

IIPL/HAL/ENV/23-24/MOEF- ERO -02
Date: 08.05.2023

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 Oct 22- March 22.

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 gassifier 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
(Formerly IRC Agrochemicals 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- October 2022 – March 2023



Indorama India Pvt Ltd
PO:-Durgachak, Haldia,
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Name of the Project:- Replacement of Furnace oil based Hot air generator(HAG) by fluidized Bed Biomass Gassifier 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 October 2022 to 31st March 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), Diammonium phosphate plant (DAP1 & DAP2) , Single superphosphate plant (SSP) are within the permissible limit as per Consent to Operate.</p> <p>Continuous online analysers are installed for Particulate matter (PM) in DAP plant (Diammonium phosphate Plant), SSP plant (single superphosphate Plant). Further NH₃, HF analysers in DAP plants and HF analyser 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>

2.	<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 SPM. Online PM analyzers are also installed in all the stacks of the plant.</p>
3.	<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</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</p>

	regularly The instruments used for ambient air quality monitoring shall be calibrated time to time	the month of Oct'22–Mar'23. Calibration of the instruments measuring ambient air quality done by third party..
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 Aug 22, an effluent recycling plant of 40m ³ /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. ETP reports are attached in annexure-4 Pictures of Effluent recycling plant is also attached in annexure -4.
5.	Solid / hazardous waste shall be properly disposed off and no solid waste shall be disposed off outside the	Spent V2O5 catalyst & acidic residue (Hazardous waste) which generates from sulfuric acid plant is disposed to West Bengal

	<p>premises. Fly ash generated due to burning of biomass /coal shall be used as filler in DAP manufacturing process</p>	<p>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 (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 2.78 MT of spent catalyst , 12.57 MT of ETP sludge, 0.45 MT of used oil, 2.57 MT of Acid residue, 27.19 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 326.15 MT of metal scrap generated during the period, which was sold to scrap dealer.</p>
6.	<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>

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.
8.	Necessary other statutory clearances from other concerned Departments including 'No Objection Certificate' from the WBPCB shall be obtained	Complied.
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,	Pollution load calculations due to replacement of HAG for the period Oct'22–Mar'23 is attached in annexure -6

	Orissa, CPCB and WBPCB	
10.	The company shall undertake eco-development measures including community welfare measures in the project area	Eco development measures and community welfare measures are attached in annexure-7
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.
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
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.

4.	Proper housekeeping and adequate occupational health programmes 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 Oct'22–Mar'23 total 1042 nos. of employees medical checkup was planned and 1040 nos. completed i:e completion% is 99.47%</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	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
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	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-

	Government. The funds so provided shall not be diverted for any other purpose	10.
7.	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.	We are regularly submitting half yearly Compliance reports. An earlier half-yearly Compliance report has been submitted through letter No IIPL/HAL/ENV/22-23/MOEF-ERO-01 dated 16.11.2022 in soft and hard copy.
8	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	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>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 Bhubaneswar</p> <p>.</p>	
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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
October	87	0.72	88	92	0.64	72
November	86.7	0.97	262.5	85	0.67	82
December	72	0.83	59.9	94	0.66	87.9
January	51.3	1.1	273.5	56.9	1.05	264.8
February	20	2.84	44	34	2.02	68.4
March	83	0.86	75	76	1.1	125

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
October	68	1.02	53
November	26.7	1.17	40
December	59	0.95	53
January	70.1	1.95	-
February	40	0.46	56
March	72	1.73	47

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
October	174	48	86	13
November	176	45	232.5	31
December	176	45	145	19.6
January	271.8	34.7	NA	NA
February	140	45	136	24
March	162	46	NA	NA

Note:- *This is also measured in online analyser 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 (Piyangbada)				Location 2 (Durgachak)				Location 3 (ATO-1)				Location 4 (Near Main Gate Inside Plant)			
		March		February		March		February		March		February		March		February	
PM10 (µg/m3)	100	61.6	49.9	59.2	48.7	88.6	95.3	82.8	91.7	89.2	81.9	92.4	84.7	97.4	90.6	78.7	98.9
PM2.5 (µg/m3)	60	33.4	30.2	27.3	22.9	50.7	52	45.6	44.2	43.5	47.2	51.3	47.2	57.1	44.9	40.8	57.1
SO2 (µg/m3)	80	6.4	<6.0	7.5	8.3	9.7	8.4	9.6	10.5	12.5	10.4	9.9	12	36.1	40.8	10.1	32.7
NO2 (µg/m3)	80	36.7	25.6	27.1	25.5	50.2	40.9	42.3	51.7	39.2	42.9	46.2	41	54.3	46.7	33.2	58.6
NH3 (µg/m3)	400	28.1	22.7	15.5	19.7	56.2	50.9	32.4	25.9	72.8	65.4	48.1	52.7	62.8	67.2	29.7	36.1
SO3+Acid Mist (µg/m3)	—	23.4	18.7	18.5	20.4	30.6	21.8	25.3	32.4	39.2	28.5	27.5	36.1	57.9	61.5	24.1	52.6
F(µg/m3)	—	13.9	10.7	11.7	13.8	18.2	23.4	21.2	15.7	35.2	42.7	39.5	31.2	29.4	24.6	19.7	26.2
CO (mg/m3)	2	0.44	0.35	0.23	0.29	0.51	0.6	0.63	0.58	0.44	0.37	0.37	0.51	0.72	0.58	0.38	0.84
Pb (µg/m3)	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ni (ng/m3)	20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
As(ng/m3)	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
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	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2
O3 (µg/m3)	100	<20	<20	23.8	<20.0	36.8	25.9	22.8	34.2	29.5	33.7	29.2	33.9	29.3	35.2	24.2	26.3

