the necessary air pollution control system shall be installed. Continuous on-line monitors for particulate emissions shall be installed in stacks. Interlocking facility shall be provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit (s) is shut down automatically.

- ii. The company shall install adequate dust collection and extraction system at appropriate places to control fugitive dust emissions. Cyclone and scrubbers shall be provided to control gaseous emissions from the stacks and gaseous emissions shall be maintained within 100 mg/NM³.
- iii. Ambient air quality monitoring stations shall be set up as per statutory requirement in consultation with the WBPCB. Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities. Monitoring of ambient air quality and shall be carried out regularly in consultation with WBPCB and data submitted to the CPCB and WBPCB regularly. The instruments used for ambient air quality monitoring shall be calibrated time to time.
- iv. No additional water shall be used. Recycle and reuse of water through re-circulation shall be ensured. Effort shall be made to adopt 'Zero' discharge.
- v. Solid / hazardous waste shall be properly disposed off and no solid waste shall be disposed off outside the premises. Fly ash generated due to burning of biomass/coal shall be used as filter in DAP manufacturing process.
- vi. All the recommendations mentioned in the Corporate Responsibility for Environmental Protection (CREP) of CPCB for fertilizer plants shall be implemented.
- vii. Rainwater harvesting measures shall be adopted. The company shall harvest the rainwater from the roof tops and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.
- viii. Necessary other statutory clearances from other concerned Departments including 'No Objection Certificate' from the WBPCB shall be obtained.
- ix. Pollution load due to replacement of Furnace Oil based Hot Air Generator (HAG) by fluidised bed bio-mass gassifier in the DAP-1 Plant shall be assessed and a compliance report shall be submitted to the Ministry's Regional Office at the Bhuvaneshwar, Orissa, CPCB and WBPCB.
- x. The company shall undertake eco-development measures including community welfare measures in the project area.

B. General Conditions :


- i. The project authority shall adhere to the stipulations made by West Bengal Pollution Control Board (WBPCB) and State Government.
- ii. No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.
- iii. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) 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 Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- iv. Proper house keeping and adequate occupational health programmes shall be taken up.
- v. A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive.

- vi. Adequate funds shall be earmarked towards environmental pollution control measures and used judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.
- vii. The Regional Office of this Ministry at Bhubaneshwar / CPCB / SPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data alongwith statistical interpretation shall be submitted to them regularly.
- viii. 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 W. B. Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>. This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office at Bhubaneshwar.
- 5.0 The Ministry or any other competent authority may stipulate any further condition(s) on receiving reports from the project authorities. The above conditions shall be monitored by the Regional Office of this Ministry located at Bhubaneshwar.
- 6.0 The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.
- 7.0 Any other conditions or alteration in the above conditions shall have to be implemented by the project authorities in a time bound manner.
- 8.0 The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 the Air (Prevention and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.


(Dr. P. B. Rastogi)
Additional Director

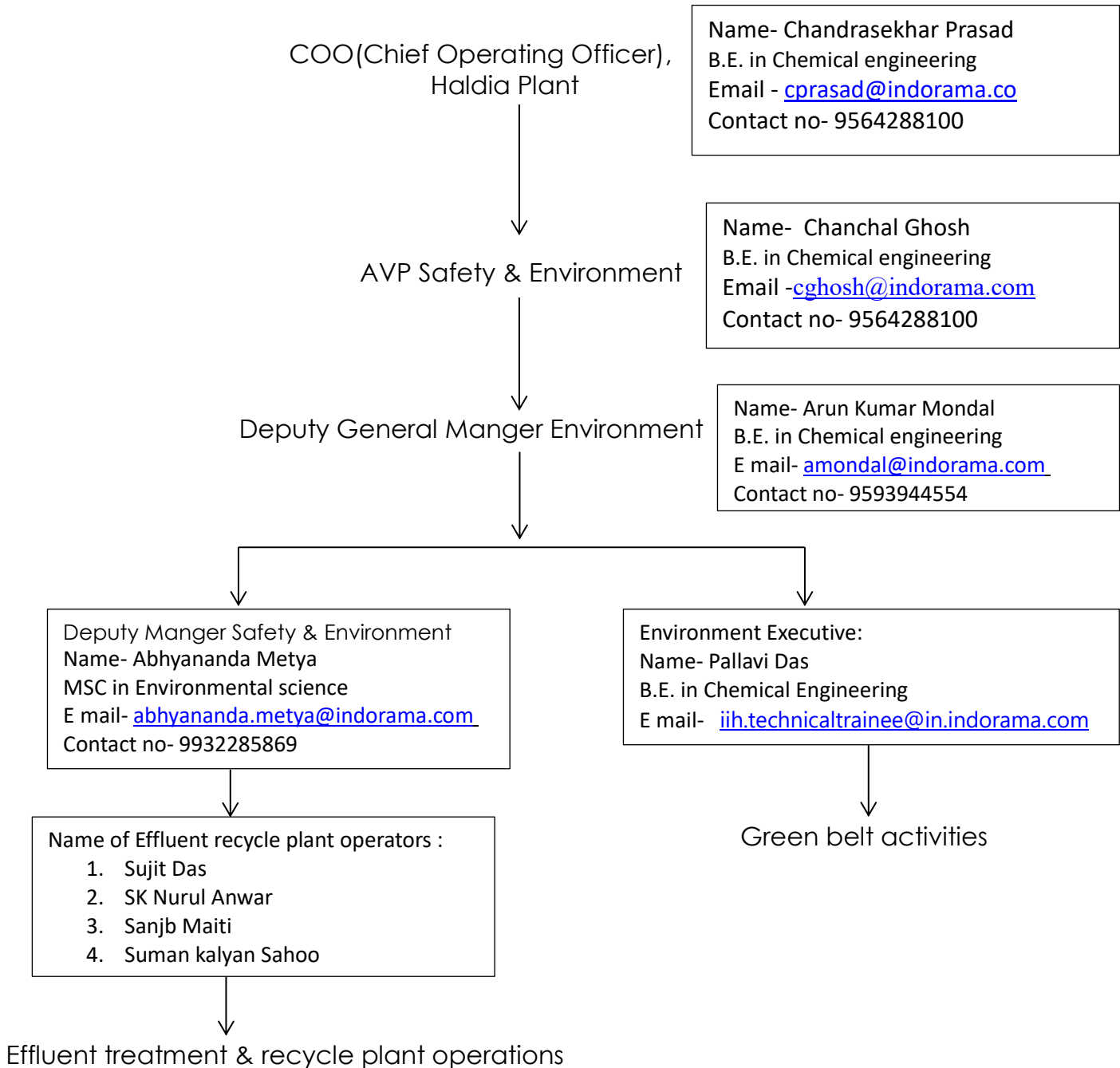
Copy to :-

1. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
2. The Chairman, West Bengal Pollution Control Board, Parivesh Bhawan, 10A Block-LA Sector-III, Salt Lake, Calcutta- 700091.
3. The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests A-3 Chandrashekharapur, Bhubaneshwar – 751 023
4. The Secretary, State Department of Environment, Govt. of West Bengal, Kolkata.
5. JS(CCI-I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Guard File.
8. Monitoring File.
9. Record File.


(Dr. P. B. Rastogi)
Additional Director

Annexure-9

Environment Management Cell structure
with Contact Details



Annexure-10

Cost for Environmental pollution control measures (Apr'23- Sep'23) are as follows:-

Sl No	Item wise expenditure under Environmental Control Measures	Total Amount in Lakhs (Approx.)
01	Stack and Effluent, Ambient air analysis cost	17.6
02	Effluent treatment and effluent recycling plant operational cost	29
03.	Manpower charges for operation of Effluent treatment plant and effluent recycling plant	27.3
04	Land development , tree planation (cost of saplings/trees)& Manpower charges for green belt development	20
05	Hazardous and biomedical waste management , EPR services under plastic waste rule	25
06	Stack and effluent analyzers maintenance cost	9
07	Capex project for Environmental measure	12.3
Total Expenditure		140.20

Major Capex to improve Environmental performance in (April'23- Sept'23):-

- Installation of web camera at ETP discharge final outlet drain. Total Cost : 5 Lakhs
- Replacement of PM analyzer at DAP 1 plant. Total cost : 4.5 Lakhs
- Installation of Ammonia, HF analyzer web logger. Total cost: 2.8 Lakhs.

Total Cost: 12.30 Lakhs

ANNEXURE - 1

Monitoring Report

TEST REPORT

Name & Address of the Customer :
'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED -1023
 Date : 12.06.2023
 Sample Description : Stack Monitoring
 Sample Mark : SAP-2
 Date & Time of Sampling :26.05.2023
 at 10.20 AM

Reference No.& Date: 4700013395 ,Dtd: 02.08.2021

ANALYSIS RESULT

A . General information about stack :			
1.	Stack connected to	: SAP-2	
2.	Emission due to	: Process Tail Gas	
3.	Material of construction of Stack	: MS	
4.	Shape of Stack	: Circular	
5.	Whether stack is provided with permanent platform & ladder	: Yes	
6.	capacity	: --- Working Load – 10 TPH	
B . Physical characteristics of stack :			
1.	Height of the stack from ground level	: 40 m	
2.	Diameter of the stack at sampling point	: 1.2 m	
3.	Height of the Sampling Point from Ground level	: 25.0 m	
4.	Area of Stack	: ---	
C. Analysis/Characteristic of stack:			
1.	Fuel used	: ---	
		2. Fuel Consumption :---	
D . Result of sampling & analysis of gaseous emission			
		Result	
		Method	
1.	Temperature of emission (°C)	36	IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	754	Lab Method
3.	Velocity of gas (m/sec.)	5.56	IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	21069.0	IS 11255 (Part III),2008RA 2018
5.	Concentration of Sulphur dioxide (mg/Nm ³)	117.0	IS 11255 (Part II)-1985, RA:2014
6.	Acid Mist (mg/Nm ³)	37.0	USEPA Part 8 - 29/10/1996
E . Pollution control device			
1.	Details of pollution control devices attached with the stack : Continuous Alkaline Scrubber		
F. Remarks : Nil			

Report Prepared By 

For Mitra S. K. Private Limited


 A. Seal
 Authorised Signatory

- The results relate only to the item(s) tested.
- This Test Report shall not be reproduced except in full, without the permission of Mitra S.K. Private Limited.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

TAHER MANSION, 1ST FLOOR

9, BENTINCK STREET, KOLKATA - 700 001

Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/335

Date: June 20, 2023

Page 1 of 1

Issued to : M/S. INDORAMA INDIA PRIVATE LIMITED				
Address : P.O.: Durgachak, Haldia, Dist: Purba Medinipur, Pin: 721602				
Your Ref. P.O. No. : 4700017754, dtd. 27.10.2022			Equipment used:	
Sample Description : Stack Gas / Flue Gas			ID No.: RVB/SMC/05 (Cal. Validity: 16/07/23)	
Date & time of sampling : 17.06.2023 (11:00 A.M. to 11:42 A.M.)			Parameters Tested	
Sampling Plan & Method : RVB/FM/44 & IS: 11255 (Part-1,2 & 3)			Physical : Temp., Velocity, Gas flow, CO, CO ₂ , SO ₂ , PM & Acid Mist	
Analysis Completed on : 20.06.2023				
A. General information about stack :				
1. Stack connected to	: SAP-2			
2. Emission due to	: Process of Tail Gas			
Material of construction of stack	: M.S.			
3. Shape of stack	: Circular.			
5. Whether stack is provided with permanent platform & ladder	: Yes.			
B. Physical characteristics of stack :				
1. Height of the stack from ground level	: 40.0 M			
2. Diameter of the stack at sampling point	: 1.2 M			
4. No. of Traverse point	: 12 Nos.			
C. Analysis / Characteristic of stack Gas / Flue Gas :				
1. Fuel used : Tail gas	2. Fuel consumption : ---	3. Load : ---		
D. Environmental conditions :				
1. Barometric pressure : 750 mmHg	2. Temperature : 35 °C			
E. Results of Physical & General Parameters of Flue Gas :				
Sl No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	38
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	5.34
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	19910
4.	Sulphur dioxide	IS 11255 : Part 2 : 1985	mg/Nm ³	75
5.	Carbon monoxide	IS 13270 (By Orsat): 1992	% v/v	<0.2
6.	Carbon dioxide	IS 13270 (By Orsat): 1992	% v/v	0.2
7.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	12
8.	Acid Mist	SOP No.: RVB/SOP/01/20 Issue No. 04, Issue Date: 10.01.2018: 2018	mg/Nm ³	12.8
F. Pollution control device				
Details of pollution control devices attached with the stack : Continuous Alkaline scrubber.				

< END OF TEST REPORT >

Report Verified by
S. Mondal

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

TEST REPORT

Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE, LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED -1363
 Date : 31.07.2023
 Sample Description : Stack Monitoring
 Sample Mark : SAP-2
 Date & Time of Sampling : 25.07.2023
 at 10.00 AM

Reference No.& Date: 4700013395 , Dtd: 02.08.2021

ANALYSIS RESULT

A. <u>General information about stack :</u>		
1.	Stack connected to	: SAP-2
2.	Emission due to	: Process Tail Gas
3.	Material of construction of Stack	: MS
4.	Shape of Stack	: Circular
5.	Whether stack is provided with permanent platform & ladder	: Yes
6.	capacity	: ---- Working Load - 9 TPH
B. <u>Physical characteristics of stack :</u>		
1.	Height of the stack from ground level	: 40 m
2.	Diameter of the stack at sampling point	: 1.2 m
3.	Height of the Sampling Point from Ground level	: 25.0 m
4.	Area of Stack	: ----
C. <u>Analysis/Characteristic of stack:</u>		
1.	Fuel used	: ----
		2. Fuel Consumption : --
D. <u>Result of sampling & analysis of gaseous emission</u>		
		Result
		Method
1.	Temperature of emission (°C)	35
2.	Barometric pressure (mm of Hg)	754
3.	Velocity of gas (m/sec.)	5.57
4.	Quantity of Gas Flow (Nm ³ /hr)	21137.30
5.	Concentration of Sulphur dioxide (mg/Nm ³)	105
6.	Acid Mist (mg/Nm ³)	42
		IS 11255 (Part III), 2008RA 2018 Lab Method IS 11255 (Part III), 2008RA 2018 IS 11255 (Part II)-1985, RA:2014 USEPA Part 8 - 29/10/1996
E. <u>Pollution control device</u>		
1.	Details of pollution control devices attached with the stack : Continuous Alkaline Scrubber	
F. <u>Remarks</u> : Nil		

Report Prepared By *Schatterjee*

for Mitra S. K. Private Limited



A. Seal

Authorized Signatory

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R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/679

Date: August 30, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED			
Address	: P.O.: Durgachak, Haldia, Dist: Purba Medinipur, Pin: 721602			
Your Ref. P.O. No.	: 4700017754, dtd. 27.10.2022	Equipment used:		
Sample Description	: Stack Gas / Flue Gas	ID No.: RVB/SMK/06 (Cal. Validity: 01/08/24)		
Date & time of sampling	: 29.08.2023 (11:20 A.M. to 11:40 A.M.)	Parameters Tested		
Sampling Plan & Method	: RVB/FM/45 & IS: 11255 (Part-1,2 & 3)	Physical: Temp., Velocity, Gas flow, CO, CO ₂ , SO ₂ , PM & Acid Mist		
Analysis Completed on	: 30.08.2023			
A. General information about stack :				
1. Stack connected to	: SAP-2			
2. Emission due to	: Process of Tail Gas			
Material of construction of stack	: M.S.			
3. Shape of stack	: Circular.			
5. Whether stack is provided with permanent platform & ladder	: Yes.			
B. Physical characteristics of stack :				
1. Height of the stack from ground level	: 40.0 M			
2. Diameter of the stack at sampling point	: 1.2 M			
4. No. of Traverse point	: 12 Nos.			
C. Analysis / Characteristic of stack Gas / Flue Gas :				
1. Fuel used	: Tail gas	2. Fuel consumption : ---	3. Load : 12 TPH	
D. Environmental conditions :				
1. Barometric pressure	: 753 mmHg	2. Temperature : 36 °C		
E. Results of Physical & General Parameters of Flue Gas :				
Sl No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	36
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	4.58
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	17256
4.	Sulphur dioxide	IS 11255 : Part 2 : 1985	mg/Nm ³	71
5.	Carbon monoxide	IS 13270 (By Orsat): 1992	% v/v	<0.2
6.	Carbon dioxide	IS 13270 (By Orsat): 1992	% v/v	0.2
7.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	13
8.	Acid Mist	SOP No.: RVB/SOP/01/20 Issue No. 04, Issue Date: 10.01.2018: 2018	mg/Nm ³	13.6
F. Pollution control device				
Details of pollution control devices attached with the stack : Continuous Alkaline scrubber.				

-: END OF TEST REPORT :-

Report Verified by
S. Mondal

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/792

Date: September 18, 2023

Page 1 of 1

Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address		: P.O.: Durgachak, Haldia, Dist. Purba Medinipur, Pin: 721602		
Your Ref. P.O. No.	: 4700017754, dtd. 27.10.2022	Equipment used: ID No.: RVB/SMK05 (Cal. Validity: 01/08/24)		
Sample Description	: Stack Gas / Flue Gas			
Date & time of sampling	: 11.09.2023 (04:30 P.M. to 05:00 P.M.)	Parameters Tested Physical : Temp., Velocity, Gas flow, CO, CO ₂ , SO ₂ , PM & Acid Mist		
Sampling Plan & Method	: RVB/FM/45 & IS: 11255 (Part-1,2 & 3)			
Analysis Completed on	: 18.09.2023			
A. General information about stack :				
1. Stack connected to	: SAP-2			
2. Emission due to	: Process of Tail Gas			
Material of construction of stack	: M.S.			
3. Shape of stack	: Circular.			
5. Whether stack is provided with permanent platform & ladder	: Yes.			
B. Physical characteristics of stack :				
1. Height of the stack from ground level	: 40.0 M			
2. Diameter of the stack at sampling point	: 1.2 M			
4. No. of Traverse point	: 12 Nos.			
C. Analysis / Characteristic of stack Gas / Flue Gas :				
1. Fuel used	: Tail gas	2. Fuel consumption	: ---	3. Load : 12 TPH
D. Environmental conditions :				
1. Barometric pressure	: 752 mmHg	2. Temperature	: 32 °C	
E. Results of Physical & General Parameters of Flue Gas :				
Sl No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	35
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	4.41
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	16654
4.	Sulphur dioxide	IS 11255 : Part 2 : 1985	mg/Nm ³	91
5.	Carbon monoxide	IS 13270 (By Orsat): 1992	% v/v	<0.2
6.	Carbon dioxide	IS 13270 (By Orsat): 1992	% v/v	0.2
7.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	8
8.	Acid Mist	SOP No.: RVB/SOP/01/20 Issue No. 04, Issue Date: 10.01.2018: 2018	mg/Nm ³	27.9
F. Pollution control device				
Details of pollution control devices attached with the stack : Continuous Alkaline scrubber.				

:- END OF TEST REPORT :-

Report Verified by
S. Mondal

(J. MUKHERJEE)
Quality Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

TEST REPORT


Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED -239
 Date : 28.04.2023
 Sample Description : Stack Monitoring
 Sample Mark : SAP-1
 Date & Time of Sampling : 06.04.2023
 at 11.50 AM

Reference No.& Date: 4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A. <u>General information about stack :</u>		
1. Stack connected to	: SAP-1	
2. Emission due to	: Process tail gas	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & ladder	: Yes	
6. capacity	: ---- Working Load- 18 TPH	
B. <u>Physical characteristics of stack :</u>		
1. Height of the stack from ground level	: 40.0 m	
2. Diameter of the stack at sampling point	: 0.95 m	
3. Height of the Sampling Point from Ground level	: 21.0 m	
4. Area of Stack	: 0.71 m ²	
C. <u>Analysis/Characteristic of stack:</u>		
1. Fuel used	: ----	
2. Fuel Consumption	: ----	
D. <u>Result of sampling & analysis of gaseous emission</u>		
1. Temperature of emission (°C)	38	IS 11255 (Part III),2008RA 2018
2. Barometric pressure (mm of Hg)	756	Lab Method
3. Velocity of gas (m/sec.)	11.32	IS 11255 (Part III),2008RA 2018
4. Quantity of Gas Flow (Nm ³ /hr)	26762.04	IS 11255 (Part III),2008RA 2018
5. Concentration of Sulphur Dioxide (mg/Nm ³)	88	IS 11255 (Part II)-1985, RA:2014
6. Acid Mist (mg/Nm ³)	32	IS 11255 (Part 6) -1999; Rffm: 2003
E. <u>Pollution control device</u>		
1. Details of pollution control devices attached with the stack	: Continuous Alkaline Scrubber	
F. <u>Remarks</u>		
: Nil		

Report Prepared By: 

for Mitra S. K. Private Limited

 Authorized Signatory

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TEST REPORT


Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED -1106
 Date : 17.06.2023
 Sample No. : MSKGL/ED/2023-24/06/00078
 Sample Description : Stack Monitoring
 Sample Mark : SAP-1
 Date & Time of Sampling : 31.05.2023
 at 10.13 AM

Reference No.& Date: 4700013395 ,Dtd: 02.08.2021

ANALYSIS RESULT

A. General information about stack :			
1.	Stack connected to	: SAP-1	
2.	Emission due to	: Process tail gas	
3.	Material of construction of Stack	: MS	
4.	Shape of Stack	: Circular	
5.	Whether stack is provided with permanent platform & ladder	: Yes	
6.	capacity	: ---	Working Load- 10 TPH
B. Physical characteristics of stack :			
1.	Height of the stack from ground level	: 40.0 m	
2.	Diameter of the stack at sampling point	: 0.95 m	
3.	Height of the Sampling Point from Ground level	: 21.0 m	
4.	Area of Stack	: 0.71 m ²	
C. Analysis/Characteristic of stack:			
1.	Fuel used	: ---	
2.	Fuel Consumption	: ---	
D. Result of sampling & analysis of gaseous emission			
		Result	Method
1.	Temperature of emission (°C)	49	IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	753	Lab Method
3.	Velocity of gas (m/sec.)	8.6	IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	19766	IS 11255 (Part III),2008RA 2018
5.	Concentration of Carbonmonoxide(% v/v)	<0.2	IS 13270 : 1992
6.	Concentration of Carbondioxide (% v/v)	1.4	IS 13270 : 1992
7.	Concentration of Sulphur Dioxide (mg/Nm ³)	184.7	IS 11255 (Part II)-1985, RA:2014
8.	Concentration of Particulate Matters (mg/Nm ³)	8.7	IS : 11255 (Part I): 1985
9.	Moisture content (%)	1.75	IS : 11255 (Part 3) : 2008
10.	Acid Mist as H ₂ SO ₄ (mg/Nm ³)	32.6	IS 11255 (Part 6) -1999; Rffm: 2003
E. Pollution control device			
1.	Details of pollution control devices attached with the stack : Continuous Alkaline Scrubber		
F. Remarks : Nil			

Report Prepared By 

for Mitra S. K. Private Limited



Aseer

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TEST REPORT

Name & Address of the Customer :
'INDORAMA INDIA PRIVATE. LIMITED.'
Haldia, Pin- 721602.

Report No. : WB/ED - 1205
Date : 30.06.2023
Sample Description : Stack Monitoring
Sample Mark : SAP-1
Date & Time of Sampling :26.06.2023
at 10.10 AM

Reference No.& Date: 4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A. General information about stack :		
1. Stack connected to	: SAP-1	
2. Emission due to	: Process tail gas	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & ladder	: Yes	
6. capacity	: ----	Working Load- 14 TPH
B. Physical characteristics of stack :		
1. Height of the stack from ground level	: 40.0 m	
2. Diameter of the stack at sampling point	: 0.95 m	
3. Height of the Sampling Point from Ground level	: 21.0 m	
4. Area of Stack	: 0.71 m ²	
C. Analysis/Characteristic of stack:		
1. Fuel used	: ----	2. Fuel Consumption : ----
D. Result of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	35	IS 11255 (Part III),2008RA 2018
2. Barometric pressure (mm of Hg)	754	Lab Method
3. Velocity of gas (m/sec.)	9.62	IS 11255 (Part III),2008RA 2018
4. Quantity of Gas Flow (Nm ³ /hr)	22910.38	IS 11255 (Part III),2008RA 2018
5. Concentration of Sulphur Dioxide (mg/Nm ³)	108.0	IS 11255 (Part II)-1985, RA:2014
6. Acid Mist (mg/Nm ³)	38.0	IS 11255 (Part 6) -1999; Rffm: 2003
E. Pollution control device		
1. Details of pollution control devices attached with the stack	: Continuous Alkaline Scrubber	
F. Remarks : Nil		

Report Prepared By 

for Mitra S. K. Private Limited



Authorised Signatory

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TEST REPORT

Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE LIMITED.'
 Haldia, Pin- 721602

Report No. : CRTGL/ED/2023-24/08/00036
 Date : 17.08.2023
 Sample No. : MSKGL/ED/2023-24/08/00036
 Sample Description : Stack Monitoring
 Sample Mark : SAP-1
 Date & Time of Sampling : 28.07.2023
 at 09:53 AM

Reference No. & Date: 4700013395 , Dtd: 02.08.2021

ANALYSIS RESULT

A. General information about stack :			
1.	Stack connected to	: SAP-1	
2.	Emission due to	: Process tail gas	
3.	Material of construction of Stack	: MS	
4.	Shape of Stack	: Circular	
5.	Whether stack is provided with permanent platform & ladder	: Yes	
6.	capacity	: ---- Working Load-10 TPH	
B. Physical characteristics of stack :			
1.	Height of the stack from ground level	: 40.0 m	
2.	Diameter of the stack at sampling point	: 0.95 m	
3.	Height of the Sampling Point from Ground level	: 21.0 m	
4.	Area of Stack	: 0.71 m ²	
C. Analysis/Characteristic of stack:			
1.	Fuel used	: ----	
		2. Fuel Consumption : ----	
D. Result of sampling & analysis of gaseous emission			
		Result	Method
1.	Temperature of emission (°C)	48	IS 11255 (Part III), 2008RA 2018
2.	Barometric pressure (mm of Hg)	754	Lab Method
3.	Velocity of gas (m/sec.)	9.0	IS 11255 (Part III), 2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	19365	IS 11255 (Part III), 2008RA 2018
5.	Concentration of Carbonmonoxide(% v/v)	<0.2	IS 13270 : 1992
6.	Concentration of Carbondioxide (% v/v)	1.0	IS 13270 : 1992
7.	Concentration of Sulphur Dioxide (mg/Nm ³)	221.2	IS 11255 (Part II)-1985, RA:2014
8.	Concentration of Particulate Matters (mg/Nm ³)	6.8	IS : 11255 (Part I): 1985
9.	Moisture content (%)	2.5	IS : 11255 (Part 3) : 2008
10.	Acid Mist as H ₂ SO ₄ (mg/Nm ³)	35.0	IS 11255 (Part 6) -1999; Rfm: 2003
E. Pollution control device			
1.	Details of pollution control devices attached with the stack : Continuous Alkaline Scrubber		
F. Remarks : Nil			

Report Prepared by 

for Mitra S. K. Private Limited
 Authorized Signatory

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Page 1 of 1



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/678

Date: August 30, 2023

Page 1 of 1

Issued to : M/S. INDORAMA INDIA PRIVATE LIMITED				
Address : P.O.: Durgachak, Haldia, Dist: Purba Mednipour, Pin: 721602				
Your Ref. P.O. No. : 4700017754, dtd. 27.10.2022	Equipment used: ID No.: RVB/SMK/06 (Cal. Validity: 01/08/24)			
Sample Description : Stack Gas / Flue Gas	Parameters Tested			
Date & time of sampling : 29.08.2023 (12:30 P.M. to 12:50 P.M.)	Physical : Temp., Velocity, Gas flow, CO, CO ₂ , SO ₂ , PM & Acid Mist			
Sampling Plan & Method : RVB/FM/45 & IS: 11255 (Part-1,2 & 3)				
Analysis Completed on : 30.08.2023				
A. General information about stack :				
1. Stack connected to : SAP-1				
2. Emission due to : Process of Tail Gas				
Material of construction of stack : M.S.				
3. Shape of stack : Circular.				
5. Whether stack is provided with permanent platform & ladder : Yes.				
B. Physical characteristics of stack :				
1. Height of the stack from ground level : 40.0 M				
2. Diameter of the stack at sampling point : 0.95 M				
4. No. of Traverse point : 12 Nos.				
C. Analysis / Characteristic of stack Gas / Flue Gas :				
1. Fuel used : Tail gas	2. Fuel consumption : ---			
	3. Load : 18 TPH			
D. Environmental conditions :				
1. Barometric pressure : 753 mmHg	2. Temperature : 36 °C			
E. Results of Physical & General Parameters of Flue Gas :				
Sl No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	38
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	11.43
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	26812
4.	Sulphur dioxide	IS 11255 : Part 2 : 1985	mg/Nm ³	74.3
5.	Carbon monoxide	IS 13270 (By Orsat): 1992	% v/v	<0.2
6.	Carbon dioxide	IS 13270 (By Orsat): 1992	% v/v	0.2
7.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	10
8.	Acid Mist	SOP No.: RVB/SOP/01/20 Issue No. 04, Issue Date: 10.01.2018: 2018	mg/Nm ³	14.2
F. Pollution control device		Details of pollution control devices attached with the stack : Continuous Alkaline scrubber.		

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/067		Date: April 26, 2023		Page 1 of 1	
Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED			
Address		: P.O.: Durgachak, Haldia, Dist: Purba Medinipur, Pin: 721602			
Your Ref. P.O. No.		: 4700017754, dtd. 27.10.2022		Equipment used:	
Sample Description		: Stack Gas / Flue Gas		ID No.: RVB/SMK/03 (Cal. Validity: 16/07/23)	
Date & time of sampling		: 25.04.2023 (02:47 P.M. to 03:39 P.M.)		Parameters Tested	
Sampling Plan & Method		: RVB/FM/44 & IS: 11255 (Part-1,2 & 3)		Physical : Temp., Velocity, Gas flow, CO, CO ₂ , F	
Analysis Completed on		: 26.04.2023		Chemical : FM	
A. General information about stack :					
1. Stack connected to		: SSP Scrubber			
2. Emission due to		: Process Activity			
3. Material of construction of stack		: M.S.			
4. Shape of stack		: Circular.			
5. Whether stack is provided with permanent platform & ladder :		Yes.			
B. Physical characteristics of stack :					
1. Height of the stack from ground level		: 40.0 M			
2. Diameter of the stack at sampling point		: 1.5 M			
4. No. of Traverse point		: 14 Nos.			
5. Height of the sampling point from GL		: 25.0 M			
C. Analysis / Characteristic of stack Gas / Flue Gas :					
1. Fuel used : Electricity		2. Fuel consumption : 25 TPH		3. Load : ---	
D. Environmental conditions :					
1. Barometric pressure : 761 mmHg		2. Temperature : 33 °C			
E. Results of Physical & General Parameters of Flue Gas :					
Sl No	Test Parameters	Test Method	Unit	Results	
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	70	
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	3.22	
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	15272	
4.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	
5.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	
6.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.7	
F. Results of gaseous emission :					
Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Particulate Matters	IS 11255 : Part 1 : 1985	mg/Nm ³	79	150 max.
G. Pollution control device					
Details of pollution control devices attached with the stack : 4 Stage Water Scrubber.					

Report Verified by
S. Mondal

: END OF TEST REPORT :-

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

TEST REPORT

Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721802

Report No. : WB/ED -1105
 Date : 17.06.2023
 Sample No. : MSKGL/ED/2023-24/08/00077
 Sample Description : Stack Monitoring
 Sample Mark : SSP Fluoride Scrubber
 Date & Time of Sampling : 30.05.2023
 at 02.58 PM

Reference No.& Date: 4700013395 ,Dtd: 02.08.2021

ANALYSIS RESULT

A. General information about stack :			
1.	Stack connected to	: SSP Fluoride Scrubber	
2.	Emission due to	: SSP Fluoride Scrubber	
3.	Material of construction of Stack	: MS	
4.	Shape of Stack	: Circular	
5.	Whether stack is provided with permanent platform & ladder	: Yes	
6.	capacity	: --- Working Load- 20 TPH	
B. Physical characteristics of stack :			
1.	Height of the stack from ground level	: 40 m	
2.	Diameter of the stack at sampling point	: 1.5 m	
3.	Height of the Sampling Point from Ground level	: 25.0 m	
4.	Area of Stack	: 1.766 m ²	
C. Analysis/Characteristic of stack:			
1.	Fuel used	: ---	
		2. Fuel Consumption : ---	
D. Result of sampling & analysis of gaseous emission			
	Result	Method	
1.	Temperature of emission (° C)	63	IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	755	IS 11255 (Part III),2008RA 2018
3.	Velocity of gas (m/s)	2.99	IS 11255 (Part III),2008RA 2018
4.	Quantity of gas flow (Nm ³ /hr)	14061	IS 11255 (Part III),2008RA 2018
5.	Concentration of Carbonmonoxide (% v/v)	<0.2	IS 13270:1992, Rffm 2009
6.	Concentration of Oxygen (% v/v)	18.6	IS:13270 :1992 Reaff,2014
7.	Concentration of Carbondioxide (% v/v)	1.0	IS:13270 :1992 Reaff,2014
8.	Concentration of Particulate Matters (mg/Nm ³)	21.8	IS 11255 (Part I):1985,RA 2014
9.	Moisture content (%)	16.0	IS 11255 (Part III),2008RA 2018
10.	Concentration of Gaseous Fluoride (mg/Nm ³)	2.62	USEPA-13B - 20/08/1996
E. Pollution control device			
1.	Details of pollution control devices attached with the stack : 4 Stage Fluoride Scrubber		
F. Remarks : Nil			

Report Prepared By 

for Mitra S.K. Private Limited

 Authorised Signatory

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R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

TAHER MANSION, 1ST FLOOR

9, BENTINCK STREET, KOLKATA - 700 001

Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/336

Date: June 20, 2023

Page 1 of 1

Issued to : M/S. INDORAMA INDIA PRIVATE LIMITED					
Address : P.O.: Durgachak, Haldia, Dist. Purba Mednipur, Pin: 721602					
Your Ref. P.O. No. : 4700017754, dtd. 27.10.2022	Equipment used: ID No.: RVB/SMK/05 (Cal. Validity: 16/07/23)				
Sample Description : Stack Gas / Flue Gas	Parameters Tested				
Date & time of sampling : 16.06.2023 (04:15 P.M. to 05:01 P.M.)	Physical : Temp., Velocity, Gas flow, CO, CO ₂ , F				
Sampling Plan & Method : RVB/FM/44 & IS: 11255 (Part-1,2 & 3)	Chemical : PM				
Analysis Completed on : 20.06.2023					
A. General information about stack :					
1. Stack connected to : SSP Scrubber					
2. Emission due to : Process Activity					
3. Material of construction of stack : M.S.					
4. Shape of stack : Circular.					
5. Whether stack is provided with permanent platform & ladder : Yes.					
B. Physical characteristics of stack :					
1. Height of the stack from ground level : 40.0 M					
2. Diameter of the stack at sampling point : 1.5 M					
4. No. of Traverse point : 20 Nos.					
5. Height of the sampling point from GL : 25.0 M					
C. Analysis / Characteristic of stack Gas / Flue Gas :					
1. Fuel used : Electricity	2. Fuel consumption : ---				
	3. Load : 30 TPH				
D. Environmental conditions :					
1. Barometric pressure : 752 mmHg	2. Temperature : 35 °C				
E. Results of Physical & General Parameters of Flue Gas :					
SI No	Test Parameters	Test Method	Unit	Results	
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	68	
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	3.44	
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	16321	
4.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	
5.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	
6.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	1.08	
F. Results of gaseous emission :					
SI No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Particulate Matters	IS 11255 : Part 1 : 1985	mg/Nm ³	44	150 max.
G. Pollution control device					
Details of pollution control devices attached with the stack : 4 Stage Water Scrubber.					

Report Verified by
S. Mondal

-: END OF TEST REPORT :-

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

TEST REPORT


Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : CRTGL/ED/2023-24/08/00035
 Date : 17.08.2023
 Sample No. : MSKGL/ED/2023-24/08/00035
 Sample Description : Stack Monitoring
 Sample Mark : SSP Fluoride Scrubber
 Date & Time of Sampling : 28.07.2023
 at 02.38 PM

Reference No. & Date: 4700013395 , Dtd: 02.08.2021

ANALYSIS RESULT

A. General information about stack :		
1.	Stack connected to	: SSP Fluoride Scrubber
2.	Emission due to	: SSP Fluoride Scrubber
3.	Material of construction of Stack	: MS
4.	Shape of Stack	: Circular
5.	Whether stack is provided with permanent platform & ladder	: Yes
6.	capacity	: ---- Working Load- 20 TPH
B. Physical characteristics of stack :		
1.	Height of the stack from ground level	: 40 m
2.	Diameter of the stack at sampling point	: 1.5 m
3.	Height of the Sampling Point from Ground level	: 25.0 m
4.	Area of Stack	: 1.766 m ²
C. Analysis/Characteristic of stack:		
1.	Fuel used	: ----
2.	Fuel Consumption	: ----
D. Result of sampling & analysis of gaseous emission		
	Result	Method
1.	Temperature of emission (°C)	71 IS 11255 (Part III), 2008RA 2018
2.	Barometric pressure (mm of Hg)	754 IS 11255 (Part III), 2008RA 2018
3.	Velocity of gas (m/s)	3.1 IS 11255 (Part III), 2008RA 2018
4.	Quantity of gas flow (Nm ³ /hr)	14383 IS 11255 (Part III), 2008RA 2018
5.	Concentration of Carbonmonoxide (% v/v)	<0.2 IS 13270:1992, Rffm 2009
6.	Concentration of Oxygen (% v/v)	18.4 IS:13270 :1992 Reaff, 2014
7.	Concentration of Carbondioxide (% v/v)	1.0 IS:13270 :1992 Reaff, 2014
8.	Concentration of Particulate Matters (mg/Nm ³)	29.5 IS 11255 (Part I), 1985, RA 2014
9.	Moisture content (%)	13.7 IS 11255 (Part III), 2008RA 2018
10.	Concentration of Gaseous Fluoride (mg/Nm ³)	2.30 USEPA-13B - 20/08/1996
E. Pollution control device		
1.	Details of pollution control devices attached with the stack : 4 Stage Fluoride Scrubber	
F. Remarks : Nil		

Report Prepared By: 

For Mitra S. K. Private Limited
 Authorized Signatory

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R. V. BRIGGS & CO. PRIVATE LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/680

Date: August 30, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED	
Address	: P.O.: Durgachak, Haldia, Dist: Purba Medinipur, Pin: 721602	
Your Ref. P.O. No.	: 4700017754, dtd. 27.10.2022	Equipment used: ID No.: RVB/SMC/05 (Cal. Validity: 01/08/24)
Sample Description	: Stack Gas / Flue Gas	
Date & time of sampling	: 29.08.2023 (03:30 P.M. to 04:12 P.M.)	Parameters Tested Physical : Temp., Velocity, Gas flow, CO, CO ₂ , F Chemical : PM
Sampling Plan & Method	: RVB/FM/45 & IS: 11255 (Part-1,2 & 3)	
Analysis Completed on	: 30.08.2023	

A. General information about stack :

- Stack connected to : SSP Scrubber
- Emission due to : Process Activity
- Material of construction of stack : M.S.
- Shape of stack : Circular.
- Whether stack is provided with permanent platform & ladder : Yes.

B. Physical characteristics of stack :

- Height of the stack from ground level : 40.0 M
- Diameter of the stack at sampling point : 1.5 M
- No. of Traverse point : 20 Nos.
- Height of the sampling point from GL : 25.0 M

C. Analysis / Characteristic of stack Gas / Flue Gas :

- Fuel used : Electricity
- Fuel consumption : --
- Load : 30 TPH

D. Environmental conditions :

- Barometric pressure : 752 mmHg
- Temperature : 35 °C

E. Results of Physical & General Parameters of Flue Gas :

Sl No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	70
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	3.92
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	18918
4.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2
5.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2
6.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.45

F. Results of gaseous emission :

Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Particulate Matters	IS 11255 : Part 1 : 1985	mg/Nm ³	37	150 max.

G. Pollution control device

Details of pollution control devices attached with the stack : 4 Stage Water Scrubber.

Report Verified by
S. Mondal

:- END OF TEST REPORT :-

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/876

Date: September 29, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED	
Address	: P.O.: Durgachak, Haldia, Dist. Purba Medinipur, Pin: 721602	
Your Ref. P.O. No.	: 4700017754, dtd. 27.10.2022	Equipment used: ID No.: RVB/SMK/05 (Cal. Validity: 17.06.24)
Sample Description	: Stack Gas / Flue Gas	
Date & time of sampling	: 25.09.2023 (03:50 P.M. to 04:39 P.M.)	Parameters Tested Physical : Temp., Velocity, Gas flow, CO, CO2, F Chemical : PM
Sampling Plan & Method	: RVB/FM/45 & IS: 11255 (Part-1,2 & 3)	
Analysis Completed on	: 29.09.2023	

A. General information about stack :

1. Stack connected to : SSP Scrubber
2. Emission due to : Process Activity
3. Material of construction of stack : M.S.
4. Shape of stack : Circular.
5. Whether stack is provided with permanent platform & ladder : Yes.

B. Physical characteristics of stack :

1. Height of the stack from ground level : 40.0 M
2. Diameter of the stack at sampling point : 1.5 M
4. No. of Traverse point : 20 Nos.
5. Height of the sampling point from Gl. : 25.0 M

C. Analysis / Characteristic of stack Gas / Flue Gas :

1. Fuel used : Electricity
2. Fuel consumption : ---
3. Load : 30 TPH

D. Environmental conditions :

1. Barometric pressure : 753 mmHg
2. Temperature : 33 °C

E. Results of Physical & General Parameters of Flue Gas :

Sl No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	65
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	3.10
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	15613
4.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2
5.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2
6.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	1.308

F. Results of gaseous emission :

Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Particulate Matters	IS 11255 : Part 1 : 1985	mg/Nm ³	41	150 max.

G. Pollution control device

Details of pollution control devices attached with the stack : 4 Stage Water Scrubber.

Report Verified by
S. Mondal

: END OF TEST REPORT :

(J. MUKHERJEE)
Quality Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

TEST REPORT

Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED -240
 Date : 28.04.2023
 Sample Description : Stack Monitoring
 Sample Mark : SSP-Ball Mill
 Date & Time of Sampling :05.04.2023
 at 02.20 pm

Reference No.& Date:4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A. General information about stack :		
1.	Stack connected to	: SSP - Ball Mill
2.	Emission due to	: Milling Operation
3.	Material of construction of Stack	: MS
4.	Shape of Stack	: Circular
5.	Whether stack is provided with permanent platform & ladder	: Yes
6.	capacity	: --- Working Load - 12 TPH
B. Physical characteristics of stack :		
1.	Height of the stack from ground level	: 34.5 m
2.	Diameter of the stack at sampling point	: 0.7 m
3.	Height of the Sampling Point from Ground level	: 31.5 m
4.	Area of Stack	: 0.39 m
C. Analysis/Characteristic of stack:		
1.	Fuel used	: ---
2.	Fuel Consumption	: ---
D. Result of sampling & analysis of gaseous emission		
	Result	Method
1.	Temperature of emission (°C)	50 IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	753 Lab Method
3.	Velocity of gas (m/sec.)	8.46 IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	10443.57 IS 11255 (Part III),2008RA 2018
5.	Concentration of Particulate Matter (mg/Nm ³)	42.0 USEPA-13B - 20/08/1996
E. Pollution control device		
1.	Details of pollution control devices attached with the stack : Cyclone Bag Filter	
F. Remarks : Nil		

Report Prepared By: 

For Mitra S. K. Private Limited
 Authorized Signatory

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TEST REPORT

Name & Address of the Customer :
'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED -1022
 Date : 12.06.2023
 Sample Description : Stack Monitoring
 Sample Mark : SSP-Ball Mill
 Date & Time of Sampling : 25.05.2023
 at 02.20 pm

Reference No.& Date:4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A. General information about stack :		
1.	Stack connected to	: SSP - Ball Mill
2.	Emission due to	:Milling Operation
3.	Material of construction of Stack	: MS
4.	Shape of Stack	: Circular
5.	Whether stack is provided with permanent platform & ladder	: Yes
6.	capacity	: ---- Working Load - 15 TPH
B. Physical characteristics of stack :		
1.	Height of the stack from ground level	: 34.5 m
2.	Diameter of the stack at sampling point	: 0.7 m
3.	Height of the Sampling Point from Ground level	: 31.5 m
4.	Area of Stack	: 0.39 m
C. Analysis/Characteristic of stack:		
1.	Fuel used	: ----
		2. Fuel Consumption : ----
D. Result of sampling & analysis of gaseous emission		
	Result	Method
1.	Temperature of emission (°C)	49
2.	Barometric pressure (mm of Hg)	755
3.	Velocity of gas (m/sec.)	8.39
4.	Quantity of Gas Flow (Nm ³ /hr)	10414.95
5.	Concentration of Particulate Matter (mg/Nm ³)	52.0
		IS 11255 (Part III),2008RA 2018 Lab Method IS 11255 (Part III),2008RA 2018 IS 11255 (Part III),2008RA 2018 USEPA-13B - 20/08/1996
E. Pollution control device		
1.	Details of pollution control devices attached with the stack : Cyclone Bag Filter	
F. Remarks : Nil		

Report Prepared By 

For Mitra S. K. Private Limited

 A. Seal
 Authorised Signatory

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TEST REPORT


Name & Address of the Customer :
'INDORAMA INDIA PRIVATE. LIMITED.'
Haldia, Pin- 721602

Report No. : WB/ED - 1204
Date : 30.06.2023
Sample Description : Stack Monitoring
Sample Mark : SSP-Ball Mill
Date & Time of Sampling : 21.06.2023
at 02.30 pm

Reference No.& Date:4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A. General information about stack :		
1. Stack connected to	:	SSP - Ball Mill
2. Emission due to	:	Milling Operation
3. Material of construction of Stack	:	MS
4. Shape of Stack	:	Circular
5. Whether stack is provided with permanent platform & ladder	:	Yes
6. capacity	:	Working Load - 14 TPH
B. Physical characteristics of stack :		
1. Height of the stack from ground level	:	34.5 m
2. Diameter of the stack at sampling point	:	0.7 m
3. Height of the Sampling Point from Ground level	:	31.5 m
4. Area of Stack	:	0.39 m
C. Analysis/Characteristic of stack:		
1. Fuel used	:	----
		2. Fuel Consumption : ----
D. Result of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	48	IS 11255 (Part III),2008RA 2018
2. Barometric pressure (mm of Hg)	755	Lab Method
3. Velocity of gas (m/sec.)	8.64	IS 11255 (Part III),2008RA 2018
4. Quantity of Gas Flow (Nm ³ /hr)	10747.31	IS 11255 (Part III),2008RA 2018
5. Concentration of Particulate Matter (mg/Nm ³)	56.0	USEPA-13B - 20/08/1996
E. Pollution control device		
1. Details of pollution control devices attached with the stack : Cyclone and Bag Filter		
F. Remarks : Nil		

Report Prepared By 

for Mitra S. K. Private Limited



Authorised Signatory

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TEST REPORT

Name & Address of the Customer :
'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED -1362
 Date : 31.07.2023
 Sample Description: Stack Monitoring
 Sample Mark : SSP-Ball Mill
 Date & Time of Sampling :18.07.2023
 at 02.50 pm

Reference No.& Date:4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A. General information about stack :			
1.	Stack connected to	: SSP - Ball Mill	
2.	Emission due to	:Milling Operation	
3.	Material of construction of Stack	: MS	
4.	Shape of Stack	:Circular	
5.	Whether stack is provided with permanent platform & ladder	: Yes	
6.	capacity	: ---- Working Load - 10 TPH	
B. Physical characteristics of stack :			
1.	Height of the stack from ground level	: 34.4 m	
2.	Diameter of the stack at sampling point	: 0.7 m	
3.	Height of the Sampling Point from Ground level	: 31.5 m	
4.	Area of Stack	: 0.39 m	
C. Analysis/Characteristic of stack:			
1.	Fuel used	: ----	
2.	Fuel Consumption	: ----	
D. Result of sampling & analysis of gaseous emission			
		Result	Method
1.	Temperature of emission (°C)	47	IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	755	Lab Method
3.	Velocity of gas (m/sec.)	7.66	IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	9568.19	IS 11255 (Part III),2008RA 2018
5.	Concentration of Particulate Matter (mg/Nm ³)	52.0	USEPA-13B - 20/08/1996
E. Pollution control device			
1.	Details of pollution control devices attached with the stack		: Cyclone and Bag Filter
F. Remarks			
: Nil			

Report Prepared By *Schatterjee*

for Mitra S. K. Private Limited



A. Seal

Authorised Signatory

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TEST REPORT

Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED -1103
 Date : 17.06.2023
 Sample No. : MSKGL/ED/2023-24/06/00075
 Sample Description : Stack Monitoring
 Sample Mark : DAP-1
 Date & Time of Sampling :30.05.2023
 at 11.44 AM

Reference No.& Date: 4700013395 ,Dtd: 02.08.2021

ANALYSIS RESULT

A . General information about stack :		
1.	Stack connected to	: DAP-1
2.	Emission due to	: Vapour Generation from process reaction ; Granulation, Screening Milling & Drying operation
3.	Material of construction of Stack	: MS
4.	Shape of Stack	: Circular
5.	Whether stack is provided with permanent platform & ladder	: Yes
6.	capacity	:---- Working Load - 40 TPH
B . Physical characteristics of stack :		
1.	Height of the stack from ground level	: 42 m
2.	Diameter of the stack at sampling point	: 2.5 m
3.	Height of the Sampling Point from Ground level	:40 m
4.	Area of Stack	: 4.91 m ²
C . Analysis/Characteristic of stack:		
1.	Fuel used	: ----
2.	Fuel Consumption	:----
D . Result of sampling & analysis of gaseous emission		
	Result	Method
1.	Temperature of emission (° c)	56 IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	755 IS 11255 (Part III),2008RA 2018
3.	Velocity of gas (m/s)	13.95 IS 11255 (Part III),2008RA 2018
4.	Quantity of gas flow (Nm ³ /hr)	192700 IS 11255 (Part III),2008RA 2018
5.	Concentration of Carbon monoxide (% v/v)	<0.2 IS 13270:1992, Rffm 2009
6.	Concentration of Oxygen (% v/v)	18.6 IS:13270 :1992 Reaff,2014
7.	Concentration of Carbondioxide (% v/v)	1.2 IS:13270 :1992 Reaff,2014
8.	Concentration of Particulate Matters (mg/Nm ³)	96.8 IS 11255 (Part I):1985,RA 2014
9.	Moisture content (%)	13.2 IS 11255 (Part III),2008RA 2018
10.	Concentration of Gaseous Fluoride (mg/Nm ³)	1.12 US EPA part 13 A_(O)
11.	Concentration of Amonia (mg/Nm ³)	281.2 IS 11255 (Part 6) -1999; Rffm. 2003
E . Pollution control device		
1.	Details of pollution control devices attached with the stack : 5 Stage Scrubber	
F . Remarks : Nil		

Report Prepared By 

for Mitra S. K. Private Limited

 Authorised Signatory

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R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/333

Date: June 20, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED	
Address	: P.O.: Durgachak, Haldia, Dist. Purba Mednipour, Pin: 721602	
Your Ref. P.O. No.	: 4700017754, dt. 27.10.2022	Equipment used: ID No.: RVB/SMK05 (Cal. Validity: 16/07/23)
Sample Description	: Stack Gas / Flue Gas	
Date & time of sampling	: 16.06.2023 (12:00 P.M. to 12:46 P.M.)	Parameters Tested Physical: Temp., Velocity, Gas flow, CO, CO ₂ , F, NH ₃ Chemical: PM
Sampling Plan & Method	: RVB/FM/44 & IS: 11255 (Part-1,2 & 3)	
Analysis Completed on	: 20.06.2023	

A. General information about stack :

- Stack connected to : DAP - 1
- Emission due to : Vapours Generated from Process Reaction, Granulation Screening, Milling & Drying Operation
- Material of construction of stack : M.S.
- Shape of stack : Circular.
- Whether stack is provided with permanent platform & ladder : Yes.

B. Physical characteristics of stack :

- Height of the stack from ground level : 42.0 M
- Diameter of the stack at sampling point : 2.5 M
- No. of Traverse point : 32 Nos.
- Height of the sampling point from GL : 40.0 M

C. Analysis / Characteristic of stack Gas / Flue Gas :

- Fuel used : ---
- Fuel consumption : ---
- Load : 40 TPH

D. Environmental conditions :

- Barometric pressure : 752 mmHg
- Temperature : 37 °C

E. Results of Physical & General Parameters of Flue Gas :

Sl No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	54
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	12.94
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	181711
4.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2
5.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2
6.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.89
7.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	163

F. Results of gaseous emission :

Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Particulate Matters	IS 11255 : Part 1 : 1985	mg/Nm ³	61	150 max.

G. Pollution control device

Details of pollution control devices attached with the stack : NH₃ Scrubber, Gas Scrubber & Fluoride Scrubber.

S. Mondal
Report Verified by
S. Mondal

END OF TEST REPORT :-

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

TAHER MANSION, 1ST FLOOR

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/676

Date: August 30, 2023

Page 1 of 1

Issued to : M/S. INDORAMA INDIA PRIVATE LIMITED					
Address : P.O.: Durgachak, Haldia, Dist: Purba Medinipur, Pin: 721602					
Your Ref. P.O. No. : 4700017754, dtd. 27.10.2022	Equipment used: ID No: RVB/SMK/06 (Cal. Validity: 01/08/24)				
Sample Description : Stack Gas / Flue Gas	Parameters Tested Physical : Temp., Velocity, Gas-flow, CO, CO ₂ , F, NH ₃ Chemical : PM				
Date & time of sampling : 28.08.2023 (01:20 P.M. to 02:08 P.M.)					
Sampling Plan & Method : RVB/FM/45 & IS: 11255 (Part-1,2 & 3)					
Analysis Completed on : 30.08.2023					
A. General information about stack :					
1. Stack connected to : DAP - 1					
2. Emission due to : Vapours Generated from Process Reaction, Granulation Screening, Milling & Drying Operation					
3. Material of construction of stack : M.S.					
4. Shape of stack : Circular,					
5. Whether stack is provided with permanent platform & ladder : Yes.					
B. Physical characteristics of stack :					
1. Height of the stack from ground level : 42.0 M					
2. Diameter of the stack at sampling point : 2.5 M					
4. No. of Traverse point : 32 Nos.					
5. Height of the sampling point from GL : 40.0 M					
C. Analysis / Characteristic of stack Gas / Flue Gas :					
1. Fuel used : ---	2. Fuel consumption : ---				
	3. Load : 38 TPH				
D. Environmental conditions :					
1. Barometric pressure : 752 mmHg	2. Temperature : 35 °C				
E. Results of Physical & General Parameters of Flue Gas :					
Sl No	Test Parameters	Test Method	Unit	Results	
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	54	
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	12.49	
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	174870	
4.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	
5.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	
6.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.47	
7.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	60.4	
F. Results of gaseous emission :					
Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Particulate Matters	IS 11255 : Part 1 : 1985	mg/Nm ³	33	150 max.
G. Pollution control device					
Details of pollution control devices attached with the stack : NH ₃ Scrubber, Gas Scrubber & Fluoride Scrubber.					

Report Verified by
S. Mondal

:- END OF TEST REPORT :-

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/790

Date: September 18, 2023

Page 1 of 1

Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED			
Address		: P.O.: Durgachak, Haldia, Dist: Purba Medinipur, Pin: 721602			
Your Ref. P.O. No.	: 4700017754, dtd. 27.10.2022	Equipment used: ID No.: RVB/SMK/06 (Cal. Validity: 01/08/24)			
Sample Description	: Stack Gas / Flue Gas				
Date & time of sampling	: 11.09.2023 (12:45 P.M. to 01:33 P.M.)	Parameters Tested Physical : Temp., Velocity, Gas flow, CO, CO ₂ , F, NH ₃ Chemical : PM			
Sampling Plan & Method	: RVB/FM/45 & IS: 11255 (Part-1,2 & 3)				
Analysis Completed on	: 18.09.2023				
A. General information about stack :					
1. Stack connected to	: DAP - 1				
2. Emission due to	: Vapours Generated from Process Reaction, Granulation Screening, Milling & Drying Operation				
3. Material of construction of stack	: M.S.				
4. Shape of stack	: Circular.				
5. Whether stack is provided with permanent platform & ladder	: Yes.				
B. Physical characteristics of stack :					
1. Height of the stack from ground level	: 42.0 M				
2. Diameter of the stack at sampling point	: 2.5 M				
4. No. of Traverse point	: 32 Nos.				
5. Height of the sampling point from GL	: 40.0 M				
C. Analysis / Characteristic of stack Gas / Flue Gas :					
1. Fuel used : ---	2. Fuel consumption : ---	3. Load : 40 TPH			
D. Environmental conditions :					
1. Barometric pressure : 752 mmHg	2. Temperature : 35 °C				
E. Results of Physical & General Parameters of Flue Gas :					
Sl No	Test Parameters	Test Method	Unit	Results	
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	55	
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	12.89	
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	179149	
4.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	
5.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	
6.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	1.04	
7.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	76.9	
F. Results of gaseous emission :					
Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Particulate Matters	IS 11255 : Part 1 : 1985	mg/Nm ³	45	150 max.
G. Pollution control device					
Details of pollution control devices attached with the stack : NH ₃ Scrubber, Gas Scrubber & Fluoride Scrubber.					