Parameters	Limit as per CPCB notification, 18th Nov, 2009	Location 1 (Piyangbada)				Location 2 (Durgachak)				Location 3 (ATO-1)				Location 4 (Near Main Gate Inside Plant)			
		January		December		January		December		January		December		January		December	
PM10 (µg/m ³)	100	69.9	78.6	68.5	76.9	76.8	82.7	84	90.7	91.8	87.3	80.8	88.3	89.8	98.6	87.6	94.3
PM2.5 (µg/m ³)	60	33.5	45.4	44.1	32.6	36.5	42.8	48	42.1	54.3	44.7	46.7	50.2	48.5	52.3	50.2	54.3
SO ₂ (µg/m ³)	80	6.8	7.2	8.9	9.6	7.8	8.6	9.1	10.3	22.6	18.6	10.7	8.4	28.7	36.5	51.8	40.9
NO ₂ (µg/m ³)	80	40.2	35.6	39.5	30.6	49.7	55.2	57.3	50	51.7	43.2	41.3	45.9	47.8	57.6	58.6	52.5
NH ₃ (µg/m ³)	400	38.7	47.3	19.1	27.2	51.2	63.5	33.2	40.8	67.5	78.6	51.8	57.1	51.4	68.7	43.9	36.3
SO ₃ +Acid Mist (µg/m ³)	–	17.4	20.9	20.1	18.6	17.7	20.1	15.7	26.5	25.2	36.2	21.6	24.3	40.6	51.3	54.9	57.2
F(µg/m ³)	–	11.7	14.6	12.6	15.4	21.5	18.6	19.5	16.1	32.7	23.2	17.6	22.3	31.4	27.5	36.9	28.6
CO (mg/m ³)	2	0.21	25.3	0.43	0.38	0.67	0.78	0.55	0.62	0.53	0.65	0.40	0.47	0.78	0.89	0.68	0.59
Pb (µg/m ³)	1	<0.0 1	<0.0 1	<0.0 1	<0.0 1	0.02	0.02	<0.0 1	<0.0 1	<0.0 1	<0.01	<0.0 1	<0.0 1	0.03	0.03	<0.0 1	<0.0 1
Ni (ng/m ³)	20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
As(ng/m ³)	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
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	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2
O ₃ (µg/m ³)	100	21.8	25.3	30.6	36.1	33.7	28.5	<20	31.9	26.5	30.7	<20	24.8	27.6	32.6	33.9	26.2

Parameters	Limit as per CPCB notification, 18th Nov,2009	Location 1 (Piyangbada)				Location 2 (Durgachak)				Location 3 (ATO-1)				Location 4 (Near Main Gate Inside Plant)	
		November		October		November		October		November		October		October	
PM10 (µg/m3)	100	80.7	68.5	79.5	71.9	85.8	94.1	85.9	97.3	81.6	89.8	96.1	86.3	92.2	81.7
PM2.5 (µg/m3)	60	42.9	35.2	42.8	34.3	48.3	42.5	40.9	51.3	50.2	51.7	54.1	48.2	53.8	44.7
SO2 (µg/m3)	80	8.7	7.9	7.2	7.7	12.8	9.6	6.8	8.5	8	6.5	11.6	9.8	10.2	8.9
NO2 (µg/m3)	80	35.3	30	42.1	35.7	51	42.8	45	55.8	47.3	37.2	41.5	32.4	37.1	29.5
NH3 (µg/m3)	400	19.7	26.2	22	30.7	35.1	28.3	21.8	35.4	51.6	42.8	53.4	45.7	29.4	36.2
SO3+Acid Mist (µg/m3)	–	22.1	14.7	24.4	29.2	18	26.1	21.9	35.7	34.2	22.8	49.3	35.5	40.3	31.1
F(µg/m3)	–	15.1	13.9	22.9	15.9	16.3	20	13.7	26.4	24.2	19.5	15.9	22.4	17.9	21.7
CO (mg/m3)	2	0.51	0.34	0.33	0.51	0.75	0.63	0.89	1.29	0.53	0.29	0.91	0.72	0.47	0.59
Pb (µg/m3)	1	<0.0 1	<0.0 1	0.02	<0.0 1	0.02	0.04	0.02	0.03	<0.0 1	0.02	0.04	0.02	0.03	<0.0 1
Ni (ng/m3)	20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
As(ng/m3)	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
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
Benzene (µg/m3)	5	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2
O3 (µg/m3)	100	36.1	30.3	32.5	37.6	42.8	36.4	31.7	24.9	30.5	25.7	36.4	29	36.4	22

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 (26.12.2022- 28.12.2022)				
Results in Leq dB(A) Day Time	54.7	57.2	51.5	63.3
Results in Leq dB(A) Night Time	51.5	55.5	51	60.3
Location	Back Side Of DG room	Near Parking Gate	Near Main Gate	Near DAP Gate
Monitoring Date (11.03.2023 – 14.03.2023)				
Results in Leq dB(A) Day Time	59.3	53.7	55.1	52.6
Results in Leq dB(A) Night Time	57	50.3	51.4	48.5

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
October	7.85	<2.0	8	6.7	<0.1	<0.05	<5.0	0.30	0.38	0.16
November	7.68	<2.0	8	<2.5	0.54	<0.05	<5.0	3.1	6.4	2.0
December	7.65	<2.0	8	14	0.65	0.21	<5.0	<0.1	<0.3	<0.1
January	7.80	<2.0	<4.0	5.1	0.52	0.33	<5.0	<0.1	<0.3	<0.1
February	7.52	<2.0	8	<2.5	0.52	0.22	<5.0	<0.1	<0.3	<0.1
March	7.46	9.6	37	12	0.51	0.07	<5.0	<0.1	<0.3	<0.1

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 a 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. Zn 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 -10
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..
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	Waste water / effluent is not being discharged into storm water drain. Storm water drains are separate from effluent drain.
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 .
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.

	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.
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
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.
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 analyser has remote calibration facility.
14.	Regular monitoring of ambient air quality	Ambient air monitoring of SO ₂ , NO _x , PM, SO ₃ , Fluoride, Acid mist being

	with regard to SO ₂ NO _x , PM, SO ₃ , fluoride and acid mist will be carried out	monitored twice in month outside factory premises and inside factory premises.
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 V ₂ O ₅ catalyst is being generated from Sulfuric acid plant during annual shut down. Spent V ₂ O ₅ catalyst is being disposed to West Bengal Waste Management Pvt Ltd (Ramky) as per Hazardous Waste Authorization & CTO.
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 WBWML as per CTO & Hazardous waste authorization.