Report Verified by
S. Mondal

:- END OF TEST REPORT :-

(J. MUKHERJEE)
Quality Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

TEST REPORT

Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED -1104
 Date : 17.06.2023
 Sample No. : MSKGL/ED/2023-24/06/00076
 Sample Description : Stack Monitoring
 Sample Mark : DAP-2
 Date & Time of Sampling : 30.05.2023
 at 04.08 PM

Reference No.& Date: 4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A. General information about stack :			
1.	Stack connected to	: DAP-2	
2.	Emission due to	: Vapour Generation from process reaction ; Granulation, Screening Milling & Drying operation	
3.	Material of construction of Stack	: MS	
4.	Shape of Stack	: Circular	
5.	Whether stack is provided with permanent platform & ladder	: Yes	
6.	capacity	: --- Working Load - 70 TPH	
B. Physical characteristics of stack :			
1.	Height of the stack from ground level	: 42 m	
2.	Diameter of the stack at sampling point	: 2.5 m	
3.	Height of the Sampling Point from Ground level	: 40.0 m	
4.	Area of Stack	: 4.91 m ²	
C. Analysis/Characteristic of stack:			
1.	Fuel used	: ---	
		2. Fuel Consumption : ---	
D. Result of sampling & analysis of gaseous emission			
	Result	Method	
1.	Temperature of emission (°C)	58	IS 11255 (Part III), 2008RA 2018
2.	Barometric pressure (mm of Hg)	755	IS 11255 (Part III), 2008RA 2018
3.	Velocity of gas (m/s)	14.16	IS 11255 (Part III), 2008RA 2018
4.	Quantity of gas flow (Nm ³ /hr)	14021	IS 11255 (Part III), 2008RA 2018
5.	Concentration of Carbon Monoxide (% v/v)	<0.2	IS 13270 : 1992
6.	Concentration of Oxygen (% v/v)	18.0	IS 13270 : 1992
7.	Concentration of Carbon Dioxide (% v/v)	1.2	IS 13270 : 1992
8.	Concentration of Particulate Matters (mg/Nm ³)	86.5	IS 11255 (Part I):1985, RA 2014
9.	Moisture content (%)	11.03	IS : 11255 (Part 3) : 2008
10.	Concentration of Gaseous Fluoride (mg/Nm ³)	1.09	US EPA part 13 A, (O)
11.	Concentration of Amonia (mg/Nm ³)	234.0	IS 11255 (Part 6) : 1999
E. Pollution control device			
1.	Details of pollution control devices attached with the stack : 5 Stage Scrubbers (NH ₃ , Scrubber, Gas Scrubber, Ventures Scrubber & Fluoride Scrubber)		
F. Remarks : Nil			

Report Prepared By 

for Mitra S. K. Private Limited

 Authorised Signatory

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/334

Date: June 20, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: P.O.: Durgachak, Haldia, Dist: Purba Medinipur, Pin: 721602		
Your Ref. P.O. No.	: 4700017754, dtd. 27.10.2022	Equipment used:	
Sample Description	: Stack Gas / Flue Gas	ID No.: RVB/SMK/05 (Cal. Validity: 16/07/23)	
Date & time of sampling	: 16.06.2023 (02:23 P.M. to 03:08 P.M.)	Parameters Tested	
Sampling Plan & Method	: RVB/FM/44 & IS: 11255 (Part-1,2 & 3)	Physical : Temp., Velocity, Gas flow, CO, CO2, F, HCl	
Analysis Completed on	: 20.06.2023	Chemical : PM	

A. General information about stack :

- Stack connected to : DAP - 2
- Emission due to : Vapours Generated from Process Reaction, Granulation Screening, Milling & Drying Operation
- Material of construction of stack : M.S.
- Shape of stack : Circular.
- Whether stack is provided with permanent platform & ladder : Yes.

B. Physical characteristics of stack :

- Height of the stack from ground level : 42.0 M
- Diameter of the stack at sampling point : 2.5 M
- No. of Traverse point : 32 Nos.
- Height of the sampling point from GL : 40.0 M

C. Analysis / Characteristic of stack Gas / Flue Gas :

- Fuel used : ---
- Fuel consumption : ---
- Load : 70 TPH

D. Environmental conditions :

- Barometric pressure : 752 mmHg
- Temperature : 36 °C

E. Results of Physical & General Parameters of Flue Gas :

Sl No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	58
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	13.62
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	190971
4.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2
5.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2
6.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.98
7.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	137

F. Results of gaseous emission :

Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Particulate Matters	IS 11255 : Part I : 1985	mg/Nm ³	74	150 max.

G. Pollution control device

Details of pollution control devices attached with the stack : 5 Stage NH₃ Scrubber, 2 Nos. Gas Scrubber, Ventury Scrubber & Fluoride Scrubber.

S. Mondal
Report Verified by
S. Mondal

: END OF TEST REPORT : -

Dr. R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/677

Date: August 30, 2023

Page 1 of 1

Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED			
Address		: P.O.: Durgachak, Haldia, Dist: Purba Medinipur, Pin: 721602			
Your Ref. P.O. No.	: 4700017754, dtd. 27.10.2022	Equipment used:			
Sample Description	: Stack Gas / Flue Gas	ID No.: RVB/SMK/06 (Cal. Validity: 01/08/24)			
Date & time of sampling	: 28.08.2023 (03:30 P.M. to 04:18 P.M.)	Parameters Tested			
Sampling Plan & Method	: RVB/FM/45 & IS: 11255 (Part-1,2 & 3)	Physical : Temp., Velocity, Gas flow, CO, CO2, F, NH3			
Analysis Completed on	: 30.08.2023	Chemical : PM			
A. General information about stack :					
1. Stack connected to	: DAP - 2				
2. Emission due to	: Vapours Generated from Process Reaction, Granulation Screening, Milling & Drying Operation				
3. Material of construction of stack	: M.S.				
4. Shape of stack	: Circular.				
5. Whether stack is provided with permanent platform & ladder	: Yes.				
B. Physical characteristics of stack :					
1. Height of the stack from ground level	: 42.0 M				
2. Diameter of the stack at sampling point	: 2.5 M				
4. No. of Traverse point	: 32 Nos.				
5. Height of the sampling point from GL	: 40.0 M				
C. Analysis / Characteristic of stack Gas / Flue Gas :					
1. Fuel used	: ---	2. Fuel consumption	: ---	3. Load	: 40 TPH
D. Environmental conditions :					
1. Barometric pressure	: 752 mmHg		2. Temperature	: 35 °C	
E. Results of Physical & General Parameters of Flue Gas :					
Sl No	Test Parameters	Test Method	Unit	Results	
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	59	
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	13.05	
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	183924	
4.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	
5.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	
6.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.58	
7.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	68.7	
F. Results of gaseous emission :					
Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Particulate Matters	IS 11255 : Part 1 : 1985	mg/Nm ³	74	150 max.
G. Pollution control device					
Details of pollution control devices attached with the stack : 5 Stage NH3 Scrubber, 2 Nos. Gas Scrubber, Ventury Scrubber & Fluoride Scrubber.					

Report Verified by
S. Mondal

:- END OF TEST REPORT :-

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/23-24/791

Date: September 18, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED	
Address	: P.O.: Durgachak, Haldia, Dist: Purba Medinipur, Pin: 721602	
Your Ref. P.O. No.	: 4700017754, dtd. 27.10.2022	Equipment used: ID No: RVB/SMK/06 (Cal. Validity: 01/08/24)
Sample Description	: Stack Gas / Flue Gas	
Date & time of sampling	: 11.09.2023 (03:13 P.M. to 04:01 P.M.)	Parameters Tested Physical : Temp., Velocity, Gas flow, CO, CO ₂ , P, NO ₂ Chemical : PM
Sampling Plan & Method	: RVB/FM/45 & IS: 11255 (Part-1,2 & 3)	
Analysis Completed on	: 18.09.2023	

A. General information about stack :

- Stack connected to : DAP - 2
- Emission due to : Vapours Generated from Process Reaction, Granulation Screening, Milling & Drying Operation
- Material of construction of stack : M.S.
- Shape of stack : Circular.
- Whether stack is provided with permanent platform & ladder : Yes.

B. Physical characteristics of stack :

- Height of the stack from ground level : 42.0 M
- Diameter of the stack at sampling point : 2.5 M
- No. of Traverse point : 32 Nos.
- Height of the sampling point from GL : 40.0 M

C. Analysis / Characteristic of stack Gas / Flue Gas :

- Fuel used : ---
- Fuel consumption : ---
- Load : 70 TPH

D. Environmental conditions :

- Barometric pressure : 752 mmHg
- Temperature : 36 °C

E. Results of Physical & General Parameters of Flue Gas :

Sl No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 : Part 3 : 2008	°C	61
2.	Velocity of gas in duct	IS 11255 : Part 3 : 2008	m/sec	13.60
3.	Quantity of gas flow	IS 11255 : Part 3 : 2008	NM ³ /hr	189416
4.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2
5.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2
6.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.43
7.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	63.2

F. Results of gaseous emission :

Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Particulate Matters	IS 11255 : Part 1 : 1985	mg/Nm ³	36	150 max.

G. Pollution control device

Details of pollution control devices attached with the stack : 5 Stage NH₃ Scrubber, 2 Nos. Gas Scrubber, Ventury Scrubber & Fluoride Scrubber.

Report Verified by
S. Mondal

- END OF TEST REPORT -

(J. MUKHERJEE)

Quality Manager

Authorised Signatory

For R.V.BRIGGS & CO. (P) LTD.

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ANNEXURE - 2

Ambient Air Monitoring Report



R. V. BRIGGS & CO. PRIVATE LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IPL/06

Date: May 08, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used;	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23	
	Latitude- N 22.07007, Longitude- E 88.13681	Environmental conditions	
Date & Time of sampling	: 24.04.2023 (09:10 A.M.)-25.04.2023 (09:10 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 08.05.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	38.7	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	59.1	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.3	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	23.2	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	16.8	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.0	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.80	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.037	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	5.30	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004.	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/06

Date: May 08, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23	
	Latitude- N 22.07007, Longitude- E 88.13681	Environmental conditions	
Date & Time of sampling	: 24.04.2023 (09:10 A.M.)-25.04.2023 (09:10 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 08.05.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	18.8
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	15.3

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS
(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447
E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com
CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/07

Date: May 08, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.:	RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23
Sampling Location	: ATO # 1	ID No.:	RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23
	Latitude- N 22.05775, Longitude- E 88.13720	Environmental conditions	
Date & Time of sampling	: 25.04.2023 (10:10 A.M.)-26.04.2023 (10:10 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 754 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 08.05.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	46.7	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	75.9	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.7	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	23.2	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	16.9	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2016	µg/m ³	12.4	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Rad (NDIR) spectroscopy	mg/m ³	0.99	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.058	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2016	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2016	ng/m ³	0.89	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.18	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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- Results relate only to the parameters tested.



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ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/07

Date: May 08, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: ATO # 1	ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23	
	Latitude- N 22.05775, Longitude- E 88.13720	Environmental conditions	
Date & Time of sampling	: 25.04.2023 (10:10 A.M.)-26.04.2023 (10:10 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 754 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 08.05.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	27.1
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	27.2

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/08

Date: May 08, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	
Sampling Location	: Near Main Gate	ID No.: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23	
	Latitude- N 22.06012, Longitude- E 88.13828	Environmental conditions	
Date & Time of sampling	: 25.04.2023 (09:50 A.M.)-26.04.2023 (09:50 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan	: RVB/FM/44	Barometric Pressure : 754 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 08.05.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	48.7	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	88.1	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.1	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 5) : 2006	µg/m ³	27.4	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	16.9	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	11.8	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	1.00	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.068	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.89	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.34	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/08

Date: May 08, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602
P.O. No.	: 4700019752, dtd. 08.05.2023
Sample Description	: Ambient Air
Sampling Location	: Near Main Gate Latitude- N 22.06012, Longitude- E 88.13828
Date & Time of sampling	: 25.04.2023 (09:50 A.M.)-26.04.2023 (09:50 A.M.)
Sampling Plan :	: RVB/FM/44
Duration of Sampling	: 24Hrs.
Analysis Completed on	: 08.05.2023

Equipment used: ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23 ID No.: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23
Environmental conditions Temperature : Max: 40.0°C & Min: 28.0°C Barometric Pressure : 754 mmHg
Parameters Tested: Fluoride & SO ₃ + Acid mist

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	25.0
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	18.7

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

Dr. R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IIPL/09

Date: May 25, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23
Sampling Location	: Priyambada Housing Complex Latitude- N 22.40235, Longitude- E 88.48512	Environmental conditions	
Date & Time of sampling	: 09.05.2023 (08:40 A.M.)-10.05.2023 (08:40 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 753 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 25.05.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	41.7	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	67.7	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	21.8	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	15.2	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	12.7	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.77	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.053	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	9.40	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/09

Date: May 25, 2023

Page 2 of 2

Issued to : M/S. INDORAMA INDIA PRIVATE LIMITED

Address : PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602

P.O. No. : 4700019752, dtd. 08.05.2023

Sample Description : Ambient Air

Sampling Location : Priyambada Housing Complex

Latitude- N 22.40235, Longitude- E 88.48512

Date & Time of sampling : 09.05.2023 (08:40 A.M.)-10.05.2023 (08:40 A.M.)

Sampling Plan : RVB/FM/44

Duration of Sampling : 24Hrs.

Analysis Completed on : 25.05.2023

Equipment used:

ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23

ID No.: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23

Environmental conditions

Temperature : Max: 40.0°C & Min: 28.0°C

Barometric Pressure : 753 mmHg

Parameters Tested:

Fluoride & SO₂ + Acid mist

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	12.5
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	13.6

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IIPL/10

Date: May 25, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/AFM460/BL04, Cal. Valid upto: 03.11.23	
	Latitude- N 22.07027, Longitude- E 88.13679	Environmental conditions	
Date & Time of sampling	: 09.05.2023 (09:20 A.M.)-10.05.2023 (09:20 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 25.05.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	36.3	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23): 2006	µg/m ³	53.7	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2): 2001	µg/m ³	5.2	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6): 2006	µg/m ³	20.7	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9): 1974	µg/m ³	18.6	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.2	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.81	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22): 2004	µg/m ³	0.042	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	8.40	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12): 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/10

Date: May 25, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/BL04, Cal. Valid upto: 03.11.23	
	Latitude- N 22.07027, Longitude- E 88.13679	Environmental conditions	
Date & Time of sampling	: 09.05.2023 (09:20 A.M.)-10.05.2023 (09:20 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 25.05.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	16.7
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	20.4

∴ END OF TEST REPORT ∴

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS
(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/11

Date: May 25, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: ATO # 1	ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23	
Date & Time of sampling	: 10.05.2023 (10:20 A.M.)-11.05.2023 (10:20 A.M.)	Environmental conditions	
Sampling Plan :	: RVB/FM/44	Temperature : Max: 40.0°C & Min: 28.0°C	
Duration of Sampling	: 24Hrs.	Barometric Pressure : 754 mmHg	
Analysis Completed on	: 25.05.2023	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	42.5	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	69.3	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.2	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	23.2	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	18.5	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indoplent Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	11.6	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NIR) spectroscopy	mg/m ³	0.84	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.053	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	6.60	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.15	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/11

Date: May 25, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: ATO # 1		
	Latitude- N 22.06507, Longitude- E 88.14636		
Date & Time of sampling	: 10.05.2023 (10:20 A.M.)-11.05.2023 (10:20 A.M.)		
Sampling Plan :	: RVB/FM/44		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 25.05.2023		
	Equipment used:		
	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23		
	ID No.: RVB/RDS/APM460/BU/04, Cal. Valid upto: 03.11.23		
	Environmental conditions		
	Temperature : Max: 40.0°C & Min: 28.0°C		
	Barometric Pressure : 754 mmHg		
	Parameters Tested:		
	Fluoride & SO ₃ + Acid mist		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	29.2
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	30.6

∴ END OF TEST REPORT ∴

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/12

Date: May 25, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No. : RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	ID No. : RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23
Sampling Location	: Near Main Gate Latitude- N 22.06187, Longitude- E 88.14293	Environmental conditions	
Date & Time of sampling	: 10.05.2023 (10:00 A.M.)-11.05.2023 (10:00 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 754 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 25.05.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	45.0	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	73	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.1	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	24.4	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	15.9	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No. : RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	11.2	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDR) spectroscopy	mg/m ³	0.98	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.073	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No. : RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	5.70	20
10.	Arsenic as As	SOP No. : RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

Dr. R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/12

Date: May 25, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: Near Main Gate		
	Latitude- N 22.06167, Longitude- E 88.14293		
Date & Time of sampling	: 10.05.2023 (10:00 A.M.)-11.05.2023 (10:00 A.M.)		
Sampling Plan :	: RVB/FM/44		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 25.05.2023		
	Equipment used:		
	ID No.: RVBIAFDS/PM2.5/10, Cal. Valid upto: 30.08.23		
	ID No.: RVBIRDS/APM460/BU/01, Cal. Valid upto: 03.11.23		
	Environmental conditions		
	Temperature : Max: 40.0°C & Min: 28.0°C		
	Barometric Pressure : 754 mmHg		
	Parameters Tested:		
	Fluoride & SO ₃ + Acid mist		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	18.8
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	23.8

∴ END OF TEST REPORT ∴

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/01

Date: April 12, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No. : RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	Environmental conditions
Sampling Location	: Priyambada Housing Complex	ID No. : RVB/RDS/APM480/BL/01, Cal. Valid upto: 03.11.23	
Date & Time of sampling	: 05.04.2023 (09:00 A.M.)-06.04.2023 (09:00 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 756 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 12.04.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	33.3	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	56.4	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.1	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	20.8	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	16.6	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No. : RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	12.9	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.83	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.044	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No. : RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No. : RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	0.48	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/01

Date: April 12, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23	
	Latitude- N 22o4'47.577", Longitude- E 88o5'25.126"	Environmental conditions	
Date & Time of sampling	: 05.04.2023 (09:00 A.M.)-06.04.2023 (09:00 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 756 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 12.04.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	10.4
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	10.2

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IIPL/02

Date: April 12, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23	
	Latitude- N 22.07011, Longitude- E 88.13694	Environmental conditions	
Date & Time of sampling	: 05.04.2023 (09:30 A.M.)-06.04.2023 (09:30 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 12.04.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	38.3	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	63.2	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	23.3	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	18.0	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	13.6	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.82	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.062	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	7.60	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	0.70	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	0.17	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/02

Date: April 12, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23	
	Latitude- N 22.07011, Longitude- E 88.13694	Environmental conditions	
Date & Time of sampling	: 05.04.2023 (09:30 A.M.)-06.04.2023 (09:30 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 12.04.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	14.6
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	17.0

-: END OF TEST REPORT :-


Report Verified by
S. Mondal


(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

- ★ The test report shall not be reproduced, except in full, without written approval of the Company.
- ★ Results relate only to the parameters tested.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/03

Date: April 12, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	
Sampling Location	: ATO # 1	ID No.: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23	
	Latitude- N 22.06177, Longitude- E 88.14724	Environmental conditions	
Date & Time of sampling	: 06.04.2023 (10:00 A.M.)-07.04.2023 (10:00 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 753 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 12.04.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	36.2	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	61.1	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.3	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	23.6	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	17.5	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	12.7	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.91	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.057	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	6.60	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	0.24	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/03

Date: April 12, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	
Sampling Location	: ATO # 1	ID No.: RVB/RDS/APM460/BU01, Cal. Valid upto: 03.11.23	
	Latitude- N 22.06177, Longitude- E 88.14724	Environmental conditions	
Date & Time of sampling	: 06.04.2023 (10:00 A.M.)-07.04.2023 (10:00 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 753 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 12.04.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	22.9
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	23.8

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/04

Date: April 12, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 06.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: Near Main Gate		
Date & Time of sampling	: 06.04.2023 (10:30 A.M.)-07.04.2023 (10:30 A.M.)		
Sampling Plan :	: RVB/FM/44		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 12.04.2023		
		Equipment used:	
		ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
		ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23	
		Environmental conditions	
		Temperature : Max: 40.0°C & Min: 28.0°C	
		Barometric Pressure : 753 mmHg	
		Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	47.5	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	75.1	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.3	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	26.5	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	16.9	180 (1 Hourly.)
6.	Ammonia as NH ₃	SCP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	11.9	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS: 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.96	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.049	1.0 (24 Hourly.)
9.	Nickel as Ni	SCP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	7.20	20
10.	Arsenic as As	SCP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.13	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R. V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/04

Date: April 12, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602
P.O. No.	: 4700019752, dtd. 08.05.2023
Sample Description	: Ambient Air
Sampling Location	: Near Main Gate Latitude- N 22.06332, Longitude- E 88.14293
Date & Time of sampling	: 06.04.2023 (10:30 A.M.)-07.04.2023 (10:30 A.M.)
Sampling Plan :	: RVB/FM/44
Duration of Sampling	: 24Hrs.
Analysis Completed on	: 12.04.2023

Equipment used: ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23 ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23
Environmental conditions Temperature : Max: 40.0°C & Min: 28.0°C Barometric Pressure : 753 mmHg
Parameters Tested: Fluoride & SO ₂ + Acid mist

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	18.8
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	20.4

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IIPL/24

Date: July 06, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: A.T.O # 1	ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23	
	Latitude- 22.347722, Longitude- 88.14661	Environmental conditions	
Date & Time of sampling	: 29.06.2023 (02:00 P.M.)-30.06.2023 (02:00 P.M.)	Temperature : Max: 37.0°C & Min: 25.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 753 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 06.07.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	51.7	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23): 2006	µg/m ³	87.7	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2): 2001	µg/m ³	4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6): 2006	µg/m ³	24.0	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9): 1974	µg/m ³	18.0	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	13.4	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.91	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22): 2004	µg/m ³	0.076	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12): 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

Dr. R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/24

Date: July 06, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: A.T.O # 1	ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23	
	Latitude- 22.347722, Longitude- 88.14661	Environmental conditions	
Date & Time of sampling	: 29.06.2023 (02:00 P.M.)-30.06.2023 (02:00 P.M.)	Temperature : Max: 37.0°C & Min: 25.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 753 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 06.07.2023	Fluoride & SO ₂ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	25.0
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	23.3

-: END OF TEST REPORT :-


Report Verified by
S. Mondal


(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IPL/25

Date: July 06, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.23	
Sampling Location	: Near Main Gate	ID No.: RVB/RDS/APM60/NL/D4, Cal. Valid upto: 16.07.23	
	Latitude- 22.06499, Longitude- 88.14639	Environmental conditions	
Date & Time of sampling	: 29.06.2023 (02:30 P.M.)-30.06.2023 (02:30 P.M.)	Temperature : Max: 37.0°C & Min: 25.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 753 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 06.07.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	47.1	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	68.2	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.1	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	24.7	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	17.5	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	13.9	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.96	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.047	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

<: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/25

Date: July 06, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.23	
Sampling Location	: Near Main Gate Latitude- 22.06499, Longitude- 88.14639	ID No.: RVB/RDS/APM460/NL/04, Cal. Valid upto: 16.07.23	
Date & Time of sampling	: 29.06.2023 (02:30 P.M.)-30.06.2023 (02:30 P.M.)	Environmental conditions	
Sampling Plan :	: RVB/FM/45	Temperature : Max: 37.0°C & Min: 25.0°C	
Duration of Sampling	: 24Hrs.	Barometric Pressure : 753 mmHg	
Analysis Completed on	: 06.07.2023	Parameters Tested:	
		Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	16.7
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	20.0

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS
(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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9, BENTINCK STREET, KOLKATA - 700 001
Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447
E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com
CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/18

Date: June 22, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602
P.O. No.	: 4700019752, dtd. 08.05.2023
Sample Description	: Ambient Air
Sampling Location	: Priyambada Housing Complex Latitude- N 22°4'47.577", Longitude- E 88°5'25.126"
Date & Time of sampling	: 14.06.2023 (11:40 A.M.)-15.06.2023 (11.40 A.M.)
Sampling Plan :	: RVB/FM/44
Duration of Sampling	: 24Hrs.
Analysis Completed on	: 22.06.2023
Equipment used: ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.23 ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23	
Environmental conditions Temperature : Max: 39.0°C & Mn: 27.0°C Barometric Pressure : 755 mmHg	
Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	47.1	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23): 2006	µg/m ³	69.6	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2): 2001	µg/m ³	4.4	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6): 2006	µg/m ³	20.1	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9): 1974	µg/m ³	17.9	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	12.1	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS: 5182 (Part- 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.93	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22): 2004	µg/m ³	0.071	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006.	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12): 2004.	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/18

Date: June 22, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.23	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23	
	Latitude- N 22o4'47.577", Longitude- E 88o6'25.126"	Environmental conditions	
Date & Time of sampling	: 14.06.2023 (11:40 A.M.)-15.06.2023 (11:40 A.M.)	Temperature : Max: 39.0°C & Min: 27.0°C	
Sampling Plan	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 22.06.2023	Fluoride & SO ₂ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	13.9
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	11.3

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/19

Date: June 22, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/NL/04, Cal. Valid upto: 16.07.23	
	Latitude- N 22.07011, Longitude- E 88.13694	Environmental conditions	
Date & Time of sampling	: 14.06.2023 (11:25 A.M.)-15.06.2023 (11:25 A.M.)	Temperature : Max: 38.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 22.06.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	42.1	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	61.3	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.9	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	22.5	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	17.6	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	11.4	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.85	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.071	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/19

Date: June 22, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/NL/04, Cal. Valid upto: 16.07.23	
	Latitude- N 22.07011, Longitude- E 88.13694	Environmental conditions	
Date & Time of sampling	: 14.06.2023 (11:25 A.M.)-15.06.2023 (11:25 A.M.)	Temperature : Max: 38.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 22.06.2023	Fluoride & SO ₂ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	19.4
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	18.1

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IIPL/20

Date: June 22, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.23	
Sampling Location	: ATO # 1	ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23	
	Latitude- N 22.06177, Longitude- E 86.14724	Environmental conditions	
Date & Time of sampling	: 13.08.2023 (11:25 A.M.)-14.06.2023 (11:25 A.M.)	Temperature : Max: 38.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 22.06.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	46.7	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	83.7	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.5	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	24.0	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	18.2	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	10.3	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1998 Non Dispersive Infra-Red (NDR) spectroscopy	mg/m ³	0.92	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.061	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/20

Date: June 22, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVBIAFDS/PM2.5/13, Cal. Valid upto: 01.08.23	
Sampling Location	: ATO # 1	ID No.: RVBIRDS/APM460/BU/15, Cal. Valid upto: 03.11.23	
	Latitude- N 22.06177, Longitude- E 88.14724	Environmental conditions	
Date & Time of sampling	: 13.06.2023 (11:25 A.M.)-14.06.2023 (11:25 A.M.)	Temperature : Max: 38.0°C & Min: 28.0°C	
Sampling Plan	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 22.06.2023	Fluoride & SO ₂ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	25.0
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	22.7

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



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TEST REPORT

No. AP-AAQ/23-24/IIPL/21

Date: June 22, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Near Main Gate	ID No.: RVB/RDS/APM460/NL/04, Cal. Valid upto: 16.07.23	
	Latitude- N 22.06332, Longitude- E 88.14293	Environmental conditions	
Date & Time of sampling	: 13.06.2023 (11:00 A.M.)-14.06.2023 (11:00 A.M.)	Temperature : Max: 38.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 22.06.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	43.3	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	69.2	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.6	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	21.0	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	17.5	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	9.2	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.92	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.045	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/21

Date: June 22, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Near Main Gate	ID No.: RVB/RDS/APM460/NL/04, Cal. Valid upto: 16.07.23	
	Latitude- N 22.06332, Longitude- E 88.14293	Environmental conditions	
Date & Time of sampling	: 13.06.2023 (11:00 A.M.)-14.06.2023 (11:00 A.M.)	Temperature : Max: 38.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 22.06.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	15.3
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	15.9

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

- ★ The test report shall not be reproduced, except in full, without written approval of the Company.
- ★ Results relate only to the parameters tested.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

TAHER MANSION, 1ST FLOOR
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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447
E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com
CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/13

Date: June 08, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23	
	Latitude- N 22.40142, Longitude- E 88.50125	Environmental conditions	
Date & Time of sampling	: 24.05.2023 (09:30 A.M.)-25.05.2023 (09:30 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 753 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 08.06.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	31.7	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	56.9	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.5	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	23.6	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	16.3	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	11.6	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.87	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.093	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	7.40	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.34	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/13

Date: June 08, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602
P.O. No.	: 4700019752, dtd. 08.05.2023
Sample Description	: Ambient Air
Sampling Location	: Priyambada Housing Complex Latitude- N 22.40142, Longitude- E 88.50125
Date & Time of sampling	: 24.05.2023 (09:30 A.M.)-25.05.2023 (09:30 A.M.)
Sampling Plan	: RVB/FM/44
Duration of Sampling	: 24Hrs.
Analysis Completed on	: 08.06.2023
Equipment used: ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23 ID No.: RVB/RDS/APM460/BL01, Cal. Valid upto: 03.11.23	
Environmental conditions Temperature : Max: 40.0°C & Min: 28.0°C Barometric Pressure : 753 mmHg	
Parameters Tested: Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	12.5
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	6.8

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IPL/14

Date: June 08, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED	Equipment used: ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23 ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602	
P.O. No.	: 4700019752, dtd. 08.05.2023	Environmental conditions Temperature : Max: 40.0°C & Min: 28.0°C Barometric Pressure : 755 mmHg
Sample Description	: Ambient Air	
Sampling Location	: Durgachak E Block Latitude- N 22.07025, Longitude- E 88.13685	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP
Date & Time of sampling	: 24.05.2023 (08:50 A.M.)-25.05.2023 (08:50 A.M.)	
Sampling Plan :	: RVB/FM/44	
Duration of Sampling	: 24Hrs.	
Analysis Completed on	: 08.06.2023	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ, 2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a, 40 CFR Part 50, Appendix L	µg/m ³	35.4	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	58.5	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	23.2	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	17.3	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2016	µg/m ³	13.2	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.82	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.060	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	6.40	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.51	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.01	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/14

Date: June 08, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: Durgachak E Block		
	Latitude- N 22.07025, Longitude- E 88.13665		
Date & Time of sampling	: 24.05.2023 (08:50 A.M.)-25.05.2023 (08:50 A.M.)		
Sampling Plan :	: RVB/FM/44		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 08.06.2023		
	Equipment used:		
	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23		
	ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23		
	Environmental conditions		
	Temperature : Max: 40.0°C & Min: 28.0°C		
	Barometric Pressure : 755 mmHg		
	Parameters Tested:		
	Fluoride & SO ₃ + Acid mist		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	16.7
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	10.2

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IIPL/17		Date: June 08, 2023		Page 1 of 1	
Issued to : M/S. INDORAMA INDIA PRIVATE LIMITED					
Address : PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602					
P.O. No. : 4700019752, dtd. 08.05.2023		Equipment used:			
Sample Description : Ambient Air		ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23			
Sampling Location : Near DG Room		ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23			
Latitude- N 22.06514, Longitude- E 88.14646		Environmental conditions			
Date & Time of sampling : 28.05.2023 (12:30 P.M.)-27.05.2023 (12:30 P.M.)		Temperature : Max: 40.0°C & Min: 28.0°C			
Sampling Plan : : RVB/FM/44		Barometric Pressure : 755 mmHg			
Duration of Sampling : : 24Hrs.		Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP			
Analysis Completed on : : 08.06.2023					

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	42.1	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	79.7	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.7	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	26.2	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	5.9	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	15.2	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	1.05	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.041	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	7.00	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.38	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.50	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/17

Date: June 08, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Near DG Room	ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23	
	Latitude- N 22.06514, Longitude- E 88.14646	Environmental conditions	
Date & Time of sampling	: 26.05.2023 (12:30 P.M.)-27.05.2023 (12:30 P.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 08.06.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	20.8
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	17.0

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IPL/16

Date: June 08, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602
P.O. No.	: 4700019752, dtd. 08.05.2023
Sample Description	: Ambient Air
Sampling Location	: Near Main Gate Latitude- N 22.05187, Longitude- E 88.14293
Date & Time of sampling	: 25.05.2023 (09:40 A.M.)-26.05.2023 (09:40 A.M.)
Sampling Plan	: RVB/FM/44
Duration of Sampling	: 24Hrs.
Analysis Completed on	: 08.06.2023

Equipment used:
ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23
ID No.: RVB/RDS/APM460/BL01, Cal. Valid upto: 03.11.23

Environmental conditions
Temperature : Max: 40.0°C & Min: 28.0°C
Barometric Pressure : 755 mmHg

Parameters Tested: PM_{2.5}, PM₁₀, SO₂, NO₂, O₃, NH₃, CO, Pb, Ni, As, C₆H₆, BaP

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	52.1	80 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23): 2008	µg/m ³	85.4	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2): 2001	µg/m ³	5.1	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6): 2006	µg/m ³	24.2	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9): 1974	µg/m ³	15.9	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	12.2	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	1.01	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22): 2004	µg/m ³	0.085	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	8.60	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.38	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.50	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12): 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/16

Date: June 08, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	
Sampling Location	: Near Main Gate	ID No.: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23	
	Latitude- N 22.06187, Longitude- E 88.14293	Environmental conditions	
Date & Time of sampling	: 25.05.2023 (09:40 A.M.)-25.05.2023 (09:40 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan	: RVB/FM/44	Barometric Pressure : 755 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 08.06.2023	Fluoride & SO ₂ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	25.0
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	20.4

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS
(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447
E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com
CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/15		Date: June 08, 2023		Page 1 of 1	
Issued to : M/S. INDORAMA INDIA PRIVATE LIMITED					
Address : PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602					
P.O. No. : 4700019752, dtd. 08.05.2023		Equipment used:			
Sample Description : Ambient Air		ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23			
Sampling Location : ATO # 1		ID No.: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23			
Latitude- N 22.06499, Longitude- E 88.14235		Environmental conditions			
Date & Time of sampling : 25.05.2023 (10:30 A.M.)-26.05.2023 (10:30 A.M.)		Temperature : Max: 40.0°C & Min: 28.0°C			
Sampling Plan : : RVB/FM/44		Barometric Pressure : 755 mmHg			
Duration of Sampling : : 24Hrs.		Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP			
Analysis Completed on : 08.06.2023					

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	32.5	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	61.3	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.9	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	25.3	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	17.6	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	13.5	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.90	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.078	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	8.70	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.50	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.29	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

• END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/15

Date: June 08, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED
Address	: PO : Durgachak, Haldia, District : Purba Mldnapore, West Bengal 721 602
P.O. No.	: 4700019752, dtd. 08.05.2023
Sample Description	: Ambient Air
Sampling Location	: ATO # 1 Latitude- N 22.06499, Longitude- E 88.14235
Date & Time of sampling	: 25.05.2023 (10:30 A.M.)-26.05.2023 (10:30 A.M.)
Sampling Plan	: RVB/FM/44
Duration of Sampling	: 24Hrs.
Analysis Completed on	: 08.06.2023

Equipment used:
ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23
ID No.: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23
Environmental conditions
Temperature : Max: 40.0°C & Min: 28.0°C
Barometric Pressure : 755 mmHg
Parameters Tested:
Fluoride & SO ₃ + Acid mist

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	31.3
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	27.2

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/05

Date: May 08, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/BL/01, Cal. Valid upto: 03.11.23	
	Latitude- N 22.51202, Longitude- E 88.51512	Environmental conditions	
Date & Time of sampling	: 24.04.2023 (09:40 A.M.)-25.04.2023 (09:40 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 756 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 08.05.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	36.7	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	61.1	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.5	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	21.8	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	17.2	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	12.3	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.87	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.037	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	7.40	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/05

Date: May 08, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 30.08.23	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/BU01, Cal. Valid upto: 03.11.23	
	Latitude- N 22.51202, Longitude- E 88.51512	Environmental conditions	
Date & Time of sampling	: 24.04.2023 (09:40 A.M.)-25.04.2023 (09:40 A.M.)	Temperature : Max: 40.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/44	Barometric Pressure : 756 mmHg	
Duration of Sampling	: 24Hrs,	Parameters Tested:	
Analysis Completed on	: 08.05.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	14.6
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	10.2

:- END OF TEST REPORT :-

S. Mondal

Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)

Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/30

Date: August 04, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVBIAFDS/PM2.5/13, Cal. Valid upto: 01.08.23	
Sampling Location	: Priyambada Housing Complex	ID No.: RVBIRDS/APM460/BL/03, Cal. Valid upto: 05.11.23	
	Latitude- 22.40235, Longitude- 88.48513	Environmental conditions	
Date & Time of sampling	: 27.07.2023 (11:45 A.M.)-28.07.2023 (11:45 A.M.)	Temperature : Max: 36.0°C & Min: 25.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 04.08.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	32.5	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	47.6	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	18.7	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	18.5	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.2	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDR) spectroscopy	mg/m ³	0.56	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.021	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

∴ END OF TEST REPORT ∴

Report Verified by
S. Mondal

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/30

Date: August 04, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: Priyambada Housing Complex Latitude- 22.40235, Longitude- 88.48513		
Date & Time of sampling	: 27.07.2023 (11:45 A.M.)-28.07.2023 (11:45 A.M.)		
Sampling Plan	: RVB/FM/45		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 04.08.2023		
		Equipment used:	
		ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.23	
		ID No.: RVB/RDS/APM480/BL/03, Cal. Valid upto: 05.11.23	
		Environmental conditions	
		Temperature : Max: 38.0°C & Min: 25.0°C	
		Barometric Pressure : 750 mmHg	
		Parameters Tested:	
		Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	6.3
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	12.5

-: END OF TEST REPORT :-

Smondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/31

Date: August 04, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED	
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602	
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used: ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23 ID No.: RVB/RDS/APM460/NL/01, Cal. Valid upto: 05.11.23
Sample Description	: Ambient Air	
Sampling Location	: Durgachak E Block Latitude- 22.40185, Longitude- 88.48478	Environmental conditions Temperature : Max: 36.0°C & Min: 25.0°C Barometric Pressure : 750 mmHg
Date & Time of sampling	: 27.07.2023 (11:30 A.M.)-28.07.2023 (11:30 A.M.)	
Sampling Plan :	: RVB/FM/45	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP
Duration of Sampling	: 24Hrs.	
Analysis Completed on	: 04.08.2023	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	35.8	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	53.4	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	20.7	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	18.2	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	16.6	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS - 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.94	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.040	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006.	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/31

Date: August 04, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED	
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602	
P.O. No.	: 4700019752, dtd. 08.05.2023	
Sample Description	: Ambient Air	
Sampling Location	: Durgachak E Block Latitude- 22.40185, Longitude- 88.48478	
Date & Time of sampling	: 27.07.2023 (11:30 A.M.)-28.07.2023 (11:30 A.M.)	
Sampling Plan :	: RVB/FM/45	
Duration of Sampling	: 24Hrs.	
Analysis Completed on	: 04.08.2023	
	Equipment used: ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23 ID No.: RVB/RDS/APM460/NL/01, Cal. Valid upto: 05.11.23	
	Environmental conditions Temperature : Max. 36.0°C & Min: 25.0°C Barometric Pressure : 750 mmHg	
	Parameters Tested: Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	10.4
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	18.8

∴ END OF TEST REPORT ∴

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS
(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447
E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com
CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IPL/32

Date: August 04, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: A.T.O # 1		
	Latitude- 22.347722, Longitude- 88.14661		
Date & Time of sampling	: 26.07.2023 (11:20 A.M.)-27.07.2023 (11:20 A.M.)		
Sampling Plan	: RVB/FM/45		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 04.08.2023		

Equipment used:
ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.23
ID No.: RVB/RDS/APM460/BL/03, Cal. Valid upto: 05.11.23

Environmental conditions
Temperature : Max: 35.0°C & Min: 26.0°C
Barometric Pressure : 750 mmHg

Parameters Tested: PM_{2.5}, PM₁₀, SO₂, NO₂, O₃, NH₃, CO, Pb, Ni, As, C₆H₆, BaP

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	28.3	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	44.1	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	19.5	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	18.5	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No : RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.3	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDR) spectroscopy	mg/m ³	1.05	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.045	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/32

Date: August 04, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dttd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: A.T.O # 1		
	Latitude- 22.347722, Longitude- 88.14661		
Date & Time of sampling	: 26.07.2023 (11:20 A.M.)-27.07.2023 (11:20 A.M.)		
Sampling Plan :	: RVB/FM/45		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 04.08.2023		
	Equipment used:		
	ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.23		
	ID No.: RVB/RDS/APM460/BL/03, Cal. Valid upto: 05.11.23		
	Environmental conditions		
	Temperature : Max: 35.0°C & Min: 26.0°C		
	Barometric Pressure : 750 mmHg		
	Parameters Tested:		
	Fluoride & SO ₃ + Acid mist		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	14.6
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	37.6

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/33

Date: August 04, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Near Main Gate	ID No.: RVB/RDS/APM460/NL/01, Cal. Valid upto: 05.11.23	
	Latitude- 22.06499, Longitude- 88.14639	Environmental conditions	
Date & Time of sampling	: 26.07.2023 (11:00 A.M.)-27.07.2023 (11:00 A.M.)	Temperature : Max: 35.0°C & Min: 27.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 04.08.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	50.8	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	89.1	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.4	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	22.2	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	15.9	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/0110 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	13.9	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	1.16	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.035	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/0115 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	8.70	20
10.	Arsenic as As	SOP No.: RVB/SOP/0116 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/33

Date: August 04, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602
P.O. No.	: 4700019752, dtd. 08.05.2023
Sample Description	: Ambient Air
Sampling Location	: Near Main Gate Latitude- 22.06499, Longitude- 88.14639
Date & Time of sampling	: 26.07.2023 (11:00 A.M.)-27.07.2023 (11:00 A.M.)
Sampling Plan :	: RVB/FM/45
Duration of Sampling	: 24Hrs.
Analysis Completed on	: 04.08.2023

Equipment used:
ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23
ID No.: RVB/RDS/APM460/NL/01, Cal. Valid upto: 05.11.23
Environmental conditions
Temperature : Max: 35.0°C & Min: 27.0°C
Barometric Pressure : 750 mmHg
Parameters Tested:
Fluoride & SO ₂ + Acid mist

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	12.5
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	25.0

- END OF TEST REPORT :-

Smondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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TEST REPORT

No. AP-AAQ/23-24/IIPL/26

Date: July 25, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: Priyambada Housing Complex		
	Latitude- 22.40235, Longitude- 88.48513		
Date & Time of sampling	: 14.07.2023 (10:40 A.M.)-15.07.2023 (10:40 A.M.)		
Sampling Plan :	: RVB/FM/45		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 25.07.2023		
	Equipment used:		
	ID No.: RVB/AFDS/PM2.5/12, Cal. Valid upto: 01.08.23		
	ID No.: RVB/RDS/APM460/NL/03, Cal. Valid upto: 05.11.23		
	Environmental conditions		
	Temperature : Max: 34.0°C & Min: 27.0°C		
	Barometric Pressure : 754 mmHg		
	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	39.6	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	62.7	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	20.8	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	18.4	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.8	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.81	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.054	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	7.80	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/26

Date: July 25, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: Priyambada Housing Complex Latitude- 22.40235, Longitude- 88.48513		
Date & Time of sampling	: 14.07.2023 (10:40 A.M.)-15.07.2023 (10:40 A.M.)		
Sampling Plan :	: RVB/FM/45		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 25.07.2023		
		Equipment used: ID No.: RVB/AFDS/PM2.5/12, Cal. Valid upto: 01.08.23 ID No.: RVB/RDS/APM460/NL/03, Cal. Valid upto: 05.11.23	
		Environmental conditions Temperature : Max: 34.0°C & Min: 27.0°C Barometric Pressure : 754 mmHg	
		Parameters Tested: Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	12.5
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	10.4

:- END OF TEST REPORT :-

Smondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IIPL/27

Date: July 25, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	Environmental conditions
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23	
	Latitude- 22.40185, Longitude- 88.48478	Temperature : Max: 34.0°C & Min: 27.0°C	
Date & Time of sampling	: 14.07.2023 (10:20 A.M.)-15.07.2023 (10:20 A.M.)	Barometric Pressure : 754 mmHg	
Sampling Plan :	: RVB/FM/45	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 25.07.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	42.9	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	68.9	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	21.1	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	17.4	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	13.4	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.97	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.060	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	10.20	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/27

Date: July 25, 2023

Page 2 of 2

Issued to : M/S. INDORAMA INDIA PRIVATE LIMITED

Address : PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602

P.O. No. : 4700019752, dtd. 08.05.2023

Sample Description : Ambient Air

Sampling Location : Durgachak E Block

Latitude- 22.40185, Longitude- 88.48478

Date & Time of sampling : 14.07.2023 (10:20 A.M.)-15.07.2023 (10:20 A.M.)

Sampling Plan : RVB/FM/45

Duration of Sampling : 24Hrs.

Analysis Completed on : 25.07.2023

Equipment used:

ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23

ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23

Environmental conditions

Temperature : Max: 34.0°C & Min: 27.0°C

Barometric Pressure : 754 mmHg

Parameters Tested:

Fluoride & SO₃ + Acid mist

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	8.3
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	13.9

:- END OF TEST REPORT :-

Smondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IPL/28

Date: July 25, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/12, Cal. Valid upto: 01.08.23	
Sampling Location	: A.T.O # 1	ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23	
	Latitude- 22.347722, Longitude- 88.14661	Environmental conditions	
Date & Time of sampling	: 13.07.2023 (09:50 A.M.)-14.07.2023 (09:50 A.M.)	Temperature : Max: 34.0°C & Min: 27.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 753 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 25.07.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	50.4	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	82.4	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	23.8	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	17.7	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	12.0	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	1.09	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.074	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

Smondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/28

Date: July 25, 2023

Page 2 of 2

Issued to : M/S. INDORAMA INDIA PRIVATE LIMITED

Address : PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602

P.O. No. : 4700019752, dtd. 08.05.2023

Sample Description : Ambient Air

Sampling Location : A.T.O # 1

Latitude- 22.347722, Longitude- 88.14661

Date & Time of sampling : 13.07.2023 (09:50 A.M.)-14.07.2023 (09:50 A.M.)

Sampling Plan : RVB/FM/45

Duration of Sampling : 24Hrs.

Analysis Completed on : 25.07.2023

Equipment used:

ID No.: RVB/AFDS/PM2.5/12, Cal. Valid upto: 01.08.23

ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23

Environmental conditions

Temperature : Max: 34.0°C & Min: 27.0°C

Barometric Pressure : 753 mmHg

Parameters Tested:

Fluoride & SO₃ + Acid mist

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	25.0
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	20.8

:- END OF TEST REPORT :-

Smondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IPL/29

Date: July 26, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Near Main Gate	ID No.: RVB/RDS/APM460/NL/03, Cal. Valid upto: 05.11.23	
	Latitude- 22.06499, Longitude- 88.14639	Environmental conditions	
Date & Time of sampling	: 13.07.2023 (09:30 A.M.)-14.07.2023 (09:30 A.M.)	Temperature : Max: 34.0°C & Min: 27.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 753 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 25.07.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	46.3	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	77.8	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.2	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 5) : 2006	µg/m ³	22.2	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	16.1	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.4	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	1.01	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.063	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	8.70	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

Smondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/29

Date: July 25, 2023

Page 2 of 2

Issued to : M/S. INDORAMA INDIA PRIVATE LIMITED

Address : PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602

P.O. No. : 4700019752, dtd. 08.05.2023

Sample Description : Ambient Air

Sampling Location : Near Main Gate

Latitude- 22.06499, Longitude- 88.14639

Date & Time of sampling : 13.07.2023 (09:30 A.M.)-14.07.2023 (09:30 A.M.)

Sampling Plan : RVB/FM/45

Duration of Sampling : 24Hrs.

Analysis Completed on : 25.07.2023

Equipment used:

ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23

ID No.: RVB/IRDS/APM460/NL/03, Cal. Valid upto: 05.11.23

Environmental conditions

Temperature : Max: 34.0°C & Min: 27.0°C

Barometric Pressure : 753 mmHg

Parameters Tested:

Fluoride & SO₃ + Acid mist

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5162 (Part - 13) : 1991	µg/m ³	16.7
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	17.4

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IIPL/22

Date: July 06, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.:	RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.23
Sampling Location	: Priyambada Housing Complex	ID No.:	RVB/RDS/APM460/NL/04, Cal. Valid upto: 16.07.23
	Latitude- 22.40235, Longitude- 88.48513	Environmental conditions	
Date & Time of sampling	: 28.06.2023 (01:00 P.M.)-29.06.2023 (01:00 P.M.)	Temperature : Max: 33.0°C & Min: 27.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 754 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 06.07.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	35.8	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	57	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.5	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	22.5	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	19.2	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.8	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.77	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.069	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/22

Date: July 06, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: Priyambada Housing Complex		
	Latitude- 22.40235, Longitude- 88.48513		
Date & Time of sampling	: 28.06.2023 (01:00 P.M.)-29.06.2023 (01:00 P.M.)		
Sampling Plan :	: RVB/FM/45		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 06.07.2023		
	Equipment used:		
	ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.23		
	ID No.: RVB/IRDS/APM460/NL/D4, Cal. Valid upto: 16.07.23		
	Environmental conditions		
	Temperature : Max: 33.0°C & Min: 27.0°C		
	Barometric Pressure : 754 mmHg		
	Parameters Tested:		
	Fluoride & SO ₂ + Acid mist		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	8.3
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	10.0

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
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TC-7815

TEST REPORT

No. AP-AAQ/23-24/IIPL/23

Date: July 06, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23
Sampling Location	: Durgachak E Block	Environmental conditions	
	Latitude- 22.40185, Longitude- 88.48478	Temperature : Max: 38.0°C & Min: 28.0°C	
Date & Time of sampling	: 28.06.2023 (12:00 P.M.)-29.06.2023 (12:00 P.M.)	Barometric Pressure : 754 mmHg	
Sampling Plan :	: RVB/FM/45	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Duration of Sampling	: 24Hrs.	CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 06.07.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ, 2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997, 40 CFR Part 50, Appendix L.	µg/m ³	40.8	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	67.9	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	5.4	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	25.0	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	18.3	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	15.8	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.86	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.075	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R. V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/23

Date: July 06, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 30.08.23	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/BL/15, Cal. Valid upto: 03.11.23	
	Latitude- 22.40185, Longitude- 88.48478	Environmental conditions	
Date & Time of sampling	: 28.06.2023 (12:00 P.M.)-29.06.2023 (12:00 P.M.)	Temperature : Max: 38.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 754 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 06.07.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	12.5
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	13.3

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

- ★ The test report shall not be reproduced, except in full, without written approval of the Company.
- ★ Results relate only to the parameters tested.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

TAHER MANSION, 1ST FLOOR

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/43 Date: September 18, 2023 Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 01.08.24	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/04, Cal. Valid upto: 25.11.23	
	Latitude- 22.40185, Longitude- 88.48478	Environmental conditions	
Date & Time of sampling	: 12.09.2023 (10:00 A.M.)-13.09.2023 (10:00 A.M.)	Temperature : Max: 32.0°C & Min: 27.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 18.09.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	25.8	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	39.6	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	18.8	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	14.9	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.2	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.83	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.091	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	5.80	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/43

Date: September 18, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602
P.O. No.	: 4700019752, dtd. 08.05.2023
Sample Description	: Ambient Air
Sampling Location	: Durgachak E Block Latitude- 22.40185, Longitude- 88.48478
Date & Time of sampling	: 12.09.2023 (10:00 A.M.)-13.09.2023 (10:00 A.M.)
Sampling Plan	: RVB/FM/45
Duration of Sampling	: 24Hrs.
Analysis Completed on	: 18.09.2023
Equipment used: ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 01.08.24 ID No.: RVB/RDS/APM460/04, Cal. Valid upto: 25.11.23	
Environmental conditions Temperature : Max: 32.0°C & Min: 27.0°C Barometric Pressure : 750 mmHg	
Parameters Tested: Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	8.6
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	18.3

∴ END OF TEST REPORT ∴

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/41

Date: September 06, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.24	
Sampling Location	: Near Main Gate	ID No.: RVB/RDS/APM460/BL/16, Cal. Valid upto: 03.11.23	
	Latitude- 22.06499, Longitude- 88.14639	Environmental conditions	
Date & Time of sampling	: 29.08.2023 (10:20 A.M.)-30.08.2023 (10:20 A.M.)	Temperature : Max: 34.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 06.09.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	37.9	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	66.6	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.6	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	22.6	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	16.5	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	10.5	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.94	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.054	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	6.10	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006.	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

Report Verified by
S. Mondal

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/41

Date: September 06, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/13, Cal. Valid upto: 01.08.24	
Sampling Location	: Near Main Gate Latitude- 22.06499, Longitude- 88.14639	ID No.: RVB/RDS/APM460/BL/16, Cal. Valid upto: 03.11.23	
Date & Time of sampling	: 29.08.2023 (10:20 A.M.)-30.08.2023 (10:20 A.M.)	Environmental conditions	
Sampling Plan :	: RVB/FM/45	Temperature : Max: 34.0°C & Min: 28.0°C	
Duration of Sampling	: 24Hrs.	Barometric Pressure : 750 mmHg	
Analysis Completed on	: 06.09.2023	Parameters Tested:	
		Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	10.8
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	23.8

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/40

Date: September 06, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/09, Cal. Valid upto: 17.06.24	
Sampling Location	: A.T.O # 1	ID No.: RVB/RDS/API460/BL/14, Cal. Valid upto: 03.11.23	
	Latitude- 22.347722, Longitude- 88.14661	Environmental conditions	
Date & Time of sampling	: 29.08.2023 (10:40 A.M.)-30.08.2023 (10:40 A.M.)	Temperature : Max: 34.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 06.09.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size \leq 2.5 μ m)	USEPA 1997a,40 CFR Part 50, Appendix L.	μ g/m ³	35.8	60 (24 Hourly.)
2.	PM ₁₀ (Size \leq 10 μ m)	IS 5182 (Part - 23) : 2006	μ g/m ³	62	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	μ g/m ³	4.1	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	μ g/m ³	23.5	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	μ g/m ³	14.7	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	μ g/m ³	10.8	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.96	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	μ g/m ³	0.067	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	6.20	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	μ g/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 μ g/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/40

Date: September 06, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/09, Cal. Valid upto: 17.08.24	
Sampling Location	: A.T.O # 1	ID No.: RVB/RDS/APM460/BL/14, Cal. Valid upto: 03.11.23	
	Latitude- 22.347722, Longitude- 88.14661	Environmental conditions	
Date & Time of sampling	: 29.08.2023 (10:40 A.M.)-30.08.2023 (10:40 A.M.)	Temperature : Max: 34.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 06.09.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS: 5182 (Part - 13) : 1991	µg/m ³	12.7
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	36.3

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/39

Date: September 06, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/08, Cal. Valid upto: 05.11.23	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23	
	Latitude- 22.40185, Longitude- 88.48478	Environmental conditions	
Date & Time of sampling	: 24.08.2023 (10:00 A.M.)-25.08.2023 (10:00 A.M.)	Temperature : Max: 32.0°C & Min: 28.0°C	
Sampling Plan	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ ,	
Analysis Completed on	: 06.09.2023	CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	25.4	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	41.1	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	21.0	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	16.1	180 (1 Hourly.)
3.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.3	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS - 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.78	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.033	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	7.30	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.37	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/39		Date: September 06, 2023		Page 2 of 2	
Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED			
Address		: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602			
P.O. No.		: 4700019752, dtd. 08.05.2023		Equipment used:	
Sample Description		: Ambient Air		ID No.: RVB/AFDS/PM2.5/08, Cal. Valid upto: 05.11.23	
Sampling Location		: Durgachak E Block		ID No.: RVB/RDS/APM460/BL/04, Cal. Valid upto: 03.11.23	
		Latitude- 22.40185, Longitude- 88.48478		Environmental conditions	
Date & Time of sampling		: 24.08.2023 (10:00 A.M.)-25.08.2023 (10:00 A.M.)		Temperature : Max: 32.0°C & Min: 28.0°C	
Sampling Plan :		: RVB/FM/45		Barometric Pressure : 750 mmHg	
Duration of Sampling		: 24Hrs.		Parameters Tested:	
Analysis Completed on		: 06.09.2023		Fluoride & SO ₂ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	7.0
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	14.6

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

TAHER MANSION, 1ST FLOOR

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/38

Date: September 06, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 06.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/06, Cal. Valid upto: 01.08.24	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/BL/02, Cal. Valid upto: 05.11.23	
	Latitude- 22.40235, Longitude- 88.48513	Environmental conditions	
Date & Time of sampling	: 24.08.2023 (10:30 A.M.)-25.08.2023 (10:30 A.M.)	Temperature : Max: 32.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 06.09.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	28.7	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	48.4	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	19.3	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	15.4	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	13.1	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.75	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.044	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	8.10	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.38	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006.	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/38

Date: September 06, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/06, Cal. Valid upto: 01.08.24	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/BL/02, Cal. Valid upto: 05.11.23	
	Latitude- 22.40235, Longitude- 88.48513	Environmental conditions	
Date & Time of sampling	: 24.08.2023 (10:30 A.M.)-25.08.2023 (10:30 A.M.)	Temperature : Max: 32.0°C & Min: 28.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 06.09.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	8.2
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	11.4

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/37		Date: August 29, 2023		Page 1 of 1	
Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED				
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602				
P.O. No.	: 4700019752, dtd. 08.05.2023			Equipment used:	
Sample Description	: Ambient Air			ID No.: RVB/AFDS/PM2.5/12, Cal. Valid upto: 01.08.24	
Sampling Location	: Near Main Gate			ID No.: RVB/RDS/APM460/BL/14, Cal. Valid upto: 03.11.23	
	Latitude- 22.06499, Longitude- 88.14639			Environmental conditions	
Date & Time of sampling	: 11.08.2023 (10:00 A.M.)-12.08.2023 (10:00 A.M.)			Temperature : Max: 32.0°C & Min: 26.0°C	
Sampling Plan :	: RVB/FM/45			Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.			Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 29.08.2023				

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	30.4	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	48.5	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	4.2	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	19.9	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	14.3	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2016	µg/m ³	9.0	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDR) spectroscopy	mg/m ³	0.97	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.034	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2016	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2016	ng/m ³	0.36	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.35	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/37 Date: August 29, 2023 Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/12, Cal. Valid upto: 01.08.24	
Sampling Location	: Near Main Gate	ID No.: RVB/RDS/APM460/BL/14, Cal. Valid upto: 03.11.23	
	Latitude- 22.06499, Longitude- 88.14639	Environmental conditions	
Date & Time of sampling	: 11.08.2023 (10:00 A.M.)-12.08.2023 (10:00 A.M.)	Temperature : Max: 32.0°C & Min: 26.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 29.08.2023	Fluoride & SO ₂ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	7.6
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	21.4

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-AAQ/23-24/IPL/36

Date: August 29, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 01.08.24	
Sampling Location	: A.T.O # 1	ID No.: RVB/RDS/API460/BL/16, Cal. Valid upto: 03.11.23	
	Latitude- 22.347722, Longitude- 88.14661	Environmental conditions	
Date & Time of sampling	: 11.08.2023 (10:30 A.M.)-12.08.2023 (10:30 A.M.)	Temperature : Max: 32.0°C & Min: 26.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 29.08.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	38.8	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23): 2006	µg/m ³	68.7	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2): 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6): 2006	µg/m ³	22.6	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9): 1974	µg/m ³	15.5	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Inductriol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	9.4	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.93	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22): 2004	µg/m ³	0.042	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.34	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12): 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

∴ END OF TEST REPORT ∴

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/36

Date: August 29, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 01.08.24	
Sampling Location	: A.T.O # 1	ID No.: RVB/RDS/APM460/BL/16, Cal. Valid upto: 03.11.23	
	Latitude- 22.347722, Longitude- 88.14661	Environmental conditions	
Date & Time of sampling	: 11.08.2023 (10:30 A.M.)-12.08.2023 (10:30 A.M.)	Temperature : Max: 32.0°C & Min: 26.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 29.08.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	10.9
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	35.4

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IPL/35		Date: August 29, 2023	Page 1 of 1
Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/12, Cal. Valid upto: 01.08.24	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/BL/16, Cal. Valid upto: 03.11.23	
	Latitude- 22.40185, Longitude- 88.48478	Environmental conditions	
Date & Time of sampling	: 12.08.2023 (09:50 A.M.)-13.08.2023 (09:50 A.M.)	Temperature : Max: 33.0°C & Min: 26.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 29.08.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	29.6	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23): 2006	µg/m ³	40.7	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2): 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6): 2006	µg/m ³	20.0	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9): 1974	µg/m ³	16.3	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.1	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.94	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22): 2004	µg/m ³	0.049	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12): 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/35

Date: August 29, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/12, Cal. Valid upto: 01.08.24	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/BL/16, Cal. Valid upto: 03.11.23	
	Latitude- 22.40185, Longitude- 88.48478	Environmental conditions	
Date & Time of sampling	: 12.08.2023 (09:50 A.M.)-13.08.2023 (09:50 A.M.)	Temperature : Max: 33.0°C & Min: 26.0°C	
Sampling Plan	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 29.08.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	8.8
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	16.1

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.