Annexure- 6**Emission load of DAP-1 plant after scrubber for Biomass/Coal based HAG**

Month	RH	Production	Gas flow (Nm ³ /Hr)	Particulate matter (mg/Nm ³)	Pollution load (SPM) (kg)	Specific Emission (kg SPM/MT of Production)
Oct-22	551.75	21638.86	174829	87	8392.19	0.39
Nov-22	535	21860.51	158277	86.7	7341.60	0.34
Dec-22	476.5	17599.67	175220	72	6011.45	0.34
Jan-23	618.5	22863.81	196453	51.3	6233.27	0.27
Feb-23	609.75	23293.42	178815	20	2180.65	0.09
Mar-23	156.75	6046.66	187001.84	83	2432.94	0.40
	2948.25	113302.93	178432.64	66.67	35070.94	0.31

Average specific emission kg particulate matter/MT of production 0.31

Note :-

Oct'22–Mar'23 particulate matter (PM) values are sampled and analyzed by third party (NABL) accredited lab.

Annexure-7
Eco sustainability measures (Oct'22 – Mar'23)
CSR Report (October'22 – March'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 training**

Empowering women from underprivileged community and create opportunity for employment through beautician training. 60 underprivileged women from marginalized



communities of South Kolkata have completed beautician training with the collaboration of Hope Kolkata Foundation. After completion of the training each trainee have receive the certificate and start-up kit.



- **Tailoring training**

Empowering women from underprivileged community and create opportunity for employment through tailoring training. 20 underprivileged women from marginalized communities of South Kolkata and 50 women from Haldia and Baruipur have completed tailoring training with the collaboration of Hope Kolkata Foundation and Abhyudaya Haldia.



After completion of the training each trainee have receive the certificate and start-up kit.

- **Poultry farm management training**

100 women from economically backward community of the East Medinipur get the training on poultry farm management. After the training, they would be assisted with construction of the poultry farm and supported with chicks, poultry feed and medicines. The main objective of this project is to upgrade the skill on poultry management of the underserved women from the rural marginalized community.



➤ **Health**

- **Overall health camp**

To provide free medical benefits to the people from the underprivileged community the health camps have been organised at the local community. There are eight general health camp have been organised by Deulpota Seva Samitii at the villages in Sutahata block, Mahisadal Block. The health check-up have done for 2227 people from the marginalised community. The specialist doctors from the Indian Cancer Society, Kolkata were present at the camp for the health check-up at the community.



- **Eye Screening camps**

2809 socially and economically backward people in Sutahata block and Mahishadal block and Haldia Municipality of Purba Medinipur district were screened in 7 free eye screening camps organised in collaboration with Medical Research Foundation(Sankar-Nethralaya). Among the beneficiaries 1826 received free spectacle.



- **Water and Sanitation project at Govt. Schools**

We have provided safe sanitary blocks to students of the Govt. schools who still have little or no access to sanitary facilities within their school with proper light and ventilation and improved drainage system. Provided adequate supply of running water and wash water to sanitary blocks in the schools to support hygienic habits and safe drinking water.





- **Menstrual Hygiene Management project**

2 sanitary napkin vending machines and incinerator have installed at 2 govt. high schools to create awareness on Menstrual Hygiene to the school going adolescent girls. There are 20 awareness camps have been organised at the schools to aware the adolescent girls on menstrual hygiene management and there are 1200 girls child have participated at these awareness camps. We also distributed menstrual hygiene kit to 700 adolescent girl child of 5 Govt. high schools.



➤ **Global Recycling Day Celebration:**

Global Recycling Day was first established in 2018 by the Global Recycling Foundation, a non-profit organization that aims to promote the importance of recycling and support of sustainable development. The day 18TH March is recognized by the United Nations and is celebrated around the world. Indorama India Haldia also celebrated the Global Recycling Day on 17th & 18th March, 2023. On this day we raised awareness about the importance of recycling and reducing waste. Recycling helps to conserve natural resources, reduce pollution and create jobs. By recycling, we can help protect the planet for future generations. Let's commit to reduce our waste, recycle more and encourage others to do the same ! We celebrated this day by giving awareness and Spot Quiz on 3 R principles (Reducing waste, reusing and recycling resources and products).



➤ **Different species of trees planted inside factory to Eco Sustainability measures:**



➤ **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 m 2
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, Chandersekharpur, Bhubaneswar-751023
2. The Member Secretary, West Bengal Pollution Control Board, Paribesh Bhawan 10A, Block-LA, Sector-III Bidhannagar, Kolkata-700 106
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

37 m 2
(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 gasifier in the DAP-1 Plant shall be assessed and a compliance report shall be submitted to the Ministry's Regional Office at the Bhubaneswar, 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.

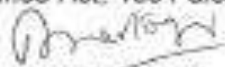
- vi. Adequate funds shall be earmarked towards environmental pollution control measures and used judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.
- vii. The Regional Office of this Ministry at Bhuvaneshwar / 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 Bhuvaneshwar.

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 Bhuvaneshwar.

6.0 The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.

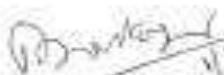
7.0 Any other conditions or alteration in the above conditions shall have to be implemented by the project authorities in a time bound manner.

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.