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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-AAQ/23-24/IIPL/34		Date: August 29, 2023	Page 1 of 1
Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 01.08.24	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/BL/14, Cal. Valid upto: 03.11.23	
	Latitude- 22.40235, Longitude- 88.48513	Environmental conditions	
Date & Time of sampling	: 12.08.2023 (09:30 A.M.)-13.08.2023 (09:30 A.M.)	Temperature : Max: 32.0°C & Min: 26.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 29.08.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	34.6	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	56.7	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	19.9	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	13.8	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	11.3	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDR) spectroscopy	mg/m ³	0.76	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.041	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.36	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	1.41	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

Report Verified by

S. Mondal

(Dr. R. KARIM)

Technical Manager

Authorised Signatory

For R.V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/34

Date: August 29, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/11, Cal. Valid upto: 01.08.24	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/BL/14, Cal. Valid upto: 03.11.23	
	Latitude- 22.40235, Longitude- 88.48513	Environmental conditions	
Date & Time of sampling	: 12.08.2023 (09:30 A.M.)-13.08.2023 (09:30 A.M.)	Temperature : Max: 32.0°C & Min: 26.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 29.08.2023	Fluoride & SO ₂ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	9.4
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	15.6

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/46

Date: October 10, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/15, Cal. Valid upto: 15.07.24	
Sampling Location	: Priyambada Housing Complex Latitude- 22.40235, Longitude- 88.48513	ID No.: RVB/RDS/APM460/08, Cal. Valid upto: 05.11.23	
Date & Time of sampling	: 28.09.2023 (11:00 A.M.)-29.09.2023 (11:00 A.M.)	Environmental conditions	
Sampling Plan :	: RVB/FM/45	Temperature : Max: 32.0°C & Min: 26.0°C	
Duraton of Sampling	: 24Hrs.	Barometric Pressure : 752 mmHg	
Analysis Completed on	: 10.10.2023	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	22.5	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23): 2006	µg/m ³	31.1	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2): 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6): 2006	µg/m ³	17.5	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9): 1974	µg/m ³	14.1	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indoptienol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	12.1	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.77	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22): 2004	µg/m ³	0.085	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	5.20	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006.	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12): 2004.	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/46

Date: October 10, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No: RVB/AFDS/PM2.5/15, Cal. Valid upto: 15.07.24	
Sampling Location	: Priyambada Housing Complex	ID No: RVB/RDS/APM460/08, Cal. Valid upto: 05.11.23	
	Latitude- 22.40235, Longitude- 88.48513	Environmental conditions	
Date & Time of sampling	: 28.09.2023 (11:00 A.M.)-29.09.2023 (11:00 A.M.)	Temperature : Max: 32.0°C & Mn: 26.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 752 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 10.10.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	10.1
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	15.4

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/47

Date: October 10, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/14, Cal. Valid upto: 15.07.24	
Sampling Location	: Durgachak E Block	ID No.: RVB/RDS/APM460/06, Cal. Valid upto: 03.11.23	
	Latitude- 22.40185, Longitude- 88.48478	Environmental conditions	
Date & Time of sampling	: 28.09.2023 (10:30 A.M.)-29.09.2023 (10:30 A.M.)	Temperature : Max: 32.0°C & Min: 26.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 752 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 10.10.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	28.3	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	42.1	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	18.4	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	13.3	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	14.3	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.78	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.113	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/13 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R. V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/47

Date: October 10, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dttd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: Durgachak E Block Latitude- 22.40185, Longitude- 88.48478		
Date & Time of sampling	: 28.09.2023 (10:30 A.M.)-29.09.2023 (10:30 A.M.)		
Sampling Plan :	: RVB/FM/45		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 10.10.2023		
		Equipment used:	
		ID No.: RVB/AFDS/PM2.5/14, Cal. Valid upto: 15.07.24	
		ID No.: RVB/RDS/APM460/06, Cal. Valid upto: 03.11.23	
		Environmental conditions	
		Temperature : Max: 32.0°C & Min: 26.0°C	
		Barometric Pressure : 752 mmHg	
		Parameters Tested:	
		Fluoride & SO ₂ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	8.6
2.	SO ₂ + Acid mist	Titrimetric	µg/m ³	18.3

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/48

Date: October 10, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/15, Cal. Valid upto: 15.07.24	
Sampling Location	: A.T.O # 1	ID No.: RVB/RDS/APM460/08, Cal. Valid upto: 05.11.23	
	Latitude- 22.347722, Longitude- 88.14661	Environmental conditions	
Date & Time of sampling	: 29.09.2023 (10:40 A.M.)-29.09.2023 (10:40 A.M.)	Temperature : Max: 32.0°C & Min: 26.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 752 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 10.10.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L.	µg/m ³	23.3	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23): 2006	µg/m ³	34.4	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2): 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6): 2006	µg/m ³	17.5	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9): 1974	µg/m ³	14.5	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	12.5	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDR) spectroscopy	mg/m ³	0.89	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22): 2004	µg/m ³	0.054	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	<5.0	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.47	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006.	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12): 2004.	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/48

Date: October 10, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd, 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: A.T.O # 1		
	Latitude- 22.347722, Longitude- 88.14661		
Date & Time of sampling	: 29.09.2023 (10:40 A.M.)-29.09.2023 (10:40 A.M.)		
Sampling Plan :	: RVB/FM/45		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 10.10.2023		
	Equipment used:		
	ID No.: RVB/AFDS/PM2.5/15, Cal. Valid upto: 15.07.24		
	ID No.: RVB/RDS/APM460/08, Cal. Valid upto: 05.11.23		
	Environmental conditions		
	Temperature : Max: 32.0°C & Min: 26.0°C		
	Barometric Pressure : 752 mmHg		
	Parameters Tested:		
	Fluoride & SO ₃ + Acid mist		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	14.8
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	39.6

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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TEST REPORT

No. AP-AAQ/23-24/IIPL/49

Date: October 10, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019762, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/14, Cal. Valid upto: 15.07.24	
Sampling Location	: Near Main Gate	ID No.: RVB/RDS/APM460/06, Cal. Valid upto: 03.11.23	
	Latitude- 22.06499, Longitude- 88.14639	Environmental conditions	
Date & Time of sampling	: 29.09.2023 (10:20 A.M.)-29.09.2023 (10:20 A.M.)	Temperature : Max: 32.0°C & Min: 26.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 752 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP.	
Analysis Completed on	: 10.10.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	28.7	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	44	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	21.8	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	13.2	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	11.8	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDR) spectroscopy	mg/m ³	0.90	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.053	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	6.00	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.35	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

Dr. R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R. V. BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/49

Date: October 10, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: Near Main Gate Latitude- 22.06499, Longitude- 88.14639		
Date & Time of sampling	: 29.09.2023 (10:20 A.M.)-29.09.2023 (10:20 A.M.)		
Sampling Plan :	: RVB/FM/45		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 10.10.2023		
		Equipment used:	
		ID No.: RVB/AFDS/PM2.5/14, Cal. Valid upto: 15.07.24	
		ID No.: RVB/RDS/APM460/06, Cal. Valid upto: 03.11.23	
		Environmental conditions	
		Temperature : Max: 32.0°C & Min: 26.0°C	
		Barometric Pressure : 752 mmHg	
		Parameters Tested:	
		Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	12.4
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	27.0

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

Dr. R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/44

Date: September 18, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air	Equipment used:	
Sampling Location	: A.T.O # 1	ID No.: RVB/AFDS/PM2.5/09, Cal. Valid upto: 17.06.24	
	Latitude- 22.347722, Longitude- 88.14661	ID No.: RVB/RDS/APM460/BL/14, Cal. Valid upto: 03.11.23	
Date & Time of sampling	: 13.09.2023 (11:20 A.M.)-14.09.2023 (11:20 A.M.)	Environmental conditions	
Sampling Plan :	: RVB/FM/45	Temperature : Max: 31.0°C & Min: 27.0°C	
Duration of Sampling	: 24Hrs.	Barometric Pressure : 750 mmHg	
Analysis Completed on	: 18.09.2023	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	29.6	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	48.2	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	21.2	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	13.9	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	10.0	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDR) spectroscopy	mg/m ³	0.92	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.081	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	6.10	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.24	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

∴ END OF TEST REPORT ∴

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/44

Date: September 18, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/09, Cal. Valid upto: 17.06.24	
Sampling Location	: A.T.O # 1	ID No.: RVB/RDS/APM460/BL/14, Cal. Valid upto: 03.11.23	
	Latitude- 22.347722, Longitude- 88.14661	Environmental conditions	
Date & Time of sampling	: 13.09.2023 (11:20 A.M.)-14.09.2023 (11:20 A.M.)	Temperature : Max: 31.0°C & Min: 27.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 18.09.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	14.8
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	39.6

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/45

Date: September 18, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No. : RVB/AFDS/PM2.5/09, Cal. Valid upto: 17.06.24	
Sampling Location	: Near Main Gate	ID No. : RVB/RDS/APM460/BL/11, Cal. Valid upto: 05.11.23	
	Latitude- 22.05499, Longitude- 88.14639	Environmental conditions	
Date & Time of sampling	: 13.09.2023 (11:00 A.M.)-14.09.2023 (11:00 A.M.)	Temperature : Max: 31.0°C & Min: 27.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 18.09.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	28.3	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	45.3	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	21.0	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	15.6	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No. : RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2018	µg/m ³	9.8	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.84	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.090	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No. : RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	3.00	20
10.	Arsenic as As	SOP No. : RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2018	ng/m ³	0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/45

Date: September 18, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023		
Sample Description	: Ambient Air		
Sampling Location	: Near Main Gate		
	Latitude- 22.06499, Longitude- 88.14639		
Date & Time of sampling	: 13.09.2023 (11:00 A.M.)-14.09.2023 (11:00 A.M.)		
Sampling Plan :	: RVB/FM/45		
Duration of Sampling	: 24Hrs.		
Analysis Completed on	: 18.09.2023		
	Equipment used:		
	ID No.: RVB/AFDS/PM2.5/09, Cal. Valid upto: 17.06.24		
	ID No.: RVB/RDS/APM460/BL/11, Cal. Valid upto: 05.11.23		
	Environmental conditions		
	Temperature : Max: 31.0°C & Min: 27.0°C		
	Barometric Pressure : 750 mmHg		
	Parameters Tested:		
	Fluoride & SO ₃ + Acid mist		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	12.4
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	27.0

∴ END OF TEST REPORT ∴

S. Mondal
Report Verified by
S. Mondal

(Dr. R. Karim)
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IIPL/42

Date: September 18, 2023

Page 1 of 1

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 01.08.24	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/03, Cal. Valid upto: 25.11.23	
	Latitude- 22.40235, Longitude- 88.48513	Environmental conditions	
Date & Time of sampling	: 12.09.2023 (10:30 A.M.)-13.09.2023 (10:30 A.M.)	Temperature : Max: 32.0°C & Min: 27.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested: PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , O ₃ , NH ₃ , CO, Pb, Ni, As, C ₆ H ₆ , BaP	
Analysis Completed on	: 18.09.2023		

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)	Norms as NAAQ,2009
1.	PM _{2.5} (Size ≤ 2.5µm)	USEPA 1997a,40 CFR Part 50, Appendix L	µg/m ³	24.2	60 (24 Hourly.)
2.	PM ₁₀ (Size ≤ 10µm)	IS 5182 (Part - 23) : 2006	µg/m ³	36.8	100 (24 Hourly.)
3.	Sulphur Dioxide as SO ₂	IS 5182 (Part - 2) : 2001	µg/m ³	<4.0	80 (24 Hourly.)
4.	Nitrogen Dioxide as NO ₂	IS 5182 (Part - 6) : 2006	µg/m ³	17.0	80 (24 Hourly.)
5.	Ozone as O ₃	IS 5182 (Part - 9) : 1974	µg/m ³	13.5	180 (1 Hourly.)
6.	Ammonia as NH ₃	SOP No.: RVB/SOP/01/10 (Indophenol Method) Issue No. 04, Issue Date: 10.01.2016	µg/m ³	13.1	400 (24 Hourly.)
7.	Carbon Monoxide as CO	IS : 5182 (Part - 10), 1999 Non Dispersive Infra-Red (NDIR) spectroscopy	mg/m ³	0.74	04 (1 Hourly.)
8.	Lead as Pb	IS 5182 (Part - 22) : 2004	µg/m ³	0.105	1.0 (24 Hourly.)
9.	Nickel as Ni	SOP No.: RVB/SOP/01/15 (AAS Method) Issue No. 04, Issue Date: 10.01.2016	ng/m ³	5.90	20
10.	Arsenic as As	SOP No.: RVB/SOP/01/16 (AAS Method) Issue No. 04, Issue Date: 10.01.2016	ng/m ³	<0.25	6.0
11.	Benzene as C ₆ H ₆	IS 5182 (Part - 11): 2006,	µg/m ³	<1.0	5.0
12.	Benzo (a) Pyrene	IS 5182 (Part - 12) : 2004,	ng/m ³	<0.5	1.0

Minimum detection Limit: Nickel: 5 ng/m³, Arsenic: 0.25 ng/m³, Benzene: 1 µg/m³ & Benzo(a)Pyrene: 0.5 ng/m³

:- END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-AAQ/23-24/IPL/42

Date: September 18, 2023

Page 2 of 2

Issued to	: M/S. INDORAMA INDIA PRIVATE LIMITED		
Address	: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602		
P.O. No.	: 4700019752, dtd. 08.05.2023	Equipment used:	
Sample Description	: Ambient Air	ID No.: RVB/AFDS/PM2.5/10, Cal. Valid upto: 01.08.24	
Sampling Location	: Priyambada Housing Complex	ID No.: RVB/RDS/APM460/03, Cal. Valid upto: 25.11.23	
	Latitude- 22.40235, Longitude- 88.48513	Environmental conditions	
Date & Time of sampling	: 12.09.2023 (10:30 A.M.)-13.09.2023 (10:30 A.M.)	Temperature : Max: 32.0°C & Min: 27.0°C	
Sampling Plan :	: RVB/FM/45	Barometric Pressure : 750 mmHg	
Duration of Sampling	: 24Hrs.	Parameters Tested:	
Analysis Completed on	: 18.09.2023	Fluoride & SO ₃ + Acid mist	

TEST FINDINGS:-

Sl. No.	Parameters	Test Method	Unit	Results (Time Weighted Avg.)
1.	Fluoride	IS : 5182 (Part - 13) : 1991	µg/m ³	10.1
2.	SO ₃ + Acid mist	Titrimetric	µg/m ³	15.4

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V. BRIGGS & CO. (P) LTD.

ANNEXURE – 3

Noise Monitoring Report



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-SL/23-24/IIPL/01		Date: May 26, 2023			Page 1 of 1	
Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED				
Address		: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602				
P.O. No.		: 4700019592, dtd. 28.04.2023				
Description of Sample		: Sound Level Monitoring			Parameters Tested L _{Min} , L _{Max} & L _{eq}	
Location		: Near DG Room				
Date of Monitoring		: 23.05.2023 to 24.05.2023				
Day Time (06:00 A.M. to 10:00 P.M.)						
Sl. No.	Date	Time	Noise Level in dB(A)			Norms as per Environmental Protection Act 1986, rule 3(1) and 4 (1) for industrial area
			L _{Min}	L _{Max}	L _{eq}	
1.	23.05.2023	06:01 A.M. - 07:00 A.M.	55.8	58.4	57.2	75 dB(A)
2.		07:01 A.M. - 08:00 A.M.	59.8	62.8	41.6	
3.		08:01 A.M. - 09:00 A.M.	60.2	63.4	61.9	
4.		09:01 A.M. - 10:00 A.M.	62.8	64.5	62.7	
5.		10:01 A.M. - 11:00 A.M.	63.6	66.2	64.9	
6.		11:01 A.M. - 12:00 P.M.	64.5	66.7	65.6	
7.		12:01 P.M. - 01:00 P.M.	62.3	64.2	63.2	
8.		01:01 P.M. - 02:00 P.M.	61.2	64.5	63.5	
9.		02:01 P.M. - 03:00 P.M.	63.8	66.3	64.9	
10.		03:01 P.M. - 04:00 P.M.	61.3	64.5	63.2	
11.		04:01 P.M. - 05:00 P.M.	59.7	62.4	61.1	
12.		05:01 P.M. - 06:00 P.M.	57.8	60.3	59.0	
13.		06:01 P.M. - 07:00 P.M.	55.4	58.3	57.2	
14.		07:01 P.M. - 08:00 P.M.	54.3	57.8	56.3	
15.		08:01 P.M. - 09:00 P.M.	54.2	56.2	55.3	
16.		09:01 P.M. - 10:00 P.M.	53.3	55.6	53.3	
L(Day) Min: 53.3		L(Day) Max: 66.7		L(Day) Leq : 59.6		
Night Time (10:00 P.M. to 06:00 A.M.)						
17.	23.05.2023	10:01 P.M. - 11:00 P.M.	50.2	51.8	50.9	70 dB(A)
18.		11:01 P.M. - 00:00 A.M.	51.2	53.6	52.3	
19.	24.05.2023	00:01 A.M. - 01:00 A.M.	50.2	52.7	51.4	
20.		01:01 A.M. - 02:00 A.M.	51.2	53.4	52.3	
21.		02:01 A.M. - 03:00 A.M.	52.4	55.7	54.3	
22.		03:01 A.M. - 04:00 A.M.	54.3	56.2	55.3	
23.		04:01 A.M. - 05:00 A.M.	55.2	57.3	56.3	
24.		05:01 A.M. - 06:00 A.M.	54.4	56.8	55.5	
L(Night) Min: 50.2		L(Night) Max: 57.3		L(Night) Leq : 53.7		

Note : - Leq - Equivalent sound energy.

:- END OF TEST REPORT :-

Report Verified by
S. Mondal

(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-SL/23-24/IPL/02		Date: May 26, 2023			Page 1 of 1	
Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED				
Address		: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602				
P.O. No.		: 4700019592, dtd. 28.04.2023				
Description of Sample		: Sound Level Monitoring			Parameters Tested L _{Max} , L _{Min} & L _{Eq}	
Location		: Near DAP Gate				
Date of Monitoring		: 24.05.2023 to 25.05.2023				
Day Time (06:00 A.M. to 10:00 P.M.)						
Sl. No.	Date	Time	Noise Level in dB(A)			Norms as per Environmental Protection Act 1986, rule 3(1) and 4 (1) for Industrial area
			L _{Min}	L _{Max}	L _{Eq}	
1.	24.05.2023	06:01 A.M. - 07:00 A.M.	58.5	61.2	59.9	75 dB(A)
2.		07:01 A.M. - 08:00 A.M.	59.8	62.5	61.2	
3.		08:01 A.M. - 09:00 A.M.	60.8	63.5	62.2	
4.		09:01 A.M. - 10:00 A.M.	61.5	64.7	63.3	
5.		10:01 A.M. - 11:00 A.M.	63.2	66.5	65.1	
6.		11:01 A.M. - 12:00 P.M.	64.3	66.5	65.5	
7.		12:01 P.M. - 01:00 P.M.	63.2	65.7	64.7	
8.		01:01 P.M. - 02:00 P.M.	62.8	65.6	64.0	
9.		02:01 P.M. - 03:00 P.M.	64.3	66.5	65.6	
10.		03:01 P.M. - 04:00 P.M.	63.2	65.8	64.8	
11.		04:01 P.M. - 05:00 P.M.	62.2	64.6	63.8	
12.		05:01 P.M. - 06:00 P.M.	59.5	62.5	61.1	
13.		06:01 P.M. - 07:00 P.M.	59.8	61.8	60.9	
14.		07:01 P.M. - 08:00 P.M.	58.4	60.3	59.3	
15.		08:01 P.M. - 09:00 P.M.	56.3	58.6	57.7	
16.		09:01 P.M. - 10:00 P.M.	53.2	55.8	53.9	
L(Day) Min: 53.2		L(Day) Max: 66.5		L(Day) Leq : 62.3		
Night Time (10:00 P.M. to 06:00 A.M.)						
17.	24.05.2023	10:01 P.M. - 11:00 P.M.	53.8	56.8	55.1	70 dB(A)
18.		11:01 P.M. - 00:00 A.M.	51.3	53.8	52.6	
19.	25.05.2023	00:01 A.M. - 01:00 A.M.	50.4	53.7	52.3	
20.		01:01 A.M. - 02:00 A.M.	52.3	54.6	53.4	
21.		02:01 A.M. - 03:00 A.M.	49.6	52.7	51.1	
22.		03:01 A.M. - 04:00 A.M.	52.5	54.8	52.9	
23.		04:01 A.M. - 05:00 A.M.	53.7	57.8	55.8	
24.		05:01 A.M. - 06:00 A.M.	55.2	57.8	55.4	
L(Night) Min: 49.6		L(Night) Max: 57.8		L(Night) Leq : 53.8		

Note :- Leq - Equivalent sound energy.

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-SL/23-24/IPL/03		Date: May 27, 2023			Page 1 of 1	
Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED				
Address		: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602				
P.O. No.		: 4700019592, dtd. 28.04.2023				
Description of Sample		: Sound Level Monitoring			<u>Parameters Tested</u> L _{Max} , L _{Min} & L _{eq}	
Location		: Near Parking Area				
Date of Monitoring		: 25.05.2023 to 26.05.2023				
Day Time (06:00 A.M. to 10:00 P.M.)						
Sl. No.	Date	Time	Noise Level in dB(A)			Norms as per Environmental Protection Act 1986, rule 3(1) and 4 (1) for industrial area
			L _{Min}	L _{Max}	L _{eq}	
1.	25.05.2023	06:01 A.M. - 07:00 A.M.	54.6	56.7	55.4	75 dB(A)
2.		07:01 A.M. - 08:00 A.M.	53.2	56.8	55.2	
3.		08:01 A.M. - 09:00 A.M.	54.2	56.4	55.3	
4.		09:01 A.M. - 10:00 A.M.	54.8	57.2	56.2	
5.		10:01 A.M. - 11:00 A.M.	55.6	58.5	57.2	
6.		11:01 A.M. - 12:00 P.M.	55.7	57.4	56.7	
7.		12:01 P.M. - 01:00 P.M.	55.4	57.8	56.4	
8.		01:01 P.M. - 02:00 P.M.	54.2	56.2	55.4	
9.		02:01 P.M. - 03:00 P.M.	55.3	57.8	56.5	
10.		03:01 P.M. - 04:00 P.M.	54.3	57.2	55.8	
11.		04:01 P.M. - 05:00 P.M.	54.8	56.5	55.8	
12.		05:01 P.M. - 06:00 P.M.	54.2	56.2	55.3	
13.		06:01 P.M. - 07:00 P.M.	54.7	56.8	54.7	
14.		07:01 P.M. - 08:00 P.M.	49.8	51.6	50.7	
15.		08:01 P.M. - 09:00 P.M.	49.8	51.8	50.9	
16.		09:01 P.M. - 10:00 P.M.	48.8	51.7	50.1	
L(Day) Min: 48.8		L(Day) Max: 58.5		L(Day) Leq : 55.1		
Night Time (10:00 P.M. to 06:00 A.M.)						
17.	25.05.2023	10:01 P.M. - 11:00 P.M.	49.6	51.4	49.3	70 dB(A)
18.		11:01 P.M. - 00:00 A.M.	48.2	50.4	48.4	
19.	26.05.2023	00:01 A.M. - 01:00 A.M.	48.8	51.7	49.3	
20.		01:01 A.M. - 02:00 A.M.	47.6	50.3	49.1	
21.		02:01 A.M. - 03:00 A.M.	48.2	50.6	48.4	
22.		03:01 A.M. - 04:00 A.M.	49.2	51.5	49.4	
23.		04:01 A.M. - 05:00 A.M.	50.6	52.7	50.7	
24.		05:01 A.M. - 06:00 A.M.	52.4	54.8	52.8	
L(Night) Min: 47.6		L(Night) Max: 54.8		L(Night) Leq : 49.9		

Note : - Leq - Equivalent sound energy.