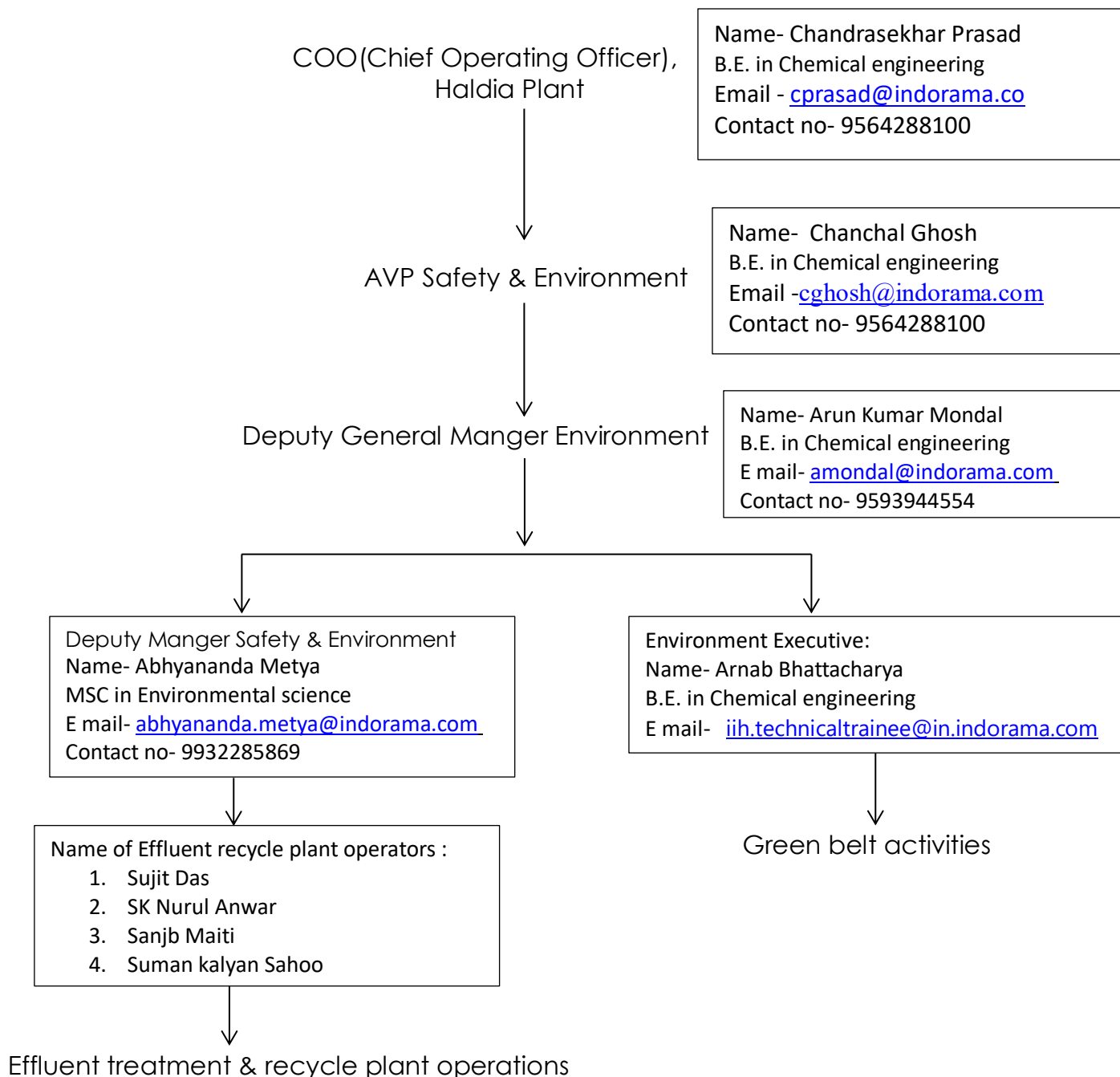

(Dr. P. B. Rastogi)
Additional Director

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 Chandrasekharpur, 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 (Oct 22- March 23) are as follows:-

Sl No	Item wise expenditure under Environmental Control Measures	Total Amount in Lacs (Approx.)
01	Stack and Effluent , Ambient air analysis cost	19.6
02	Effluent treatment and effluent recycling plant operational cost (consumable chemicals & power cost)	27.3
03.	Manpower charges for operation of Effluent treatment plant and effluent recycling plant	26.8
04	Land development , tree planation (cost of saplings/trees)& Manpower charges for green belt development	10.7
05	Hazardous and biomedical waste management cost	9.82
06	Stack and effluent analyzers maintaince cost	9
07	Capex project for Environmental measure	322.38
Total Expenditure		425.6

Major Capex to improve Environmental performance in Oct 22-March 23

- Installation of Digital flow meters with telemetric system for Fresh water withdrawal monitoring. Cost- 21.95 lacs.
- Installation of 500 kWp rooftop solar. Cost - 264.14 lacs.
- Construction of RCC storm water drain & effluent pit. Cost – 36.29 lacs

Total Cost - 322.38 lacs.

Monitoring Reports

Annexure-1

TEST REPORT


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

Report No. : WB/ED -4697
 Date : 30.03.2023
 Sample Description : Stack Monitoring
 Sample Mark : DAP-1
 Date & Time of Sampling : 06.03.2022
 at 01.30 PM

Reference No. & Date: 4700013395 , Dtd: 02.08.2021

ANALYSIS RESULT

A . <u>General information about stack :</u>		
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 - 38 TPH
B . <u>Physical characteristics of stack :</u>		
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. <u>Analysis/Characteristic of stack:</u>		
1.	Fuel used	: ----
		2. Fuel Consumption :----
D . <u>Result of sampling & analysis of gaseous emission</u>		
		Result
1.	Temperature of emmission (° c)	54
2.	Barometric pressure (mm of Hg)	755
3.	Velocity of gas (m/s)	13.29
4.	Quantity of gas flow (Nm3/hr)	187001.84
5.	Concentration of Particulate Matters (mg/Nm ³)	83.0
6.	Concentration of Gaseous Fluoride (mg/Nm ³)	0.86
7.	Concentration of Amonia (mg/Nm ³)	75.0
E . <u>Pollution control device</u>		
1.	Details of pollution control devices attached with the stack : 4 Stage Scrubber	
F. <u>Remarks</u> : Nil		

Report Prepared By: 

for Mitra S. K. Private Limited
 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.