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-SL/23-24/BPL/04		Date: May 27, 2023		Page 1 of 1		
Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED				
Address		: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602				
P.O. No.		: 4700019592, dtd. 28.04.2023				
Description of Sample		: Sound Level Monitoring		Parameters Tested L_{Max} , L_{Min} & L_{eq}		
Location		: Near Main Gate				
Date of Monitoring		: 26.05.2023 to 27.05.2023				
Day Time (06:00 A.M. to 10:00 P.M.)						
Sl. No.	Date	Time	Noise Level in dB(A)			Norms as per Environmental Protection Act 1986, rule 3(1) and 4(1) for industrial area
			L_{Min}	L_{Max}	L_{eq}	
1.	26.05.2023	06:01 A.M. - 07:00 A.M.	56.3	58.2	57.0	75 dB(A)
2.		07:01 A.M. - 08:00 A.M.	54.6	56.8	54.6	
3.		08:01 A.M. - 09:00 A.M.	54.2	56.3	55.4	
4.		09:01 A.M. - 10:00 A.M.	55.4	57.8	55.7	
5.		10:01 A.M. - 11:00 A.M.	55.8	57.7	56.8	
6.		11:01 A.M. - 12:00 P.M.	55.2	58.6	57.0	
7.		12:01 P.M. - 01:00 P.M.	55.4	58.6	57.2	
8.		01:01 P.M. - 02:00 P.M.	53.8	56.8	55.5	
9.		02:01 P.M. - 03:00 P.M.	54.5	57.2	55.0	
10.		03:01 P.M. - 04:00 P.M.	55.7	58.4	56.3	
11.		04:01 P.M. - 05:00 P.M.	56.6	58.4	56.5	
12.		05:01 P.M. - 06:00 P.M.	55.2	58.5	57.4	
13.		06:01 P.M. - 07:00 P.M.	54.5	56.4	54.8	
14.		07:01 P.M. - 08:00 P.M.	54.3	57.2	55.0	
15.		08:01 P.M. - 09:00 P.M.	55.3	57.4	55.5	
16.		09:01 P.M. - 10:00 P.M.	52.8	54.7	53.8	
L(Day) Min: 52.8		L(Day) Max: 58.6		L(Day) Leq : 56.0		
Night Time (10:00 P.M. to 06:00 A.M.)						
17.	26.05.2023	10:01 P.M. - 11:00 P.M.	53.2	56.6	54.2	70 dB(A)
18.		11:01 P.M. - 00:00 A.M.	55.8	57.4	56.7	
19.	27.05.2023	00:01 A.M. - 01:00 A.M.	53.7	55.8	53.6	
20.		01:01 A.M. - 02:00 A.M.	54.8	56.7	54.7	
21.		02:01 A.M. - 03:00 A.M.	49.8	51.6	50.6	
22.		03:01 A.M. - 04:00 A.M.	50.4	53.4	51.2	
23.		04:01 A.M. - 05:00 A.M.	49.8	51.8	50.8	
24.		05:01 A.M. - 06:00 A.M.	49.8	51.6	50.8	
L(Night) Min: 49.8		L(Night) Max: 57.4		L(Night) Leq : 53.0		

Note : - L_{eq} - Equivalent sound energy.

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-SL/23-24/IPL/05		Date: August 08, 2023				Page 1 of 1
Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED				
Address		: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602				
P.D. No.		: 4700019592, dtd. 28.04.2023				
Description of Sample		: Sound Level Monitoring				Parameters Tested L_{min} , L_{max} & L_{eq}
Location		: Near VIP Gate				
Date of Monitoring		: 31.07.2023 to 01.08.2023				
Day Time (06:00 A.M. to 10:00 P.M.)						
Sl. No.	Date	Time	Noise Level in dB(A)			Norms as per Environmental Protection Act 1986, rule 3(1) and 4 (1) for industrial area
			L_{min}	L_{max}	L_{eq}	
1.	31.07.2023	06:01 A.M. - 07:00 A.M.	50.2	53.6	52.1	75 dB(A)
2.		07:01 A.M. - 08:00 A.M.	51.4	54.0	52.7	
3.		08:01 A.M. - 09:00 A.M.	51.6	54.5	53.5	
4.		09:01 A.M. - 10:00 A.M.	52.4	55.0	54.1	
5.		10:01 A.M. - 11:00 A.M.	54.0	56.0	55.1	
6.		11:01 A.M. - 12:00 P.M.	53.1	55.8	54.8	
7.		12:01 P.M. - 01:00 P.M.	55.7	57.0	56.4	
8.		01:01 P.M. - 02:00 P.M.	53.4	55.6	54.5	
9.		02:01 P.M. - 03:00 P.M.	52.0	54.5	53.3	
10.		03:01 P.M. - 04:00 P.M.	52.5	55.0	53.6	
11.		04:01 P.M. - 05:00 P.M.	53.1	56.0	54.8	
12.		05:01 P.M. - 06:00 P.M.	50.3	54.0	52.6	
13.		06:01 P.M. - 07:00 P.M.	50.0	52.0	51.2	
14.		07:01 P.M. - 08:00 P.M.	49.5	51.0	50.3	
15.		08:01 P.M. - 09:00 P.M.	48.0	50.2	49.2	
16.		09:01 P.M. - 10:00 P.M.	47.2	49.7	48.4	
L(Day) Min: 47.2		L(Day) Max: 57		L(Day) Leq : 53.1		
Night Time (10:00 P.M. to 06:00 A.M.)						
17.	31.07.2023	10:01 P.M. - 11:00 P.M.	47.0	49.5	48.4	70 dB(A)
18.		11:01 P.M. - 00:00 A.M.	47.2	49.0	48.3	
19.	01.08.2023	00:01 A.M. - 01:00 A.M.	47.5	49.4	48.4	
20.		01:01 A.M. - 02:00 A.M.	46.0	47.0	47.3	
21.		02:01 A.M. - 03:00 A.M.	49.5	51.8	50.8	
22.		03:01 A.M. - 04:00 A.M.	51.8	53.6	52.8	
23.		04:01 A.M. - 05:00 A.M.	53.4	55.0	54.2	
24.		05:01 A.M. - 06:00 A.M.	52.8	56.0	54.7	
L(Night) Min: 46		L(Night) Max: 56		L(Night) Leq : 50.8		

Note : - L_{eq} - Equivalent sound energy.

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-SL/23-24/IPL/06		Date: August 08, 2023			Page 1 of 1	
Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED				
Address		: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602				
P.O. No.		: 4700019592, dtd. 28.04.2023				
Description of Sample		: Sound Level Monitoring			Parameters Tested L _{Min} , L _{Max} & L _{eq}	
Location		: Near Main Gate				
Date of Monitoring		: 01.08.2023 to 02.08.2023				
Day Time (06:00 A.M. to 10:00 P.M.)						
Sl. No.	Date	Time	Noise Level in dB(A)			Norms as per Environmental Protection Act 1986, rule 3(1) and 4 (1) for industrial area
			L _{Min}	L _{Max}	L _{eq}	
1.	01.08.2023	06:01 A.M. - 07:00 A.M.	56.4	58.2	57.2	75 dB(A)
2.		07:01 A.M. - 08:00 A.M.	54.6	56.7	55.6	
3.		08:01 A.M. - 09:00 A.M.	54.2	56.7	55.5	
4.		09:01 A.M. - 10:00 A.M.	55.2	57.6	56.6	
5.		10:01 A.M. - 11:00 A.M.	55.2	57.3	56.5	
6.		11:01 A.M. - 12:00 P.M.	55.3	57.5	56.5	
7.		12:01 P.M. - 01:00 P.M.	55.1	58.0	57.1	
8.		01:01 P.M. - 02:00 P.M.	54.6	57.2	56.1	
9.		02:01 P.M. - 03:00 P.M.	55.1	57.6	55.5	
10.		03:01 P.M. - 04:00 P.M.	55.3	57.8	56.6	
11.		04:01 P.M. - 05:00 P.M.	56.5	58.2	57.3	
12.		05:01 P.M. - 06:00 P.M.	54.8	57.5	56.3	
13.		06:01 P.M. - 07:00 P.M.	55.1	58.5	57.3	
14.		07:01 P.M. - 08:00 P.M.	54.2	57.9	56.1	
15.		08:01 P.M. - 09:00 P.M.	54.5	57.2	56.0	
16.		09:01 P.M. - 10:00 P.M.	53.5	55.6	54.8	
L(Day) Min: 53.5		L(Day) Max: 58.5		L(Day) Leq : 56.5		
Night Time (10:00 P.M. to 06:00 A.M.)						
17.	01.08.2023	10:01 P.M. - 11:00 P.M.	54.8	57.4	56.0	70 dB(A)
18.		11:01 P.M. - 00:00 A.M.	52.5	54.8	53.7	
19.	02.08.2023	00:01 A.M. - 01:00 A.M.	49.0	52.2	50.3	
20.		01:01 A.M. - 02:00 A.M.	49.5	53.0	51.8	
21.		02:01 A.M. - 03:00 A.M.	48.2	50.3	49.2	
22.		03:01 A.M. - 04:00 A.M.	48.5	50.1	49.3	
23.		04:01 A.M. - 05:00 A.M.	48.6	50.3	49.4	
24.		05:01 A.M. - 06:00 A.M.	50.2	54.7	52.7	
L(Night) Min: 48.2		L(Night) Max: 57.4		L(Night) Leq : 51.8		

Note : - Leq - Equivalent sound energy.

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS
(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

TAHER MANSION, 1ST FLOOR

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-SL/23-24/IPL/07		Date: August 08, 2023				Page 1 of 1
Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED				
Address		: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602.				
P.O. No.		: 4700019592, dtd. 28.04.2023				
Description of Sample		: Sound Level Monitoring				<u>Parameters Tested</u> L_{Max} , L_{Min} & L_{eq}
Location		: Near DAP Gate				
Date of Monitoring		: 02.08.2023 to 03.08.2023				
Day Time (06:00 A.M. to 10:00 P.M.)						
Sl. No.	Date	Time	Noise Level in dB(A)			Norms as per Environmental Protection Act 1986, rule 3(1) and 4 (1) for Industrial area
			L_{Min}	L_{Max}	L_{eq}	
1.	02.08.2023	06:01 A.M. - 07:00 A.M.	58.2	61.5	59.5	75 dB(A)
2.		07:01 A.M. - 08:00 A.M.	59.2	62.4	60.9	
3.		08:01 A.M. - 09:00 A.M.	60.5	63.1	61.9	
4.		09:01 A.M. - 10:00 A.M.	61.2	64.2	63.1	
5.		10:01 A.M. - 11:00 A.M.	63.5	65.5	64.7	
6.		11:01 A.M. - 12:00 P.M.	64.6	67.4	66.0	
7.		12:01 P.M. - 01:00 P.M.	62.8	65.6	64.2	
8.		01:01 P.M. - 02:00 P.M.	61.4	65.0	63.6	
9.		02:01 P.M. - 03:00 P.M.	62.8	65.6	64.1	
10.		03:01 P.M. - 04:00 P.M.	62.3	64.0	63.2	
11.		04:01 P.M. - 05:00 P.M.	63.1	65.0	64.2	
12.		05:01 P.M. - 06:00 P.M.	60.2	62.2	61.1	
13.		06:01 P.M. - 07:00 P.M.	58.0	60.7	59.9	
14.		07:01 P.M. - 08:00 P.M.	57.0	60.5	58.7	
15.		08:01 P.M. - 09:00 P.M.	57.8	59.8	58.8	
16.		09:01 P.M. - 10:00 P.M.	55.2	57.0	56.1	
L(Day) Min: 55.2		L(Day) Max: 67.4		L(Day) Leq : 62.1		
Night Time (10:00 P.M. to 06:00 A.M.)						
17.	02.08.2023	10:01 P.M. - 11:00 P.M.	54.6	56.0	55.4	70 dB(A)
18.		11:01 P.M. - 00:00 A.M.	52.0	54.2	53.2	
19.	03.08.2023	00:01 A.M. - 01:00 A.M.	50.2	52.6	51.4	
20.		01:01 A.M. - 02:00 A.M.	49.0	51.8	50.3	
21.		02:01 A.M. - 03:00 A.M.	49.2	52.0	50.4	
22.		03:01 A.M. - 04:00 A.M.	49.0	52.6	51.5	
23.		04:01 A.M. - 05:00 A.M.	51.8	54.2	53.1	
24.		05:01 A.M. - 06:00 A.M.	55.6	58.0	56.8	
L(Night) Min: 49		L(Night) Max: 58		L(Night) Leq : 53.0		

Note :- Leq - Equivalent sound energy.

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS
(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

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Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007



TEST REPORT

No. AP-SL/23-24/IPL/08		Date: August 08, 2023			Page 1 of 1	
Issued to		: M/S. INDORAMA INDIA PRIVATE LIMITED				
Address		: PO : Durgachak, Haldia, District : Purba Midnapore, West Bengal 721 602				
P.O. No.		: 4700019592, dtd. 29.04.2023				
Description of Sample		: Sound Level Monitoring			<u>Parameters Tested</u> L _{Max} , L _{Min} & L _{eq}	
Location		: Near DAP Gate				
Date of Monitoring		: 03.08.2023 to 04.08.2023				
Day Time (06:00 A.M. to 10:00 P.M.)						
Sl. No.	Date	Time	Noise Level in dB(A)			Norms as per Environmental Protection Act 1986, rule 3(1) and 4 (1) for Industrial area
			L _{Min}	L _{Max}	L _{eq}	
1.	03.08.2023	06:01 A.M. - 07:00 A.M.	53.4	55.5	54.4	75 dB(A)
2.		07:01 A.M. - 08:00 A.M.	54.5	56.0	55.4	
3.		08:01 A.M. - 09:00 A.M.	55.5	58.2	57.0	
4.		09:01 A.M. - 10:00 A.M.	55.5	57.0	56.3	
5.		10:01 A.M. - 11:00 A.M.	56.4	58.4	57.4	
6.		11:01 A.M. - 12:00 P.M.	56.8	58.7	57.6	
7.		12:01 P.M. - 01:00 P.M.	55.0	58.5	56.8	
8.		01:01 P.M. - 02:00 P.M.	56.7	59.2	58.3	
9.		02:01 P.M. - 03:00 P.M.	55.4	58.0	57.0	
10.		03:01 P.M. - 04:00 P.M.	54.2	57.8	56.1	
11.		04:01 P.M. - 05:00 P.M.	53.2	55.8	54.6	
12.		05:01 P.M. - 06:00 P.M.	53.0	55.0	54.0	
13.		06:01 P.M. - 07:00 P.M.	51.5	54.5	52.9	
14.		07:01 P.M. - 08:00 P.M.	50.0	53.0	51.7	
15.		08:01 P.M. - 09:00 P.M.	50.5	54.0	52.3	
16.		09:01 P.M. - 10:00 P.M.	50.0	52.8	51.3	
L(Day) Min: 50		L(Day) Max: 59.2		L(Day) Leq : 55.4		
Night Time (10:00 P.M. to 06:00 A.M.)						
17.	03.08.2023	10:01 P.M. - 11:00 P.M.	50.2	53.0	51.7	70 dB(A)
18.		11:01 P.M. - 00:00 A.M.	49.2	51.4	50.3	
19.	04.08.2023	00:01 A.M. - 01:00 A.M.	49.0	51.0	50.2	
20.		01:01 A.M. - 02:00 A.M.	48.8	50.8	49.8	
21.		02:01 A.M. - 03:00 A.M.	48.2	50.0	49.2	
22.		03:01 A.M. - 04:00 A.M.	48.0	49.6	48.8	
23.		04:01 A.M. - 05:00 A.M.	50.4	52.2	51.3	
24.		05:01 A.M. - 06:00 A.M.	52.6	55.2	54.3	
L(Night) Min: 48		L(Night) Max: 55.2		L(Night) Leq : 50.9		

Note : - Leq - Equivalent sound energy.

-: END OF TEST REPORT :-

S. Mondal
Report Verified by
S. Mondal

R. Karim
(Dr. R. KARIM)
Technical Manager
Authorised Signatory
For R.V.BRIGGS & CO. (P) LTD.

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ANNEXURE - 4

Effluent Monitoring Report

TEST REPORT


Name & Address of the Customer :
'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED-503
Date : 18.05.2023
Sample No. : MSKGL/ED/2023-24/05/00005
Sample Description : Effluent Water
Sampling Location: ETP Treated Water
 from Plant Outlet
Sample Drawn on: 28.04.2023

Reference No. & Date: 4700017438

ANALYSIS RESULT

Sl No.	Test Parameters	Unit	Result	Method
1.	pH value at 25° C	---	7.83	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	0.68	APHA (23rd Edition) 4500 -F- C/D: 2017
3.	Total Suspended Solid	mg/l	10	APHA (23rd Edition) 2540D : 2017
4.	Biochemical Oxygen Demand	mg/l	8.7	APHA (23rd Edition) 5210B : 2017
5.	Chemical Oxygen Demand	mg/l	32	APHA (23rd Edition) 5220B : 2017
6.	Oil and Grease	mg/l	<5.0	APHA (23rd Edition) 5520B : 2017
7.	Ammoniacal Nitrogen (as N)	mg/l	<0.1	APHA (23rd Edition) 4500 - NH3-F : 2017
8.	Dissolved Phosphate (as P)	mg/l	0.29	APHA (23rd Edition) 4500 P B, D : 2017
9.	Total Kjeldahl Nitrogen as N	mg/l	<0.3	APHA (23rd Edition) 2017 4500 -Norg B: 2017
10.	Free Ammoniacal Nitrogen as N	mg/l	<0.1	APHA (23rd Edition) 4500-NH3-F 2017_(O)

Report Prepared for 

for Mitra S. K. Private Limited
 Authorized Signatory

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TEST REPORT


Name & Address of the Customer :
'INDORAMA INDIA PRIVATE LIMITED.'
 Haldia, Pin- 721602

Report No. : WB/ED-1058
 Date : 15.06.2023
 Sample No. : MSKGL/ED/2023-24/05/01949
 Sample Description : Effluent Water
 Sampling Location: ETP Treated Water
 from Plant Outlet
 Sample Drawn on: 30.05.2023

Reference No.& Date: 4700017438

ANALYSIS RESULT

Sl No.	Test Parameters	Unit	Result	Method
1.	pH value at 25 °C	—	7.14	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	0.4	APHA (23rd Edition) 4500 -F- C/D: 2017
3.	Total Suspended Solid	mg/l	8.4	APHA (23rd Edition) 2540D : 2017
4.	Biochemical Oxygen Demand	mg/l	<2.0	APHA (23rd Edition) 5210B : 2017
5.	Chemical Oxygen Demand	mg/l	8.0	APHA (23rd Edition) 5220B : 2017
6.	Oil and Grease	mg/l	<5.0	APHA (23rd Edition) 5520B : 2017
7.	Ammoniacal Nitrogen (as N)	mg/l	<0.1	APHA (23rd Edition) 4500 - NH3-F : 2017
8.	Dissolved Phosphate (as P)	mg/l	0.34	APHA (23rd Edition) 4500 • P B, D : 2017
9.	Total Kjeldahl Nitrogen as N	mg/l	<0.3	APHA (23rd Edition) 2017 4500 -Norg • B: 2017
10.	Free Ammoniacal Nitrogen as N	mg/l	<0.1	APHA (23rd Edition) 4500-NH3-F 2017 (O)

Report Prepared By 

for Mitra S. K. Private Limited

 A.secul
 Authorised Signatory

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TEST REPORT

Name & Address of the Customer :
'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721602

Report No. : CRTGL/ED/2023-24/06/01044

Date: :20.07.2023

Sample No. : MSKGL/ED/2023-24/06/01044

Sample Description : Effluent Water

Sampling Location: ETP Treated Water
 from Plant Outlet

Sample Drawn on: 16.06.2023

Reference No.& Date: 4700017438

ANALYSIS RESULT

Sl No.	Test Parameters	Unit	Result	Method
1.	pH value at 25 ^o C	----	8.15	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	0.3	APHA (23rd Edition) 4500 -F- C/D: 2017
3.	Total Suspended Solid	mg/l	6.4	APHA (23rd Edition) 2540D : 2017
4.	Biochemical Oxygen Demand	mg/l	2.3	APHA (23rd Edition) 5210B : 2017
5.	Chemical Oxygen Demand	mg/l	10	APHA (23rd Edition) 5220B : 2017
6.	Oil and Grease	mg/l	<5.0	APHA (23rd Edition) 5520B : 2017
7.	Ammoniacal Nitrogen (as N)	mg/l	<0.1	APHA (23rd Edition) 4500 - NH3-F : 2017
8.	Dissolved Phosphate (as P)	mg/l	0.38	APHA (23rd Edition) 4500 - P B, D : 2017
9.	Total Kjeldahl Nitrogen as N	mg/l	<0.3	APHA (23rd Edition) 2017 4500 -Norg - B: 2017
10.	Free Ammoniacal Nitrogen as N	mg/l	<0.1	APHA (23rd Edition) 4500-NH3-F 2017 (O)

Report Prepared By 

for Mitra S. K. Private Limited

 
 Authorised Signatory

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TEST REPORT


Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE, LIMITED.'
 Haldia, Pin- 721602


Report No. : CRTGL/ED/2023-24/08/00010
 Date: 22.08.2023
 Sample No. : MSKGL/ED/2023-24/08/00010
 Sample Description : Effluent Water
 Sampling Location: ETP Treated Water
 from Plant Outlet
 Sample Drawn on: 28.07.2023

Reference No. & Date: 4700017438

ANALYSIS RESULT

Sl No.	Test Parameters	Unit	Result	Method
1.	pH value at 25 °C	---	7.40	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	0.65	APHA (23rd Edition) 4500 -F- C/D: 2017
3.	Total Suspended Solid	mg/l	5.9	APHA (23rd Edition) 2540D : 2017
4.	Biochemical Oxygen Demand	mg/l	4.4	APHA (23rd Edition) 5210B : 2017
5.	Chemical Oxygen Demand	mg/l	16	APHA (23rd Edition) 5220B : 2017
6.	Oil and Grease	mg/l	<5.0	APHA (23rd Edition) 5520B : 2017
7.	Ammoniacal Nitrogen (as N)	mg/l	3.1	APHA (23rd Edition) 4500 - NH ₃ -F : 2017
8.	Dissolved Phosphate (as P)	mg/l	0.26	APHA (23rd Edition) 4500 P B, D : 2017
9.	Total Kjeldahl Nitrogen (as N)	mg/l	4.4	APHA (23rd Edition) 2017 4500 -Norg B: 2017
10.	Free Ammoniacal Nitrogen (as N)	mg/l	2.4	APHA (23rd Edition) 4500-NH ₃ -F 2017_(O)

Report Prepared By: 

for Mitra S.K. Private Limited
 Authorized Signatory 

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Head Office: Shrachi Centre (5th floor), 74B, A.J.C. Bose Road, Kolkata - 700 016, West Bengal, India.
 Tel. : 91 33 40143000 / 22650005 / 22650007 Fax : 91 33 22650008
 Email : info@mitrask.com. Website: www.mitrask.com

TEST REPORT

Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE. LIMITED.'
 Haldia, Pin- 721502

Report No. : MSKGL/ED/2023-24/001118
 Date: 20.09.2023
 Sample No. : MSKGL/ED/2023-24/08/01164
 Sample Description : Effluent Water
 Sampling Location: ETP Treated Water
 from Plant Outlet
 Sample Drawn on: 30.08.2023

Reference No.& Date: 4700017438

ANALYSIS RESULT

Sl No.	Test Parameters	Unit	Result	Method
1.	pH value at 25 °C	---	7.53	
2.	Fluoride (as F)	mg/l	0.89	APHA (23rd Edition) 4500 -H-B : 2017
3.	Total Suspended Solid	mg/l	12	APHA (23rd Edition) 4500 -F- C/D: 2017
4.	Biochemical Oxygen Demand	mg/l	3.2	APHA (23rd Edition) 2540D : 2017
5.	Chemical Oxygen Demand	mg/l	12	APHA (23rd Edition) 5210B : 2017
6.	Oil and Grease	mg/l	<5.0	APHA (23rd Edition) 5220B : 2017
7.	Ammoniacal Nitrogen (as N)	mg/l	2.2	APHA (23rd Edition) 5520B : 2017
8.	Dissolved Phosphate (as P)	mg/l	1.8	APHA (23rd Edition) 4500 - NH3-F : 2017
9.	Total Kjeldahl Nitrogen as N	mg/l	3.4	APHA (23rd Edition) 4500 I P B, D : 2017
10.	Free Ammoniacal Nitrogen as N	mg/l	0.72	APHA (23rd Edition) 2017 4500 -Norg I B: 2017 APHA (23rd Edition) 4500-NH3-F 2017 (O)

Report Prepared By *Shatterjee*

for Mitra S. K. Private Limited

[Signature]
 Authorised Signatory

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- This Test Report shall not be reproduced except in full, without the permission of Mitra S.K. Private Limited.

TEST REPORT

Name & Address of the Customer :
 'INDORAMA INDIA PRIVATE, LIMITED.'
 Haldia, Pin- 721602

Report No. : MSKGL/ED/2023-24/001188
 Date: : 20.09.2023
 Sample No. : MSKGL/ED/2023-24/09/00569
 Sample Description : Effluent Water
 Sampling Location: ETP Treated Water
 from Plant Outlet
 Sample Drawn on: 11.09.2023

Reference No.& Date: 4700017438

ANALYSIS RESULT

Sl No.	Test Parameters	Unit	Result	Method
1.	pH value	None	7.90	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	0.46	APHA (23rd Edition) 4500 -F- C/D : 2017
3.	Total Suspended Solid (as TSS)	mg/l	12	APHA (23rd Edition) 2540D : 2017
4.	Biochemical Oxygen Demand (as BOD)	mg/l	6.6	APHA (23rd Edition) 5210B : 2017
5.	Chemical Oxygen Demand (COD)	mg/l	24	APHA (23rd Edition) 5220B : 2017
6.	Oil and Grease	mg/l	<5.0	APHA (23rd Edition) 5520B : 2017
7.	Ammoniacal Nitrogen (as N)	mg/l	3.6	APHA (23rd Edition) 4500 - NH3-F : 2017
8.	Dissolved Phosphate (as P)	mg/l	<0.05	APHA (23rd Edition) 4500 P, B, D : 2017
9.	Total Kjeldahl Nitrogen as N	mg/l	6.4	APHA (23rd Edition) 2017 4500 -Norg B : 2017
10.	Free Ammoniacal Nitrogen as N	mg/l	1.3	APHA (23rd Edition) 4500-NH3-F 2017 (O)

Report Prepared By *Schatterjee*

for Mitra S. K. Private Limited

Schatterjee
 Authorised Signatory

- The results relate only to the samples tested.
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ANNEXURE – 11

Groundwater Monitoring Report



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)

TAHER MANSION, 1ST FLOOR

9, BENTINCK STREET, KOLKATA - 700 001

Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447

E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007



TEST REPORT

ULR NO. TC781523100003345F

No. W(D)/23-24/656

Date : June 01, 2023

Page 1 of 3

Issued to	: M/S, INDORAMA INDIA PRIVATE LIMITED Durgachak, Haldia, East Medinipore	
Your Ref No.	: PO No. : 4700019593 letter dtd. 28.04.2023	Environmental conditions during sampling Temperature: 28°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Drinking Water	
Collection Source	: Borewell Water Reservoir Deep Tubewell-1	Parameters Tested: Microbiological 1) Coliform Organism (2) E.Coli
Sample Drawn by us on	: 24.05.2023 at 13.40pm	
Sample carried out by	: Mr. S.Mukherjee	
Sampling Plan :	: RVB/FM/44	
Method of Sampling	: IS : 15185	
Mode of Sampling	: Grab	
Analysis Completed on	: 26.05.2023	

Microbiological Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015
1	Coliform Organism	APHA 23rd Edn. 9222B	CFU/100ml	Absent	Absent
2	E. coli	APHA 23rd Edn. 9222H	CFU/100ml	Absent	Absent

Remarks on Test Report :

The above mentioned sample of drinking water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.