Head Office: Shrachi Centre (5th floor), 74B, A.J.C. Bose Road, Kolkata - 700 016, West Bengal, India.
 Tel. : 91 33 40143000 / 22650006 / 22650007 Fax : 91 33 22650008
 Email : info@mitrask.com. Website: www.mitrask.com

Page 1 of 1



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



TC-7815

TEST REPORT

No. AP-FG/22-23/1340

Date: February 20, 2023

Page 1 of 2

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	Parameters Tested				
Sample Description : Stack Gas	Physical : Temp., Velocity, Gas flow				
Date & time of sampling : 17.02.2023 at 10:40 A.M. to 11:30 A.M.	Chemical : CO, CO ₂ , F, NH ₃ & PM				
Test Completed on : 20.02.2023					
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 (a) from ground level : 42.0 M (b) from roof level : ---					
2. Diameter of the stack (a) at bottom : --- (b) at top : ---					
3. 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 :					
1. Fuel used : --- 2. Load : 30 PTH					
D. Results of Physical Parameters of Flue Gas : Barometric pressure : 757 mmHg					
Sl No	Test Parameters	Test Method	Unit	Results	
1.	Temperature of emission	IS 11255 (Part 3) : 2008	°C	40	
2.	Velocity of gas in duct	IS 11255 : (Part 3) : 2008	m/sec	12.18	
3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	178815	
E. Results of gaseous emission :					
Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	Not Available
2.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	Not Available
3.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	20	150 max.
4.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	2.84	Not Available
5.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	44.0	Not Available
F. Pollution control device					
Details of pollution control devices attached with the stack : NH ₃ 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.

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* Results relate only to the parameters tested.

TEST REPORT


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

Report No. : WB/ED -4354
 Date : 28.02.2023
 Sample No. : MSKGL/ED/2022-23/01/01416
 Sample Description : Stack Monitoring
 Sample Mark : DAP-1
 Date & Time of Sampling : 30.01.2023
 at 12.54 PM

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)	52	IS 11255 (Part III), 2008RA 2018
2. Barometric pressure (mm of Hg)	756	IS 11255 (Part III), 2008RA 2018
3. Velocity of gas (m/s)	14.1	IS 11255 (Part III), 2008RA 2018
4. Quantity of gas flow (Nm ³ /hr)	196453	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)	18.4	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)	51.3	IS 11255 (Part I):1985, RA 2014
9. Moisture content (%)	13.4	IS 11255 (Part III), 2008RA 2018
10. Concentration of Gaseous Fluoride (mg/Nm ³)	1.1	US EPA part 13 A_(O)
11. Concentration of Amonia (mg/Nm ³)	273.5	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.

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/22-23/988

Date: December 16, 2022

Page 1 of 2

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	Parameters Tested Physical : Temp., Velocity, Gas flow Chemical : CO, CO ₂ , F, NH ₃ & PM				
Sample Description : Stack Gas					
Date & time of sampling : 15.12.2022 at 11:30 A.M. to 12:18 P.M.					
Test Completed on : 16.12.2022					
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 (a) from ground level : 42.0 M (b) from roof level : --- 2. Diameter of the stack (a) at bottom : --- (b) at top : --- 3. 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 : 1. Fuel used : --- 2. Load : 40 PTH					
D. Results of Physical Parameters of Flue Gas : Barometric pressure : 759 mmHg					
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	12.44	
3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	175220	
E. Results of gaseous emission :					
Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	Not Available
2.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	Not Available
3.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	72	150 max.
4.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.83	Not Available
5.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	59.9	Not Available
F. Pollution control device Details of pollution control devices attached with the stack : NH ₃ Scrubber, Gas Scrubber & Fluoride Scrubber.					

:- END OF TEST REPORT :-

Report Verified by
S. Mondal

(Dr. R. KARIM)

Technical Manager

Authorised Signatory

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

BB

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- ★ Results relate only to the parameters tested.

TEST REPORT

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

Report No. : WB/ED -3098
Date : 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00774
Sample Description : Stack Monitoring
Sample Mark : DAP-1
Date & Time of Sampling : 11.11.2022
 at 11.47 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 emmission (° c)	54	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)	10.7	IS 11255 (Part III),2008RA 2018
4 .	Quantity of gas flow (Nm3/hr)	158277	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)	18.2	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)	86.7	IS 11255 (Part I):1985,RA 2014
9 .	Moisture content (%)	7.45	IS 11255 (Part III),2008RA 2018
10 .	Concentration of Gaseous Fluoride (mg/Nm ³)	0.97	USEPA-13B - 20/08/1996
11 .	Concentration of Amonia (mg/Nm ³)	262.5	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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TEST REPORT


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

Report No. : WB/ED -4698
 Date : 30.03.2023
 Sample Description : Stack Monitoring
 Sample Mark : DAP-2
 Date & Time of Sampling : 08.03.2023
 at 11.00 am

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 - 50 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 : Briquette	2. Fuel Consumption : 0.5 Ton/hr
D . Result of sampling & analysis of gaseous emission		
	Result	Method
1 .	Temperature of emission (°C)	57 IS 11255 (Part III), 2008RA 2018
2 .	Barometric pressure (mm of Hg)	756 IS 11255 (Part III), 2008RA 2018
3 .	Velocity of gas (m/s)	13.78 IS 11255 (Part III), 2008RA 2018
4 .	Quantity of gas flow (Nm ³ /hr)	196788.81 IS 11255 (Part III), 2008RA 2018
5 .	Concentration of Particulate Matters (mg/Nm ³)	76.0 IS 11255 (Part I):1985, RA 2014
6 .	Concentration of Gaseous Fluoride (mg/Nm ³)	1.1 USEPA-13B - 20/08/1996
7 .	Concentration of Amonia (mg/Nm ³)	125.0 IS 11255 (Part 6) -1999; Rffm: 2003
E . Pollution control device		
1 .	Details of pollution control devices attached with the stack	: 5 Stage Scrubbers (NH ₃ , Scrubber; Gas Scrubber, Venturies Scrubber & Fluoride Scrubber)
F . Remarks : Nil		

Report Prepared By: 

for Mitra S. K. Private Limited
 Authorised Signatory

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Page 1 of 1



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ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-FG/22-23/1341

Date: February 20, 2023

Page 1 of 2

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				
Sample Description	: Stack Gas				
Date & time of sampling	: 17.02.2023 at 09:27 A.M. to 10:09 A.M.				
Test Completed on	: 20.02.2023				
Parameters Tested					
Physical : Temp., Velocity, Gas flow					
Chemical : CO, CO ₂ , F, NH ₃ & 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 (a) from ground level : 42.0 M (b) from roof level : ---					
2. Diameter of the stack (a) at bottom : --- (b) at top : ---					
3. 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 :					
1. Fuel used : --- 2. Load : 52 TPH					
D. Results of Physical Parameters of Flue Gas : Barometric pressure : 757 mmHg					
Sl No	Test Parameters	Test Method	Unit	Results	
1.	Temperature of emission	IS 11255 (Part 3) : 2008	°C	57	
2.	Velocity of gas in duct	IS 11255 : (Part 3) : 2008	m/sec	13.57	
3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	193042	
E. Results of gaseous emission :					
Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	Not Available
2.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	Not Available
3.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	35	150 max.
4.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	2.02	Not Available
5.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	68.4	Not Available
F. 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.