-: END OF TEST REPORT :-

Pijush Kanti Dutta
Sr. Microbiologist
Authorized Signatory



R. V. BRIGGS & CO. PRIVATE LTD.

ANALYTICAL CONSULTING & TECHNICAL CHEMISTS
(AN ISO 9001:2015 & ISO 45001: 2018 CERTIFIED COMPANY)



TAHER MANSION, 1ST FLOOR
9, BENTINCK STREET, KOLKATA - 700 001
Phone : (033) 4044-3380/3381/3382 / 3383, Fax : 33 2248-0447
E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com
CIN : U51109WB1931PTC007007

TEST REPORT

ULR NO. TC781523100003345F

No. W(D)/23-24/656

Date : June 01, 2023

Page 2 of 3

Issued to	: M/S, INDORAMA INDIA PRIVATE LIMITED Durgachak, Haldia, East Medinipore.		
Your Ref No.	: PO No.: 4700019593 letter dtd. 28.04		
Sample Description	: Drinking Water	Environmental conditions during sampling	
Collection Source	: Borewell Water Reservoir Deep Tubewell-1	Temperature: 28°C, Transport by : Through Ice Box Transport condition : Cold chain maintained	
Sample Drawn by us on	: 24.05.2023 at 13.40pm	Parameters Tested: Physical & Chemical 1. Organoleptic and Physical - 6 Parameters 2. General Parameters - 23 Parameters 3. Toxic Substances - 8 Parameters	
Sample carried out by	: Mr. S.Mukherjee		
Sampling Plan :	: RVB/FM/44		
Method of Sampling	: IS : 3025 (Part - 1) 1987		
Mode of Sampling	: Grab		
Analysis Completed on	: 31.05.2023		

Physical & Chemical Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015	
					Acceptable Limit	Permissible Limit
A. Organoleptic and Physical Parameters						
1	Colour	IS: 3025-(part-4): 1983	Hazen	l	5 Max.	15 Max.
2	Odour	IS:3025(Part-5):1983	---	Agreeable	Agreeable	Agreeable
3	Taste	IS:3025(Part-8):1984	---	Agreeable	Agreeable	Agreeable
4	pH value	IS: 3025 (Part-11): 1983	---	7.4	6.5 - 8.5	No Relaxation
5	Turbidity	IS: 3025 (Part-10): 1984	NTU	<1	1 Max.	5 Max.
6	Total Dissolved Solids	IS: 3025 (Part-16): 1984	mg/l	828	500 Max.	2000 Max.
B. General Parameters Concerning Substances Undesirable in Excessive Amounts						
1	Aluminium as Al	IS: 3025 (Part-55):	mg/l	<0.03	0.03 Max.	0.2 Max.
2	Ammonia (NH ₃ -N)	IS: 3025(Part-34)	mg/l	<0.2	0.5 Max.	No Relaxation
3	Anionic detergents(as MBAS)	Annex K of IS: 13428	mg/l	<0.05	0.2 Max.	1 Max.
4	Barium as Ba	APHA 23rd Edn. 3111D	mg/l	<0.5	0.7 Max.	No Relaxation
5	Boron as B	IS: 3025 (Part-57): 2005	mg/l	<0.2	0.5 Max.	2.4 Max.
6	Calcium as Ca	IS: 3025 (Part-40): 1991	mg/l	65	75 Max.	200 Max.
7	Chloride as Cl	IS: 3025 (Part-32): 1988	mg/l	255	250 Max.	1000 Max.
8	Copper as Cu	IS: 3025 (Part-42): 1992	mg/l	<0.05	0.05 Max.	1.5 Max.
9	Fluoride as F	IS: 3025 (Part-60): 2008	mg/l	0.44	1 Max.	1.5 Max.
10	Iron as Fe	IS: 3025 (Part-53): 2003	mg/l	<0.1	1.0 Max.	No Relaxation
11	Magnesium as Mg	IS: 3025 (Part-46): 1994	mg/l	21	30 Max.	100 Max.
12	Manganese as Mn	IS: 3025 (Part-59): 2006	mg/l	0.096	0.1 Max.	0.3 Max.
13	Nitrate as NO ₃	IS: 3025 (Part-34): 1988	mg/l	35.3	45 Max.	No Relaxation
14	Phenolic Compounds as C ₆ H ₅ OH	IS: 3025 (Part-43): 1992	mg/l	<0.001	0.001 Max.	0.002 Max.
15	Selenium as Se	IS: 3025 (Part-56): 2003	mg/l	<0.01	0.01 Max.	No Relaxation
16	Silver as Ag	Annex J of IS: 13428	mg/l	<0.05	0.1 Max.	No Relaxation
17	Sulphate as SO ₄	IS: 3025 (Part-24): 1986	mg/l	1.0	200 Max.	400 Max.

Cont. page - 2

RBK



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CIN : U51109WB1931PTC007007



TEST REPORT

No. W(D)/23-24/656

Date : June 01, 2023

Page 3 of 3

Sl No.	Test parameters	Test Method	Unit	Result	Norms as per IS : 10500, 2012 (2nd Rev.)	
					Acceptable Limit	Permissible Limit
18	Sulphide as H ₂ S	IS: 3025 (Part-29): 1986	mg/l	<0.05	0.05 Max.	No Relaxation
19	Total Alkany as CaCO ₃	IS: 3025 (Part-23): 1986	mg/l	290	200 Max.	600 Max.
20	Total Hardness as CaCO ₃	IS: 3025 (Part-21) - 2009	mg/l	249	200 Max.	600 Max.
21	Zinc as Zn	IS: 3025 (Part-49): 1994	mg/l	<0.05	5 Max.	15 Max.
C. Parameters Concerning Toxic Substances						
1	Cadmium as Cd.	IS: 3025 (Part-41): 1992	mg/l	< 0.002	0.003 Max.	No Relaxation
2	Cyanide as CN	IS: 3025 (Part-27): 1986	mg/l	< 0.02	0.05 Max.	No Relaxation
3	Lead as Pb	IS: 3025 (Part-47): 1994	mg/l	< 0.01	0.01 Max.	No Relaxation
4	Mercury as Hg	IS: 3025 (Part-48): 1994	mg/l	< 0.001	0.001 Max.	No Relaxation
5	Molybdenum as Mo	IS: 3025 (Part-2): 2004	mg/l	< 0.05	0.07 Max.	No Relaxation
6	Nickel as Ni	IS: 3025 (Part - 54) 2003	mg/l	< 0.01	0.02 Max.	No Relaxation
7	Total Arsenic as As	IS: 3025 (Part-37): 1988	mg/l	< 0.002	0.01 Max.	No Relaxation
8	Total Chromium as Cr	IS: 3025 (Part-52): 2003	mg/l	< 0.05	0.05 Max.	No Relaxation

Minimum detection limit:

i) Turbidity : 1.0NTU	ii) Aluminium : 0.03mg/l	iii) Ammonia : 0.2mg/l	iv) Barium : 0.5mg/l
v) Anionic Detergents : 0.01mg/l	vi) Copper : 0.05mg/l	vii) Silver : 0.05mg/l	viii) Boron : 0.2mg/l
ix) Sulphide : 0.05mg/l	x) Selenium : 0.01mg/l	xi) Cyanide : 0.02mg/l	xii) Iron : 0.1mg/l
xiii) Cadmium : 0.002mg/l	xiv) Molybdenum : 0.05mg/l	xv) Mercury : 0.001mg/l	xvi) Lead : 0.01mg/l
xvii) Total Chromium : 0.05mg/l	xviii) Total Arsenic : 0.002mg/l	xix) Zinc : 0.05mg/l	xx) Nickel : 0.01mg/l
xxi) Phenolic Compounds : 0.001mg/l			

Remarks on Chemical Test Report :

- The above mentioned sample of potable water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.
- Total Dissolved Solids, Alkany, Total Hardness & Chloride are beyond the acceptable limit but within the permissible limit.

Remarks on Test Report in respect of Microbiological & Chemical Test : The Water sample is fit for Human Consumption, in respect of the above Microbiological & Chemical Parameters

-: END OF TEST REPORT :-


Report Verified by
(J. DAS)

MCB


Dr. R. KARIM
Technical Manager
Authorized Signatory
For R.V.BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

ULR NO. TC781523100003346F

No. W(D)/23-24/657

Date : June 01, 2023

Page 1 of 3

Issued to	: M/S, INDORAMA INDIA PRIVATE LIMITED Durgachak, Haldia, East Medinipore.	
Your Ref No.	: PO No.: 4700019693 letter dtd. 28.04.2023	Environmental conditions during sampling Temperature: 28°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Drinking Water	
Collection Source	: Borewell Water Reservoir Deep Tubewell-2	Parameters Tested: Microbiological 1) Coliform Organism (2) E. Coli
Sample Drawn by us on	: 24.05.2023 at 13.50pm	
Sample carried out by	: Mr. S. Mukherjee	
Sampling Plan :	: RVB/FM/44	
Method of Sampling	: IS : 15185	
Mode of Sampling	: Grab	
Analysis Completed on	: 26.05.2023	

Microbiological Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015
1	Coliform Organism	APHA 23rd Edn. 9222B	CFU/100ml	Absent	Absent
2	E. coli	APHA 23rd Edn. 9222H	CFU/100ml	Absent	Absent

Remarks on Test Report :

The above mentioned sample of drinking water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.

-: END OF TEST REPORT :-

Pijush Kanti Dutta
Sr. Microbiologist
Authorized Signatory

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TC-7815

TEST REPORT

ULR NO. TC781523100003346F

No. W/D/23-24/657

Date : June 01, 2023

Page 2 of 3

Issued to	: M/S, INDORAMA INDIA PRIVATE LIMITED Durgachak, Haldia, East Medinipore.	
Your Ref No.	: PO No.: 4700019593 letter dtd. 28.04	Environmental conditions during sampling Temperature: 28°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Drinking Water	
Collection Source	: Borewell Water Reservoir Deep Tubewell-2	Parameters Tested: Physical & Chemical 1. Organoleptic and Physical - 6 Parameters 2. General Parameters - 23 Parameters 3. Toxic Substances - 8 Parameters
Sample Drawn by us on	: 24.05.2023 at 13.50pm	
Sample carried out by	: Mr. S. Mukherjee	
Sampling Plan :	: RVB/FM/44	
Method of Sampling	: IS : 3025 (Part - 1) 1987	
Mode of Sampling	: Grab	
Analysis Completed on	: 31.05.2023	

Physical & Chemical Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015	
					Acceptable Limit	Permissible Limit
A. Organoleptic and Physical Parameters						
1	Colour	IS: 3025(part-4): 1983	Hazen	1	5 Max.	15 Max.
2	Odour	IS: 3025(Part-5): 1983	---	Agreeable	Agreeable	Agreeable
3	Taste	IS: 3025(Part-8): 1984	---	Agreeable	Agreeable	Agreeable
4	pH value	IS: 3025 (Part-11): 1983	---	7.3	6.5 - 8.5	No Relaxation
5	Turbidity	IS: 3025 (Part-10): 1984	NTU	<1	1 Max.	5 Max.
6	Total Dissolved Solids	IS: 3025 (Part-16): 1984	mg/l	1308	500 Max.	2000 Max.
B. General Parameters Concerning Substances Undesirable in Excessive Amounts						
1	Aluminium as Al	IS: 3025 (Part-55)	mg/l	<0.03	0.03 Max.	0.2 Max.
2	Ammonia (NH ₃ -N)	IS: 3025(Part-34)	mg/l	<0.2	0.5 Max.	No Relaxation
3	Anionic detergents(as MBAS)	Annex K of IS: 13428	mg/l	<0.05	0.2 Max.	1 Max.
4	Barium as Ba	APHA 23rd Edn. 3111D	mg/l	<0.5	0.7 Max.	No Relaxation
5	Boron as B	IS: 3025 (Part-57): 2005	mg/l	<0.2	0.5 Max.	2.4 Max.
6	Calcium as Ca	IS: 3025 (Part-40): 1991	mg/l	95	75 Max.	200 Max.
7	Chloride as Cl	IS: 3025 (Part-32): 1988	mg/l	470	250 Max.	1000 Max.
8	Copper as Cu	IS: 3025 (Part-42): 1992	mg/l	<0.05	0.05 Max.	1.5 Max.
9	Fluoride as F	IS: 3025 (Part-60): 2008	mg/l	0.63	1 Max.	1.5 Max.
10	Iron as Fe	IS: 3025 (Part-53): 2003	mg/l	<0.1	1.0 Max.	No Relaxation
11	Magnesium as Mg	IS: 3025 (Part-46): 1994	mg/l	38	30 Max.	100 Max.
12	Manganese as Mn	IS: 3025 (Part-59): 2006	mg/l	0.125	0.1 Max.	0.3 Max.
13	Nitrate as NO ₃	IS: 3025 (Part-34): 1988	mg/l	44.6	45 Max.	No Relaxation
14	Phenolic Compounds as C ₆ H ₅ OH	IS: 3025 (Part-43): 1992	mg/l	<0.001	0.001 Max.	0.002 Max.
15	Selenium as Se	IS: 3025 (Part-56): 2003	mg/l	<0.01	0.01 Max.	No Relaxation
16	Silver as Ag	Annex J of IS: 13428	mg/l	<0.05	0.1 Max.	No Relaxation
17	Sulphate as SO ₄	IS: 3025 (Part-24): 1986	mg/l	<1	200 Max.	400 Max.

Cont. page - 2

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TEST REPORT

No. W/D/23-24/657 Date : June 01, 2023 Page 3 of 3

Sl No.	Test parameters	Test Method	Unit	Result	Norms as per IS : 10500, 2012 (2nd Rev.)	
					Acceptable Limit	Permissible Limit
18	Sulphide as H ₂ S	IS: 3025 (Part-29): 1986	mg/l	<0.05	0.05 Max.	No Relaxation
19	Total Alkalinity as CaCO ₃	IS: 3025 (Part-23): 1986	mg/l	275	200 Max.	600 Max.
20	Total Hardness as CaCO ₃	IS: 3025 (Part-21) - 2009	mg/l	396	200 Max.	600 Max.
21	Zinc as Zn	IS: 3025 (Part-49): 1994	mg/l	<0.05	5 Max.	15 Max.

C. Parameters Concerning Toxic Substances

1	Cadmium as Cd.	IS: 3025 (Part-41): 1992	mg/l	< 0.002	0.003 Max.	No Relaxation
2	Cyanide as CN	IS: 3025 (Part-27): 1986	mg/l	< 0.02	0.05 Max.	No Relaxation
3	Lead as Pb	IS: 3025 (Part-47): 1994	mg/l	< 0.01	0.01 Max.	No Relaxation
4	Mercury as Hg	IS: 3025 (Part-48): 1994	mg/l	< 0.001	0.001 Max.	No Relaxation
5	Molybdenum as Mo	IS: 3025 (Part-2): 2004	mg/l	< 0.05	0.07 Max.	No Relaxation
6	Nickel as Ni	IS: 3025 (Part - 54) 2003	mg/l	< 0.01	0.02 Max.	No Relaxation
7	Total Arsenic as As	IS: 3025 (Part-37): 1988	mg/l	< 0.002	0.01 Max.	No Relaxation
8	Total Chromium as Cr	IS: 3025 (Part-52): 2003	mg/l	< 0.05	0.05 Max.	No Relaxation

Minimum detection limit:

- i) Turbidity : 1.0NTU ii) Aluminium : 0.03mg/l iii) Ammonia : 0.2mg/l iv) Barium : 0.5mg/l
v) Anionic Detergents : 0.01mg/l vi) Copper : 0.05mg/l vii) Silver : 0.05mg/l viii) Boron : 0.2mg/l
ix) Sulphide : 0.05mg/l x) Selenium : 0.01mg/l xi) Cyanide : 0.02mg/l xii) Iron : 0.1mg/l
xiii) Cadmium : 0.002mg/l xiv) Molybdenum : 0.05mg/l xv) Mercury : 0.001mg/l xvi) Lead : 0.01mg/l
xvii) Total Chromium : 0.05mg/l xviii) Total Arsenic : 0.002mg/l xix) Zinc : 0.05mg/l xx) Nickel : 0.01mg/l
xxi) Phenolic Compounds : 0.001mg/l

Remarks on Chemical Test Report :

- i) The above mentioned sample of potable water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.
ii) Total Dissolved Solids, Alkalinity, Total Hardness & Chloride are beyond the acceptable limit but within the permissible limit.

Remarks on Test Report in respect of Microbiological & Chemical Test : The Water sample is fit for Human Consumption, in respect of the above Microbiological & Chemical Parameters

-: END OF TEST REPORT :-

Report Verified by
(J. DAS)

WCD

Dr. R. KARIM
Technical Manager
Authorized Signatory
For R.V.BRIGGS & CO. PRIVATE LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007



TC-7816

TEST REPORT

ULR NO. TC781523100003347F

No. W(D)/23-24/658

Date : June 01, 2023

Page 1 of 3

Issued to		: M/S, INDORAMA INDIA PRIVATE LIMITED Durgachak, Haldia, East Medinipore.			
Your Ref No.	: PO No.: 4700019593 letter dtd. 28.04.2023	Environmental conditions during sampling			
Sample Description	: Drinking Water	Temperature: 28°C.			
Collection Source	: Borewell Water Kumar Chak Deep Tubewell	Transport by : Through Ice Box			
Sample Drawn by us on	: 24.05.2023 at 14.00pm	Transport condition : Cold chain maintained			
Sample carried out by	: Mr. S. Mukherjee	Parameters Tested: Microbiological			
Sampling Plan :	: RVB/FM/44	1) Coliform Organism (2) E. Coli			
Method of Sampling	: IS : 15185				
Mode of Sampling	: Grab				
Analysis Completed on	: 26.05.2023				
Microbiological Test Findings :					
Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015
1	Coliform Organism	APHA 23rd Edn. 9222B	CFU/100ml	Absent	Absent
2	E. coli	APHA 23rd Edn. 9222H	CFU/100ml	Absent	Absent

Remarks on Test Report :

The above mentioned sample of drinking water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.

-: END OF TEST REPORT :-

Pijush Kanti Dutta
Sr. Microbiologist
Authorized Signatory

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TC-7815

TEST REPORT

ULR NO. TC781523100003347F

No. W(D)/23-24/658

Date : June 01, 2023

Page 2 of 3

Issued to	: M/S, INDORAMA INDIA PRIVATE LIMITED Durgachak, Haldia, East Medinipore.	
Your Ref No.	: PO No.: 4700019593 letter dtd. 28.04	Environmental conditions during sampling Temperature: 28°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Drinking Water	
Collection Source	: Borewell Water Kumar Chak Deep Tubewell	Parameters Tested: Physical & Chemical 1. Organoleptic and Physical - 6 Parameters 2. General Parameters - 23 Parameters 3. Toxic Substances - 8 Parameters
Sample Drawn by us on	: 24.05.2023 at 14.00pm	
Sample carried out by	: Mr. S.Mukherjee	
Sampling Plan :	: RVB/FM/44	
Method of Sampling	: IS : 3025 (Part - 1) 1987	
Mode of Sampling	: Grab	
Analysis Completed on	: 31.05.2023	

Physical & Chemical Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015	
					Acceptable Limit	Permissible Limit
A. Organoleptic and Physical Parameters						
1	Colour	IS: 3025-(part-4): 1983	Hazen	1	5 Max.	15 Max.
2	Odour	IS:3025(Part-5):1983	---	Agreeable	Agreeable	Agreeable
3	Taste	IS:3025(Part-8):1984	---	Agreeable	Agreeable	Agreeable
4	pH value	IS: 3025 (Part-11): 1983	---	7.4	6.5 - 8.5	No Relaxation
5	Turbidity	IS: 3025 (Part-10): 1984	NTU	2.6	1 Max.	5 Max.
6	Total Dissolved Solids	IS: 3025 (Part-16): 1984	mg/l	802	500 Max.	2000 Max.
B. General Parameters Concerning Substances Undesirable in Excessive Amounts						
1	Aluminium as Al	IS: 3025 (Part-55)	mg/l	<0.03	0.03 Max.	0.2 Max.
2	Ammonia (NH ₃ -N)	IS: 3025(Part-34)	mg/l	<0.2	0.5 Max.	No Relaxation
3	Anionic detergents(as MBAS)	Annex K of IS: 13428	mg/l	<0.05	0.2 Max.	1 Max.
4	Barium as Ba	APHA 23rd Edn. 3111D	mg/l	<0.5	0.7 Max.	No Relaxation
5	Boron as B	IS: 3025 (Part-57): 2005	mg/l	<0.2	0.5 Max.	2.4 Max.
6	Calcium as Ca	IS: 3025 (Part-40): 1991	mg/l	71	75 Max.	200 Max.
7	Chloride as Cl	IS: 3025 (Part-32): 1988	mg/l	245	250 Max.	1000 Max.
8	Copper as Cu	IS: 3025 (Part-42): 1992	mg/l	<0.05	0.05 Max.	1.5 Max.
9	Fluoride as F	IS: 3025 (Part-60): 2008	mg/l	0.50	1 Max.	1.5 Max.
10	Iron as Fe	IS: 3025 (Part-53): 2003	mg/l	0.86	1.0 Max.	No Relaxation
11	Magnesium as Mg	IS: 3025 (Part-46): 1994	mg/l	29	30 Max.	100 Max.
12	Manganese as Mn	IS: 3025 (Part-59): 2006	mg/l	0.087	0.1 Max.	0.3 Max.
13	Nitrate as NO ₃	IS: 3025 (Part-34): 1988	mg/l	30.5	45 Max.	No Relaxation
14	Phenolic Compounds as C ₆ H ₅ OH	IS: 3025 (Part-43): 1992	mg/l	<0.001	0.001 Max.	0.002 Max.
15	Selenium as Se	IS: 3025 (Part-56): 2003	mg/l	<0.01	0.01 Max.	No Relaxation
16	Silver as Ag	Annex J of IS: 13428	mg/l	<0.05	0.1 Max.	No Relaxation
17	Sulphate as SO ₄	IS: 3025 (Part-24): 1986	mg/l	19.5	200 Max.	400 Max.

Cont. page - 2

R. V. Briggs



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CIN : U51109WB1931PTC007007



TC-7B15

TEST REPORT

No. W(D)/23-24/658

Date : June 01, 2023

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Sl No.	Test parameters	Test Method	Unit	Result	Norms as per IS: 10500, 2012 (2nd Rev.)	
					Acceptable Limit	Permissible Limit
18	Sulphide as H ₂ S	IS: 3025 (Part-29): 1986	mg/l	<0.05	0.05 Max.	No Relaxation
19	Total Alkalinity as CaCO ₃	IS: 3025 (Part-23): 1986	mg/l	273	200 Max.	600 Max.
20	Total Hardness as CaCO ₃	IS: 3025 (Part-21) - 2009	mg/l	297	200 Max.	600 Max.
21	Zinc as Zn	IS: 3025 (Part-49): 1994	mg/l	0.244	5 Max.	15 Max.
C. Parameters Concerning Toxic Substances						
1	Cadmium as Cd.	IS: 3025 (Part-41): 1992	mg/l	< 0.002	0.003 Max.	No Relaxation
2	Cyanide as CN	IS: 3025 (Part-27): 1986	mg/l	< 0.02	0.05 Max.	No Relaxation
3	Lead as Pb	IS: 3025 (Part-47): 1994	mg/l	< 0.01	0.01 Max.	No Relaxation
4	Mercury as Hg	IS: 3025 (Part-48): 1994	mg/l	< 0.001	0.001 Max.	No Relaxation
5	Molybdenum as Mo	IS: 3025 (Part-2): 2004	mg/l	< 0.05	0.07 Max.	No Relaxation
6	Nickel as Ni	IS: 3025 (Part - 54): 2003	mg/l	< 0.01	0.02 Max.	No Relaxation
7	Total Arsenic as As	IS: 3025 (Part-37): 1988	mg/l	< 0.002	0.01 Max.	No Relaxation
8	Total Chromium as Cr	IS: 3025 (Part-52): 2003	mg/l	< 0.05	0.05 Max.	No Relaxation

Minimum detection limit:

i) Turbidity : 1.0NTU	ii) Aluminium : 0.03mg/l	iii) Ammonia : 0.2mg/l	iv) Barium : 0.5mg/l
v) Anionic Detergents : 0.01mg/l	vi) Copper : 0.05mg/l	vii) Silver : 0.05mg/l	viii) Boron : 0.2mg/l
ix) Sulphide : 0.05mg/l	x) Selenium : 0.01mg/l	xi) Cyanide : 0.02mg/l	xii) Iron : 0.1mg/l
xiii) Cadmium : 0.002mg/l	xiv) Molybdenum : 0.05mg/l	xv) Mercury : 0.001mg/l	xvi) Lead : 0.01mg/l
xvii) Total Chromium : 0.05mg/l	xviii) Total Arsenic : 0.002mg/l	xix) Zinc : 0.05mg/l	xx) Nickel : 0.01mg/l
xxi) Phenolic Compounds : 0.001mg/l			

Remarks on Chemical Test Report :

- The above mentioned sample of potable water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.
- Total Dissolved Solids, Alkalinity, Total Hardness & Turbidity are beyond the acceptable limit but within the permissible limit.

Remarks on Test Report in respect of Microbiological & Chemical Test : The Water sample is fit for Human Consumption, in respect of the above Microbiological & Chemical Parameters

-: END OF TEST REPORT :-:


Report Verified by
(J. DAS)


Dr. R. KARIM
Technical Manager
Authorized Signatory
For R.V.BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

ULR NO. TC781523100004828F

No. W(D)/23-24/1452

Date : August 11, 2023

Page 1 of 3

Issued to

: M/S, INDORAMA INDIA PRIVATE LIMITED

Durgachak, Haldia, East Medinipore.

Your Ref No.	: PO No.: 4700019593 letter dtd. 28.04.2023	Environmental conditions during sampling Temperature: 29°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Ground Water	
Collection Source	: Borewell No. 1	Parameters Tested: Microbiological 1) Coliform Organism (2) E.Coli
Sample Drawn by us on	: 28.07.2023 at 11.30am	
Sample carried out by	: Mr. S.Mukherjee	
Sampling Plan :	: RVB/FM/46	
Method of Sampling	: ISO 19458:2006 (E)	
Mode of Sampling	: Grab	
Analysis Completed on	: 31.07.2023	

Microbiological Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015
1	Coliform Organism	APHA 23rd Edn. 9222B	CFU/100ml	Absent	Absent
2	E. coli	APHA 23rd Edn. 9222H	CFU/100ml	Absent	Absent

Remarks on Test Report :

The above mentioned sample of water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.

-: END OF TEST REPORT :-

Verified by

Pijush Kanti Dutta
Sr. Microbiologist
Authorized Signatory



R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007



TEST REPORT

ULR NO. TC781523100004828F

No. W(D)/23-24/1452

Date : August 11, 2023

Page 2 of 3

Issued to

M/S, INDORAMA INDIA PRIVATE LIMITED
Durgachak, Haldia, East Medinipur.

Your Ref No.	: PO No. : 4700019593 letter dtd. 28.04.2023	Environmental conditions during sampling Temperature: 29°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Ground Water	
Collection Source	: Borewell No. 1	Parameters Tested: Physical & Chemical 1. Organoleptic and Physical - 6 Parameters 2. General Parameters - 23 Parameters 3. Toxic Substances - 8 Parameters
Sample Drawn by us on	: 28.07.2023 at 11.30am	
Sample carried out by	: Mr. S.Mukherjee	
Sampling Plan :	: RVB/FM/46	
Method of Sampling	: IS : 17614 (Part - 1) : 2021	
Mode of Sampling	: Grab	
Analysis Completed on	: 08.08.2023	

Physical & Chemical Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015	
					Acceptable Limit	Permissible Limit
A. Organoleptic and Physical Parameters						
1	Colour	IS: 3025-(part-4): 1983	Hazen	1	5 Max.	15 Max.
2	Odour	IS:3025(Part-5):1983	---	Agreeable	Agreeable	Agreeable
3	Taste	IS:3025(Part-8):1984	---	Agreeable	Agreeable	Agreeable
4	pH value	IS: 3025 (Part-11): 1983	---	7.4	6.5 - 8.5	No Relaxation
5	Turbidity	IS: 3025 (Part-10): 1984	NTU	2.1	1 Max.	5 Max.
6	Total Dissolved Solids	IS: 3025 (Part-16): 1984	mg/l	526	500 Max.	2000 Max.
B. General Parameters Concerning Substances Undesirable in Excessive Amounts						
1	Aluminium as Al	IS: 3025 (Part-55)	mg/l	<0.03	0.03 Max.	0.2 Max.
2	Ammonia (NH ₃ -N)	IS: 3025(Part-34)	mg/l	<0.2	0.5 Max.	No Relaxation
3	Anionic detergents(as MBAS)	Annex K of IS: 13428	mg/l	<0.05	0.2 Max.	1 Max.
4	Barium as Ba	APHA 23rd Edn. 3111D	mg/l	<0.5	0.7 Max.	No Relaxation
5	Boron as B	IS: 3025 (Part-57): 2005	mg/l	<0.2	0.5 Max.	2.4 Max.
6	Calcium as Ca	IS: 3025 (Part-40): 1991	mg/l	58	75 Max.	200 Max.
7	Chloride as Cl	IS: 3025 (Part-32): 1988	mg/l	257	250 Max.	1000 Max.
8	Copper as Cu	IS: 3025 (Part-42): 1992	mg/l	<0.05	0.05 Max.	1.5 Max.
9	Fluoride as F	IS: 3025 (Part-60): 2008	mg/l	0.98	1 Max.	1.5 Max.
10	Iron as Fe	IS: 3025 (Part-53): 2003	mg/l	0.48	1.0 Max.	No Relaxation
11	Magnesium as Mg	IS: 3025 (Part-46): 1994	mg/l	22.6	30 Max.	100 Max.
12	Manganese as Mn	IS: 3025 (Part-59): 2006	mg/l	0.11	0.1 Max.	0.3 Max.
13	Nitrate as NO ₃	IS: 3025 (Part-34): 1988	mg/l	5.9	45 Max.	No Relaxation
14	Phenolic Compounds as C ₆ H ₅ OH	IS: 3025 (Part-43): 1992	mg/l	<0.001	0.001 Max.	0.002 Max.
15	Selenium as Se	IS: 3025 (Part-56): 2003	mg/l	<0.01	0.01 Max.	No Relaxation
16	Silver as Ag	Annex J of IS: 13428	mg/l	<0.05	0.1 Max.	No Relaxation
17	Sulphate as SO ₄	IS: 3025 (Part-24): 1986	mg/l	1.1	200 Max.	400 Max.