BB

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TEST REPORT


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

Report No. : WB/ED -4353
 Date : 28.02.2023
 Sample No. : MSKGL/ED/2022-23/01/01415
 Sample Description : Stack Monitoring
 Sample Mark : DAP-2
 Date & Time of Sampling : 30.01.2023
 at 11.32 AM

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)	56 IS 11255 (Part III), 2008RA 2018
2.	Barometric pressure (mm of Hg)	756 IS 11255 (Part III), 2008RA 2018
3.	Velocity of gas (m/s)	13.69 IS 11255 (Part III), 2008RA 2018
4.	Quantity of gas flow (Nm ³ /hr)	195922 IS 11255 (Part III), 2008RA 2018
5.	Concentration of Carbon Monoxide (% v/v)	<0.2 IS 13270 : 1992
6.	Concentration of Oxygen (% v/v)	17.8 IS 13270 : 1992
7.	Concentration of Carbon Dioxide (% v/v)	1.4 IS 13270 : 1992
8.	Concentration of Particulate Matters (mg/Nm ³)	56.9 IS 11255 (Part I):1985, RA 2014
9.	Moisture content (%)	9.6 IS : 11255 (Part 3) : 2008
10.	Concentration of Gaseous Fluoride (mg/Nm ³)	1.05 US EPA part 13 A (O)
11.	Concentration of Amonia (mg/Nm ³)	264.8 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, Venturies Scrubber & Fluoride Scrubber)
F. Remarks : Nil		

Report Prepared By 

for Mitra S. K. Private Limited

 Authorised Signatory

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

CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/22-23/1003

Date: December 17, 2022

Page 1 of 2

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																																				
Sample Description	: Stack Gas																																				
Date & time of sampling	: 16.12.2022 at 11:20 A.M. to 12:02 P.M.																																				
Test Completed on	: 17.12.2022																																				
<p align="center"><u>Parameters Tested</u></p> <p>Physical : Temp., Velocity, Gas flow</p> <p>Chemical : CO, CO₂, F, NH₃ & PM</p>																																					
<p>A. General information about stack :</p> <p>1. Stack connected to : DAP - 2</p> <p>2. Emission due to : Vapours Generated from Process Reaction, Granulation Screening, Milling & Drying Operation</p> <p>3. Material of construction of stack : M.S.</p> <p>4. Shape of stack : Circular.</p> <p>5. Whether stack is provided with permanent platform & ladder : Yes.</p>																																					
<p>B. Physical characteristics of stack :</p> <p>1. Height of the stack (a) from ground level : 42.0 M (b) from roof level : ---</p> <p>2. Diameter of the stack (a) at bottom : --- (b) at top : ---</p> <p>3. Diameter of the stack at sampling point : 2.5 M</p> <p>4. No. of Traverse point : 32 Nos.</p> <p>5. Height of the sampling point from GL : 40.0 M</p>																																					
<p>C. Analysis / Characteristic of stack :</p> <p>1. Fuel used : --- 2. Load : 70 TPH</p>																																					
<p>D. Results of Physical Parameters of Flue Gas : Barometric pressure : 759 mmHg</p> <table border="1"> <thead> <tr> <th>Sl No</th> <th>Test Parameters</th> <th>Test Method</th> <th>Unit</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Temperature of emission</td> <td>IS 11255 (Part 3) : 2008</td> <td>°C</td> <td>54</td> </tr> <tr> <td>2.</td> <td>Velocity of gas in duct</td> <td>IS 11255 : (Part 3) : 2008</td> <td>m/sec</td> <td>13.62</td> </tr> <tr> <td>3.</td> <td>Quantity of gas flow</td> <td>IS 11255 : (Part 3) : 2008</td> <td>NM³/hr</td> <td>197136</td> </tr> </tbody> </table>		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	13.62	3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	197136																
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	13.62																																	
3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	197136																																	
<p>E. Results of gaseous emission :</p> <table border="1"> <thead> <tr> <th>Sl No</th> <th>Test Parameters</th> <th>Test Method</th> <th>Unit</th> <th>Results</th> <th>Norms as per CPCB</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Carbon monoxide</td> <td>IS 13270 (By Orsat) : 1992</td> <td>% v/v</td> <td><0.2</td> <td>Not Available</td> </tr> <tr> <td>2.</td> <td>Carbon dioxide</td> <td>IS 13270 (By Orsat) : 1992</td> <td>% v/v</td> <td>0.2</td> <td>Not Available</td> </tr> <tr> <td>3.</td> <td>Particulate Matters</td> <td>IS 11255 : (Part 1) : 1985</td> <td>mg/Nm³</td> <td>94</td> <td>150 max.</td> </tr> <tr> <td>4.</td> <td>Gasous Fluoride</td> <td>IS 11255 (Part 5) : 1990</td> <td>mg/Nm³</td> <td>0.66</td> <td>Not Available</td> </tr> <tr> <td>5.</td> <td>Ammonia as NH₃</td> <td>Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401</td> <td>mg/Nm³</td> <td>87.9</td> <td>Not Available</td> </tr> </tbody> </table>		Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB	1.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	Not Available	2.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	Not Available	3.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	94	150 max.	4.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.66	Not Available	5.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	87.9	Not Available
Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB																																
1.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	Not Available																																
2.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	Not Available																																
3.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	94	150 max.																																
4.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.66	Not Available																																
5.	Ammonia as NH ₃	Methods of Air Sampling & Analysis, 3rd Ed. (Indophenol Method), Method 401	mg/Nm ³	87.9	Not Available																																
<p>F. Pollution control device</p> <p>Details of pollution control devices attached with the stack : NH₃ Scrubber, Gas Scrubber & Fluoride Scrubber.</p>																																					

:- END OF TEST REPORT :-

Report Verified by
S. Mondal

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

BB

TEST REPORT

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

Report No. : WB/ED -3288
Date : 06.12.2022
Sample Description : Stack Monitoring
Sample Mark : DAP-2
Date & Time of Sampling : 30.11.2022

Reference No.& Date: 4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A . <u>General information about stack :</u>			
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 . <u>Physical characteristics of stack :</u>			
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 . <u>Analysis/Characteristic of stack:</u>			
1 .	Fuel used	: Briquette	2. Fuel Consumption : 0.5 Ton/hr
D . <u>Result of sampling & analysis of gaseous emission</u>		<u>Result</u>	<u>Method</u>
1 .	Temperature of emmission (°c)	57	IS 11255 (Part III),2008RA 2018
2 .	Barometric pressure (mm of Hg)	756	IS 11255 (Part III),2008RA 2018
3 .	Velocity of gas (m/s)	13.71	IS 11255 (Part III),2008RA 2018
4 .	Quantity of gas flow (Nm3/hr)	197216.13	IS 11255 (Part III),2008RA 2018
5 .	Concentration of Particulate Matters (mg/Nm ³)	85.0	IS 11255 (Part I):1985,RA 2014
6 .	Concentration of Gaseous Fluoride (mg/Nm ³)	0.67	USEPA-13B - 20/08/1996
7 .	Concentration of Amonia (mg/Nm ³)	82.0	IS 11255 (Part 6) -1999; Rffm: 2003
E . <u>Pollution control device</u>			
1 .	Details of pollution control devices attached with the stack : 5 Stage Scrubbers (NH3, Scrubber; Gas Scrubber, Venturies Scrubber & Fluoride Scrubber)		
F . <u>Remarks</u> : 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 -4700
 Date : 30.03.2023
 Sample Description : Stack Monitoring
 Sample Mark : SSP-Ball Mill
 Date & Time of Sampling : 03.03.2023
 at 02.00 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	: 34.3 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)	46 IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	757 Lab Method
3.	Velocity of gas (m/sec.)	8.97 IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	11269.39 IS 11255 (Part III),2008RA 2018
5.	Concentration of Particulate Matter (mg/Nm ³)	47.0 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
 Authorised Signatory

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Page 1 of 1

TEST REPORT

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

Report No. : WB/ED -4431
 Date : 09.03.2023
 Sample Description : Stack Monitoring
 Sample Mark : SSP-Ball Mill
 Date & Time of Sampling : 24.02.2023
 at 02.30 pm

Reference No.& Date:4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A . <u>General information about stack :</u>		
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 . <u>Physical characteristics of stack :</u>		
1.	Height of the stack from ground level	: 34.3 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	: ---
C. <u>Analysis/Characteristic of stack:</u>		
1.	Fuel used	: ---- 2. Fuel Consumption : ----
D . <u>Result of sampling & analysis of gaseous emission</u>		
	<u>Result</u>	<u>Method</u>
1.	Temperature of emission (°C)	47 IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	756 Lab Method
3.	Velocity of gas (m/sec.)	8.77 IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	11012.11 IS 11255 (Part III),2008RA 2018
5.	Concentration of Particulate Matter (mg/Nm ³)	56.0 USEPA-13B - 20/08/1996
E . <u>Pollution control device</u>		
1.	Details of pollution control devices attached with the stack : Cyclone Bag Filter	
F. <u>Remarks</u> : Nil		

Report Prepared By



for Mitra S. K. Private Limited



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TEST REPORT


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

Report No. : WB/ED -3650
Date : 12.01.2023
Sample Description : Stack Monitoring
Sample Mark : SSP-Ball Mill
Date & Time of Sampling : 26.12.2022
 at 01.50 pm

Reference No.& Date: 4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A . <u>General information about stack :</u>		
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 . <u>Physical characteristics of stack :</u>		
1 .	Height of the stack from ground level	: 34.3 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	: 0.385 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>		
	<u>Result</u>	<u>Method</u>
1 .	Temperature of emission (°C)	46 IS 11255 (Part III),2008RA 2018
2 .	Barometric pressure (mm of Hg)	756 Lab Method
3 .	Velocity of gas (m/sec.)	9.30 IS 11255 (Part III),2008RA 2018
4 .	Quantity of Gas Flow (Nm ³ /hr)	11668.57 IS 11255 (Part III),2008RA 2018
5 .	Concentration of Particulate Matter (mg/Nm ³)	53.0 USEPA-13B - 20/08/1996
E . <u>Pollution control device</u>		
1 .	Details of pollution control devices attached with the stack : Cyclone Bag Filter	
F. <u>Remarks</u> : Nil		

Report Prepared By 

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TEST REPORT


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

Report No. : WB/ED -3290
Date : 06.12.2022
Sample Description : Stack Monitoring
Sample Mark : SSP-Ball Mill
Date & Time of Sampling : 29.11.2022

Reference No.& Date: 4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A . <u>General information about stack :</u>		
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 - 10.5 TPH
B . <u>Physical characteristics of stack :</u>		
1 .	Height of the stack from ground level	: 34.3 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	: 0.385 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>		
	<u>Result</u>	<u>Method</u>
1.	Temperature of emission (°C)	46 IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	756 Lab Method
3.	Velocity of gas (m/sec.)	8.96 IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	11241.98 IS 11255 (Part III),2008RA 2018
5.	Concentration of Particulate Matter (mg/Nm ³)	40.0 USEPA-13B - 20/08/1996
E . <u>Pollution control device</u>		
1.	Details of pollution control devices attached with the stack : Cyclone Bag Filter	
F. <u>Remarks</u> : Nil		

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TEST REPORT


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

Report No. : WB/ED -2983
Date : 04.11.2022
Sample Description : Stack Monitoring
Sample Mark : SSP-Ball Mill
Date & Time of Sampling : 31.10.2022
 at 03.00 pm