Cont. page - 2

Signature

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CIN : U51109WB1931PTC007007



TEST REPORT

No. W(D)/23-24/1452

Date : August 11, 2023

Page 3 of 3

Sl No.	Test parameters	Test Method	Unit	Result	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015	
					Acceptable Limit	Permissible Limit
18	Sulphide as H ₂ S	IS: 3025 (Part-29): 1986	mg/l	<0.05	0.05 Max.	No Relaxation
19	Total Alkalinity as CaCO ₃	IS: 3025 (Part-23): 1986	mg/l	302	200 Max.	600 Max.
20	Total Hardness as CaCO ₃	IS: 3025 (Part-21) - 2009	mg/l	238	200 Max.	600 Max.
21	Zinc as Zn	IS: 3025 (Part-49): 1994	mg/l	<0.05	5 Max.	15 Max.
22	Sodium as Na	IS: 3025 (Part-45): 1993	mg/l	174.3	---	---
23	Potassium as K	IS: 3025 (Part-45): 1993	mg/l	3.53	---	---
C. Parameters Concerning Toxic Substances						
1	Cadmium as Cd.	IS: 3025 (Part-41): 1992	mg/l	< 0.002	0.003 Max.	No Relaxation
2	Cyanide as CN	IS: 3025 (Part-27): 1986	mg/l	< 0.05	0.05 Max.	No Relaxation
3	Lead as Pb	IS: 3025 (Part-47): 1994	mg/l	< 0.01	0.01 Max.	No Relaxation
4	Mercury as Hg	IS: 3025 (Part-48): 1994	mg/l	< 0.001	0.001 Max.	No Relaxation
5	Molybdenum as Mo	IS: 3025 (Part-2): 2004	mg/l	< 0.05	0.07 Max.	No Relaxation
6	Nickel as Ni	IS: 3025 (Part - 54) 2003	mg/l	< 0.01	0.02 Max.	No Relaxation
7	Total Arsenic as As	IS: 3025 (Part-37): 1988	mg/l	< 0.002	0.01 Max.	No Relaxation
8	Total Chromium as Cr	IS: 3025 (Part-52): 2003	mg/l	< 0.05	0.05 Max.	No Relaxation

Minimum detection limit:

i) Anionic Detergents : 0.05mg/l	ii) Aluminium : 0.03mg/l	iii) Ammonia : 0.2mg/l	iv) Barium : 0.5mg/l
v) Sulphide : 0.05mg/l	vi) Copper : 0.05mg/l	vii) Silver : 0.05mg/l	viii) Boron : 0.2mg/l
ix) Cadmium : 0.002mg/l	x) Selenium : 0.01mg/l	xi) Cyanide : 0.05mg/l	xii) Nickel : 0.01mg/l
xiii) Total Chromium : 0.05mg/l	xiv) Molybdenum : 0.05mg/l	xv) Mercury : 0.001mg/l	xvi) Lead : 0.01mg/l
xvii) Zinc : 0.05mg/l	xviii) Total Arsenic : 0.002mg/l	xix) Phenolic Compounds : 0.001mg/l	

Remarks on Chemical Test Report :

- The above mentioned sample of water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.
- Turbidity, Total Dissolved Solids, Chloride, Manganese, Total Alkalinity & Total Hardness are beyond the acceptable limit but within the permissible limit.

Remarks on Test Report in respect of Microbiological & Chemical Test : The Water sample is fit for Human Consumption, in respect of the above Microbiological & Chemical Parameters

-: END OF TEST REPORT :-


Report Verified by
(J. DAS)


(Dr. R. KARIM)
Technical Manager
Authorized Signatory
For R.V.BRIGGS & CO. PRIVATE LTD.



R. V. BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. W(D)/23-24/1452 Date : August 11, 2023 Page 4 of 5

Issued to : M/S, INDORAMA INDIA PRIVATE LIMITED
Durgachak, Haldia, East Medinipore.

Your Ref No.	: PO No.: 4700019593 letter dtd. 28.04.2023	Environmental conditions during sampling Temperature: 29 ^o C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Ground Water	
Collection Source	: Borewell No. 1	Parameters Tested: Chemical biCarbonate
Sample Drawn by us on	: 28.07.2023 at 11.30am	
Sample carried out by	: Mr. S.Mukherjee	
Sampling Plan :	: RVB/FM/46	
Method of Sampling	: IS : 17614 (Part - 1) : 2021	
Mode of Sampling	: Grab	
Analysis Completed on	: 08.08.2023	

Physical & Chemical Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results
1	biCarbonate	IS: 3025 -(part-23) - 1986	mg/l	301.6

-: END OF TEST REPORT :-


Report Verified by
(J. Das)


(Dr. R. KARIM)
Technical Manager
Authorised Signatory

NCB

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CIN : U51109WB1931PTC007007

TEST REPORT

No. W(D)/23-24/1452 Date : August 11, 2023 Page 5 of 5

Issued to : M/S, INDORAMA INDIA PRIVATE LIMITED
Durgachak, Haldia, East Medinipore.

Your Ref No.	: PO No. : 4700019593 letter dtd. 28.04.2023	Environmental conditions during sampling Temperature: 29°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Ground Water	
Collection Source	: Borewell No. 1	Parameters Tested: Chemical Atrazine & Gamma HCH (Lindane)
Sample Drawn by us on	: 28.07.2023 at 11.30am	
Sample carried out by	: Mr. S Mukherjee	
Sampling Plan :	: RVB/FM/46	
Method of Sampling	: IS : 17614 (Part - 1) : 2021	
Mode of Sampling	: Grab	
Analysis Completed on	: 08.08.2023	

Physical & Chemical Test Findings :

Sl. No.	Test Parameters	Test Method	Unit	Result	Norms as per IS : 10500, 2012 (2nd Rev.) Requirement/Limit
1	Atrazine	APHA 23rd Edn. 6630B	µg/l	< 0.10	2 µg/l
2	Gamma HCH (Lindane)	APHA 23rd Edn. 6630B	µg/l	< 0.01	2 µg/l

-: END OF TEST REPORT :-


Report Verified by
(J. Das)


(Dr. R. KARIM)
Technical Manager
Authorised Signatory



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TC-7815

TEST REPORT

ULR NO. TC781523100004829F

No. W(D)/23-24/1453

Date : August 11, 2023

Page 1 of 3

Issued to

M/S, INDORAMA INDIA PRIVATE LIMITED

Durgachak, Haldia, East Medinipore.

Your Ref No.	: PO No.: 4700019593 letter dtd. 28.04.2023	Environmental conditions during sampling Temperature: 29°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Ground Water	
Collection Source	: Borewell No. 2	Parameters Tested: Microbiological 1) Coliform Organism (2) E.Coli
Sample Drawn by us on	: 28.07.2023 at 12.00pm	
Sample carried out by	: Mr. S.Mukherjee	
Sampling Plan :	: RVB/FM/46	
Method of Sampling	: ISO 19458:2006 (E)	
Mode of Sampling	: Grab	
Analysis Completed on	: 31.07.2023	

Microbiological Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015
1	Coliform Organism	APHA 23rd Edn. 9222B	CFU/100ml	Absent	Absent
2	E. coli	APHA 23rd Edn. 9222H	CFU/100ml	Absent	Absent

Remarks on Test Report :

The above mentioned sample of water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.

∴ END OF TEST REPORT ∴

Verified by

Pijush Kanti Dutta
Sr. Microbiologist
Authorized Signatory



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TC-7815

TEST REPORT

ULR NO. TC781523100004829F

No. W(D)/23-24/1453

Date : August 11, 2023

Page 2 of 3

Issued to : M/S, INDORAMA INDIA PRIVATE LIMITED
Durgachak, Haldia, East Medinipore.

Your Ref No.	: PO No.: 4700019593 letter dtd. 28.04.2023	Environmental conditions during sampling Temperature: 29°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Ground Water	
Collection Source	: Borewell No. 2	Parameters Tested: Physical & Chemical 1. Organoleptic and Physical - 6 Parameters 2. General Parameters - 23 Parameters 3. Toxic Substances - 8 Parameters
Sample Drawn by us on	: 28.07.2023 at 12.00pm	
Sample carried out by	: Mr. S.Mukherjee	
Sampling Plan :	: RVB/FM/46	
Method of Sampling	: IS : 17614 (Part - 1) : 2021	
Mode of Sampling	: Grab	
Analysis Completed on	: 08.08.2023	

Physical & Chemical Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015	
					Acceptable Limit	Permissible Limit
A. Organoleptic and Physical Parameters						
1	Colour	IS: 3025-(part-4): 1983	Hazen	1	5 Max.	15 Max.
2	Odour	IS:3025(Part-5):1983	Agreeable	Agreeable	Agreeable
3	Taste	IS:3025(Part-8):1984	--	Agreeable	Agreeable	Agreeable
4	pH value	IS: 3025 (Part-11): 1983	7.3	6.5 - 8.5	No Relaxation
5	Turbidity	IS: 3025 (Part-10): 1984	NTU	< 1	1 Max.	5 Max.
6	Total Dissolved Solids	IS: 3025 (Part-16): 1984	mg/l	1226	500 Max.	2000 Max.
B. General Parameters Concerning Substances Undesirable in Excessive Amounts						
1	Aluminium as Al	IS: 3025 (Part-55)	mg/l	<0.03	0.03 Max.	0.2 Max.
2	Ammonia (NH ₃ -N)	IS: 3025(Part-34)	mg/l	<0.2	0.5 Max.	No Relaxation
3	Anionic detergent(as MBAS)	Annex K of IS: 13428	mg/l	<0.05	0.2 Max.	1 Max
4	Barium as Ba	APHA 23rd Edn. 3111D	mg/l	<0.5	0.7 Max.	No Relaxation
5	Boron as B	IS: 3025 (Part-57): 2005	mg/l	<0.2	0.5 Max.	2.4 Max.
6	Calcium as Ca	IS: 3025 (Part-40): 1991	mg/l	93	75 Max.	200 Max.
7	Chloride as Cl	IS: 3025 (Part-32): 1988	mg/l	411	250 Max.	1000 Max.
8	Copper as Cu	IS: 3025 (Part-42): 1992	mg/l	<0.05	0.05 Max.	1.5 Max.
9	Fluoride as F	IS: 3025 (Part-60): 2008	mg/l	0.67	1 Max.	1.5 Max.
10	Iron as Fe	IS: 3025 (Part-53): 2003	mg/l	< 0.1	1.0 Max.	No Relaxation
11	Magnesium as Mg	IS: 3025 (Part-46): 1994	mg/l	31.9	30 Max.	100 Max.
12	Manganese as Mn	IS: 3025 (Part-59): 2006	mg/l	0.12	0.1 Max.	0.3 Max.
13	Nitrate as NO ₃	IS: 3025 (Part-34): 1988	mg/l	8.9	45 Max.	No Relaxation
14	Phenolic Compounds as C ₆ H ₅ OH	IS: 3025 (Part-43): 1992	mg/l	<0.001	0.001 Max.	0.002 Max.
15	Selenium as Se	IS: 3025 (Part-56): 2003	mg/l	<0.01	0.01 Max.	No Relaxation
16	Silver as Ag	Annex J of IS: 13428	mg/l	<0.05	0.1 Max.	No Relaxation
17	Sulphate as SO ₄	IS: 3025 (Part-24): 1986	mg/l	< 1	200 Max.	400 Max.

Cont. page - 2

R. V. Briggs



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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. W(D)/23-24/1453

Date : August 11, 2023

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Sl No.	Test parameters	Test Method	Unit	Result	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015	
					Acceptable Limit	Permissible Limit
18	Sulphide as H ₂ S	IS: 3025 (Part-29): 1986	mg/l	<0.05	0.05 Max.	No Relaxation
19	Total Alkalinity as CaCO ₃	IS: 3025 (Part-23): 1986	mg/l	302	200 Max.	600 Max.
20	Total Hardness as CaCO ₃	IS: 3025 (Part-21) - 2009	mg/l	364	200 Max.	600 Max.
21	Zinc as Zn	IS: 3025 (Part-49): 1994	mg/l	<0.05	5 Max.	15 Max.
22	Sodium as Na	IS: 3025 (Part-45): 1993	mg/l	254.2	---	---
23	Potassium as K	IS: 3025 (Part-45): 1993	mg/l	4.51	---	---

C. Parameters Concerning Toxic Substances

1	Cadmium as Cd.	IS: 3025 (Part-41): 1992	mg/l	< 0.002	0.003 Max.	No Relaxation
2	Cyanide as CN	IS: 3025 (Part-27): 1986	mg/l	< 0.05	0.05 Max.	No Relaxation
3	Lead as Pb	IS: 3025 (Part-47): 1994	mg/l	< 0.01	0.01 Max.	No Relaxation
4	Mercury as Hg	IS: 3025 (Part-48): 1994	mg/l	< 0.001	0.001 Max.	No Relaxation
5	Molybdenum as Mo	IS: 3025 (Part-2): 2004	mg/l	< 0.05	0.07 Max.	No Relaxation
6	Nickel as Ni	IS: 3025 (Part - 54) 2003	mg/l	< 0.01	0.02 Max.	No Relaxation
7	Total Arsenic as As	IS: 3025 (Part-37): 1988	mg/l	< 0.002	0.01 Max.	No Relaxation
8	Total Chromium as Cr	IS: 3025 (Part-52): 2003	mg/l	< 0.05	0.05 Max.	No Relaxation

Minimum detection limit:

i) Anionic Detergents : 0.05mg/l	ii) Aluminium : 0.03mg/l	iii) Ammonia : 0.2mg/l	iv) Barium : 0.5mg/l
v) Sulphide : 0.05mg/l	vi) Copper : 0.05mg/l	vii) Silver : 0.05mg/l	viii) Boron : 0.2mg/l
ix) Cadmium : 0.002mg/l	x) Selenium : 0.01mg/l	xi) Cyanide : 0.05mg/l	xii) Iron : 0.1mg/l
xiii) Total Chromium : 0.05mg/l	xiv) Molybdenum : 0.05mg/l	xv) Mercury : 0.001mg/l	xvi) Lead : 0.01mg/l
xvii) Turbidity : 1.0NTU	xviii) Total Arsenic : 0.002mg/l	xix) Zinc : 0.05mg/l	xx) Nickel : 0.01mg/l
xxi) Sulphate : 1.0mg/l	xxii) Phenolic Compounds : 0.001mg/l		

Remarks on Chemical Test Report :

- The above mentioned sample of water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.
- Total Dissolved Solids, Calcium, Chloride, Magnesium, Manganese, Total Alkalinity & Total Hardness are beyond the acceptable limit but within the permissible limit.

Remarks on Test Report in respect of Microbiological & Chemical Test : The Water sample is fit for Human Consumption, in respect of the above Microbiological & Chemical Parameters.

-: END OF TEST REPORT :-

Report Verified by
(J. DAS)

(Dr. R. KARIM)
Technical Manager
Authorized Signatory
For R.V.BRIGGS & CO. PRIVATE LTD.

ACB

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- ★ Results relate only to the parameters tested.



R. V. BRIGGS & CO. PRIVATE LTD.

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E-mail : rvbriggs.kolkata@gmail.com, Website : www.rvbriggs.com

CIN : U51109WB1931PTC007007

TEST REPORT

No. W(D)/23-24/1453

Date : August 11, 2023

Page 4 of 4

Issued to

: M/S, INDORAMA INDIA PRIVATE LIMITED

Durgachak, Haldia, East Medinipore.

Your Ref No.

: PO No.: 4700019593 letter dtd. 28.04.2023

Sample Description

: Ground Water

Environmental conditions during sampling

Collection Source

: Borewell No. 2

Temperature: 29°C,

Sample Drawn by us on

: 28.07.2023 at 12.00pm

Transport by : Through Ice Box

Sample carried out by

: Mr. S.Mukherjee

Transport condition : Cold chain maintained

Sampling Plan :

: RVB/FM/46

Parameters Tested: Chemical

Method of Sampling

: IS : 17614 (Part - 1) : 2021

biCarbonate

Mode of Sampling

: Grab

Analysis Completed on

: 08.08.2023

Physical & Chemical Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results
1	biCarbonate	IS: 3025 -(part-23) - 1986	mg/l	301.6

-: END OF TEST REPORT :-


Report Verified by
(J. Das)


(Dr. R. KARIM)
Technical Manager
Authorised Signatory



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TEST REPORT

No. W(D)/23-24/1453

Date : August 11, 2023

Page 5 of 5

Issued to : M/S, INDORAMA INDIA PRIVATE LIMITED
Durgachak, Haldia, East Medinipore.

Your Ref No.	: PO No.: 4700019593 letter dtd. 28.04.2023	Environmental conditions during sampling Temperature: 29°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Ground Water	
Collection Source	: Borewell No. 2	Parameters Tested: Chemical Atrazine & Gamma HCH (Lindane)
Sample Drawn by us on	: 28.07.2023 at 12.00pm	
Sample carried out by	: Mr. S.Mukherjee	
Sampling Plan :	: RVB/FM/46	
Method of Sampling	: IS : 17614 (Part - 1) : 2021	
Mode of Sampling	: Grab	
Analysis Completed on	: 08.08.2023	

Physical & Chemical Test Findings :

Sl. No.	Test Parameters	Test Method	Unit	Result	Norms as per IS :10500, 2012 (2nd Rev.) Requirement/Limit
1	Atrazine	APHA 23rd Edn. 6630B	µg/l	< 0.10	2 µg/l
2	Gamma HCH (Lindane)	APHA 23rd Edn. 6630B	µg/l	< 0.01	2 µg/l

-: END OF TEST REPORT :-


Report Verified by
(J. Das)


(Dr. R. KARIM)
Technical Manager
Authorised Signatory



R. V. BRIGGS & CO. PRIVATE LTD.

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TEST REPORT

ULR NO. TC781523100004981F

Page 1 of 3

No. W(D)/23-24/1497 Date : August 22, 2023
Issued to : M/S, INDORAMA INDIA PRIVATE LIMITED
Durgachak, Haldia, East Medinipore.

Your Ref No. : PO No.: 4700019593 letter dtd. 28.04.2023
Sample Description : Ground Water
Collection Source : Dock side Borewell
Sample Drawn by us on : 08.08.2023 at 03.50pm
Sample carried out by : Mr. S.Mukherjee
Sampling Plan : RVB/FM/46
Method of Sampling : ISO 19458:2006 (E)
Mode of Sampling : Grab
Analysis Completed on : 11.08.2023

Environmental conditions during sampling
Temperature: 31°C,
Transport by : Through Ice Box
Transport condition : Cold chain maintained

Parameters Tested: Microbiological
1) Coliform Organism (2) E.Coli

Microbiological Test Findings :

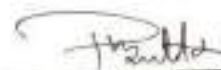
Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015
1	Coliform Organism	APHA 23rd Edn. 9222B	CFU/100ml	Absent	Absent
2	E. coli	APHA 23rd Edn. 9222H	CFU/100ml	Absent	Absent

Remarks on Test Report :
The above mentioned sample of water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.

-: END OF TEST REPORT :-



Verified by



Pijush Kanti Dutta
Sr. Microbiologist
Authorized Signatory



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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

ULR NO. TC781523100004981F

No. W(D)/23-24/1497

Date : August 22, 2023

Page 2 of 3

Issued to

: M/S, INDORAMA INDIA PRIVATE LIMITED
Durgachak, Haldia, East Medinipore.

Your Ref No. : PO No.: 4700019593 letter dtd. 28.04.2023
Sample Description : Ground Water
Collection Source : Dock side Borewell
Sample Drawn by us on : 08.08.2023 at 03.50pm
Sample carried out by : Mr. S.Mukherjee
Sampling Plan : RVB/FM/46
Method of Sampling : IS : 17614 (Part - 1) : 2021
Mode of Sampling : Grab
Analysis Completed on : 17.08.2023

Environmental conditions during sampling

Temperature: 31°C,

Transport by : Through Ice Box

Transport condition : Cold chain maintained

Parameters Tested: Physical & Chemical

1. Organoleptic and Physical - 6 Parameters

2. General Parameters - 23 Parameters

3. Toxic Substances - 8 Parameters

Physical & Chemical Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015	
					Acceptable Limit	Permissible Limit
A. Organoleptic and Physical Parameters						
1	Colour	IS: 3025-(part-4): 1983	Hazen	1	5 Max.	15 Max.
2	Odour	IS:3025(Part-5):1983	---	Agreeable	Agreeable	Agreeable
3	Taste	IS:3025(Part-8):1984	---	Agreeable	Agreeable	Agreeable
4	pH value	IS: 3025 (Part-11): 1983	---	7.2	6.5 - 8.5	No Relaxation
5	Turbidity	IS: 3025 (Part-10): 1984	NTU	1.6	1 Max.	5 Max.
6	Total Dissolved Solids	IS: 3025 (Part-16): 1984	mg/l	690	500 Max.	2000 Max.
B. General Parameters Concerning Substances Undesirable in Excessive Amounts						
1	Aluminium as Al	IS: 3025 (Part-55)	mg/l	<0.03	0.03 Max.	0.2 Max.
2	Ammonia (NH ₃ -N)	IS: 3025(Part-34)	mg/l	<0.2	0.5 Max.	No Relaxation
3	Anionic detergents(as MBAS)	Annex K of IS: 13428	mg/l	<0.05	0.2 Max.	1 Max.
4	Barium as Ba	APHA 23rd Edn. 3111D	mg/l	<0.5	0.7 Max.	No Relaxation
5	Boron as B	IS: 3025 (Part-57): 2005	mg/l	<0.2	0.5 Max.	2.4 Max.
6	Calcium as Ca	IS: 3025 (Part-40): 1991	mg/l	77.6	75 Max.	200 Max.
7	Chloride as Cl	IS: 3025 (Part-32): 1988	mg/l	242	250 Max.	1000 Max.
8	Copper as Cu	IS: 3025 (Part-42): 1992	mg/l	<0.05	0.05 Max.	1.5 Max.
9	Fluoride as F	IS: 3025 (Part-60): 2008	mg/l	0.20	1 Max.	1.5 Max.
10	Iron as Fe	IS: 3025 (Part-53): 2003	mg/l	0.12	1.0 Max.	No Relaxation
11	Magnesium as Mg	IS: 3025 (Part-46): 1994	mg/l	31.4	30 Max.	100 Max.
12	Manganese as Mn	IS: 3025 (Part-59): 2006	mg/l	< 0.05	0.1 Max.	0.3 Max.
13	Nitrate as NO ₃	IS: 3025 (Part-34): 1988	mg/l	27.2	45 Max.	No Relaxation
14	Phenolic Compounds as C ₆ H ₅ OH	IS: 3025 (Part-43): 1992	mg/l	<0.001	0.001 Max.	0.002 Max.
15	Selenium as Se	IS: 3025 (Part-56): 2003	mg/l	<0.01	0.01 Max.	No Relaxation
16	Silver as Ag	Annex J of IS: 13428	mg/l	<0.05	0.1 Max.	No Relaxation
17	Sulphate as SO ₄	IS: 3025 (Part-24): 1986	mg/l	97.2	200 Max.	400 Max.

Cont page - 2

(Signature)

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. W(D)/23-24/1497

Date : August 22, 2023

Page 3 of 3

Sl No.	Test parameters	Test Method	Unit	Result	Norms as per IS : 10500, 2012 (2nd Rev.), Amend., June 2015	
					Acceptable Limit	Permissible Limit
18	Sulphide as H ₂ S	IS: 3025 (Part-29): 1986	mg/l	<0.05	0.05 Max.	No Relaxation
19	Total Alkalinity as CaCO ₃	IS: 3025 (Part-23): 1986	mg/l	181	200 Max.	600 Max.
20	Total Hardness as CaCO ₃	IS: 3025 (Part-21) - 2009	mg/l	323	200 Max.	600 Max.
21	Zinc as Zn	IS: 3025 (Part-49): 1994	mg/l	<0.05	5 Max.	15 Max.
22	Sodium as Na	IS: 3025 (Part-45): 1993	mg/l	168.1	---	---
23	Potassium as K	IS: 3025 (Part-45): 1993	mg/l	5.13	---	---
C. Parameters Concerning Toxic Substances						
1	Cadmium as Cd.	IS: 3025 (Part-41): 1992	mg/l	< 0.002	0.003 Max.	No Relaxation
2	Cyanide as CN	IS: 3025 (Part-27): 1986	mg/l	< 0.05	0.05 Max.	No Relaxation
3	Lead as Pb	IS: 3025 (Part-47): 1994	mg/l	< 0.01	0.01 Max.	No Relaxation
4	Mercury as Hg	IS: 3025 (Part-48): 1994	mg/l	< 0.001	0.001 Max.	No Relaxation
5	Molybdenum as Mo	IS: 3025 (Part-2): 2004	mg/l	< 0.05	0.07 Max.	No Relaxation
6	Nickel as Ni	IS: 3025 (Part - 54) 2003	mg/l	< 0.01	0.02 Max.	No Relaxation
7	Total Arsenic as As	IS: 3025 (Part-37): 1988	mg/l	< 0.002	0.01 Max.	No Relaxation
8	Total Chromium as Cr	IS: 3025 (Part-52): 2003	mg/l	< 0.05	0.05 Max.	No Relaxation

Minimum detection limit:

- | | | | |
|------------------------------------|----------------------------------|-------------------------|------------------------|
| i) Anionic Detergents : 0.05mg/l | ii) Aluminium : 0.03mg/l | iii) Ammonia : 0.2mg/l | iv) Barium : 0.5mg/l |
| v) Sulphide : 0.05mg/l | vi) Copper : 0.05mg/l | vii) Silver : 0.05mg/l | viii) Boron : 0.2mg/l |
| ix) Cadmium : 0.002mg/l | x) Selenium : 0.01mg/l | xi) Cyanide : 0.05mg/l | xii) Nickel : 0.01mg/l |
| xiii) Total Chromium : 0.05mg/l | xiv) Molybdenum : 0.05mg/l | xv) Mercury : 0.001mg/l | xvi) Lead : 0.01mg/l |
| xvii) Manganese : 0.05mg/l | xviii) Total Arsenic : 0.002mg/l | xix) Zinc : 0.05mg/l | |
| xx) Phenolic Compounds : 0.001mg/l | | | |

Remarks on Chemical Test Report :

- The above mentioned sample of water complies with IS: 10500, 2012 (2nd Rev.) & Satisfactory for drinking purpose, in respect of the above mentioned parameters.
- Turbidity, Total Dissolved Solids, Calcium, Magnesium & Total Hardness are beyond the acceptable limit but within the permissible limit.

Remarks on Test Report in respect of Microbiological & Chemical Test : The Water sample is fit for Human Consumption, in respect of the above Microbiological & Chemical Parameters

-: END OF TEST REPORT :-


Report Verified by
(J. DAS)


(Dr. R. KARIM)
Technical Manager
Authorized Signatory
For R.V.BRIGGS & CO. PRIVATE LTD.

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CIN : U51109WB1931PTC007007

TEST REPORT

No. W(D)/23-24/1497

Date : August 22, 2023

Page 4 of 4

Issued to

: M/S, INDORAMA INDIA PRIVATE LIMITED
Durgachak, Haldia, East Medinipore.

Your Ref No.	: PO No.: 4700019593 letter dtd. 28.04.2023	Environmental conditions during sampling Temperature: 31°C, Transport by : Through Ice Box Transport condition : Cold chain maintained
Sample Description	: Ground Water	
Collection Source	: Dock side Borewell	Parameters Tested: Chemical biCarbonate
Sample Drawn by us on	: 08.08.2023 at 03.50pm	
Sample carried out by	: Mr. S.Mukherjee	
Sampling Plan :	: RVB/FM/46	
Method of Sampling	: IS : 17614 (Part - 1) : 2021	
Mode of Sampling	: Grab	
Analysis Completed on	: 17.08.2023	

Physical & Chemical Test Findings :

Sl No.	Test parameters	Test Method	Unit	Results
1	biCarbonate	IS: 3025 -(part-23)- 1986	mg/l	181

-: END OF TEST REPORT :-

Report Verified by
(J. Das)

(Dr. R. KARIM)
Technical Manager
Authorised Signatory

NCR

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TEST REPORT

No. W(D)/23-24/1497

Date : August 11, 2023

Page 5 of 5

Issued to

: M/S, INDORAMA INDIA PRIVATE LIMITED

Durgachak, Haldia, East Medinipore.

Your Ref No. : PO No.: 4700019593 letter dtd. 28.04.2023

Sample Description : Ground Water

Collection Source : Dock side Borewell

Sample Drawn by us on : 08.08.2023 at 03.50pm

Sample carried out by : Mr. S.Mukherjee

Sampling Plan : RVB/FM/46

Method of Sampling : IS : 17614 (Part - 1) : 2021

Mode of Sampling : Grab

Analysis Completed on : 08.08.2023

Environmental conditions during sampling

Temperature: 29°C,

Transport by : Through Ice Box

Transport condition : Cold chain maintained

Parameters Tested: Chemical

Atrazine & Gamma HCH (Lindane)

Physical & Chemical Test Findings :

Sl. No.	Test Parameters	Test Method	Unit	Result	Norms as per IS :10500, 2012 (2nd Rev.) Requirement/Limit
1	Atrazine	APHA 23rd Edn. 6630B	µg/l	< 0.10	2 µg/l
2	Gamma HCH (Lindane)	APHA 23rd Edn. 6630B	µg/l	< 0.01	2 µg/l

-: END OF TEST REPORT :-


Report Verified by
(J. Das)


(Dr. R. KARIM)
Technical Manager
Authorised Signatory