Reference No.& Date: 4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A . <u>General information about stack :</u>			
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 - 10.5 TPH
B . <u>Physical characteristics of stack :</u>			
1 .	Height of the stack from ground level	: 34.3 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	: 0.385 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>		<u>Result</u>	<u>Method</u>
1 .	Temperature of emission (°C)	98	IS 11255 (Part III),2008RA 2018
2 .	Barometric pressure (mm of Hg)	756	Lab Method
3 .	Velocity of gas (m/sec.)	8.89	IS 11255 (Part III),2008RA 2018
4 .	Quantity of Gas Flow (Nm ³ /hr)	11083.48	IS 11255 (Part III),2008RA 2018
5 .	Concentration of Particulate Matter (mg/Nm ³)	53.0	USEPA-13B - 20/08/1996
E . <u>Pollution control device</u>			
1 .	Details of pollution control devices attached with the stack : Cyclone Bag Filter		
F . <u>Remarks</u> : Nil			

Report Prepared By 

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TEST REPORT


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

Report No. : WB/ED -4701
 Date : 30.03.2023
 Sample Description : Stack Monitoring
 Sample Mark : SSP Fluoride Scrubber
 Date & Time of Sampling : 03.03.2023
 At 03.10 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	: Process Reaction , Vapour
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- 25 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)	70
2.	Barometric pressure (mm of Hg)	757 IS 11255 (Part III),2008RA 2018
3.	Velocity of gas (m/s)	2.88 IS 11255 (Part III),2008RA 2018
4.	Quantity of gas flow (Nm3/hr)	14414.96 IS 11255 (Part III),2008RA 2018
5.	Concentration of Particulate Matters (mg/Nm3)	72.0 IS 11255 (Part I):1985,RA 2014
6.	Concentration of Gaseous Fluoride (mg/Nm3)	1.73 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)

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

CIN : U51109WB1931PTC007007



TC-7815

TEST REPORT

No. AP-FG/22-23/1343

Date: February 20, 2023

Page 1 of 2

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				
Sample Description	: Stack Gas				
Date & time of sampling	: 17.02.2023 at 02:26 P.M. to 03:16 P.M.				
Test Completed on	: 20.02.2023				
Parameters Tested					
Physical : Temp., Velocity, Gas flow					
Chemical : CO, CO ₂ , F & PM					
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 (a) from ground level : 40.0 M (b) from roof level : ---					
2. Diameter of the stack (a) at bottom : --- (b) at top : ---					
3. 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 :					
1. Fuel used : --- 2. Load : 25 TPH					
D. Results of Physical Parameters of Flue Gas :					
Barometric pressure : 757 mmHg					
Sl 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	3.08	
3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	15450	
E. Results of gaseous emission :					
Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	Not Available
2.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	Not Available
3.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	40	150 max.
4.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.46	Not Available
E. Pollution control device					
Details of pollution control devices attached with the stack : 4 Stage Water Scrubber.					

:- END OF TEST REPORT :-

Report Verified by
S. Mondal

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

BB

TEST REPORT


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

Report No. : WB/ED -4355
 Date : 28.02.2023
 Sample No. : MSKGL/ED/2022-23/01/01417
 Sample Description : Stack Monitoring
 Sample Mark : SSP Fluoride Scrubber
 Date & Time of Sampling : 30.01.2023
 at 03.15 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)	69 IS 11255 (Part III), 2008RA 2018
2.	Barometric pressure (mm of Hg)	756 IS 11255 (Part III), 2008RA 2018
3.	Velocity of gas (m/s)	3.2 IS 11255 (Part III), 2008RA 2018
4.	Quantity of gas flow (Nm ³ /hr)	14828 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)	70.1 IS 11255 (Part I):1985, RA 2014
9.	Moisture content (%)	15.9 IS 11255 (Part III), 2008RA 2018
10.	Concentration of Gaseous Fluoride (mg/Nm ³)	1.95 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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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/22-23/990

Date: December 16, 2022

Page 1 of 2

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				
Sample Description	: Stack Gas				
Date & time of sampling	: 15.12.2022 at 03:00 P.M. to 03:52 P.M.				
Test Completed on	: 16.12.2022				
Parameters Tested					
Physical : Temp., Velocity, Gas flow					
Chemical : CO, CO ₂ , F & PM					
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 (a) from ground level : 40.0 M (b) from roof level : ---					
2. Diameter of the stack (a) at bottom : --- (b) at top : ---					
3. 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 :					
1. Fuel used : --- 2. Load : 25 PTH					
D. Results of Physical Parameters of Flue Gas : Barometric pressure : 759 mmHg					
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	2.91	
3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	14576	
E. Results of gaseous emission :					
Sl No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	Not Available
2.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	Not Available
3.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	59	150 max.
4.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	0.95	Not Available
E. Pollution control device					
Details of pollution control devices attached with the stack : 4 Stage Water Scrubber.					

:- END OF TEST REPORT :-

Report Verified by
S. Mondal

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

BB

TEST REPORT


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

Report No. : WB/ED -3100
Date : 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00776
Sample Description : Stack Monitoring
Sample Mark : SSP Fluoride Scrubber
Date & Time of Sampling : 11.11.2022
 at 04.38 PM

Reference No.& Date: 4700013395 , Dtd: 02.08.2021

ANALYSIS RESULT

A . <u>General information about stack :</u>		
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 . <u>Physical characteristics of stack :</u>		
1 .	Height of the stack from ground level	: 40 m
2.	Diameter of the stack at sampling point	: 1.5 m
3.	Height of the Sampling Point from Ground level	: 25.0 m
4.	Area of Stack	: 1.766 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>		
	<u>Result</u>	<u>Method</u>
1.	Temperature of emmission (° C)	67
2.	Barometric pressure (mm of Hg)	755 IS 11255 (Part III),2008RA 2018
3.	Velocity of gas (m/s)	2.94 IS 11255 (Part III),2008RA 2018
4.	Quantity of gas flow (Nm3/hr)	15077 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/Nm3)	26.7 IS 11255 (Part I):1985,RA 2014
9.	Moisture content (%)	7.35 IS 11255 (Part III),2008RA 2018
10.	Concentration of Gaseous Fluoride (mg/Nm3)	1.17 USEPA-13B - 20/08/1996
E . <u>Pollution control device</u>		
1.	Details of pollution control devices attached with the stack : 4 Stage Fluoride Scrubber	
F. <u>Remarks</u> : Nil		

Report Prepared By 

for Mitra S. K. Private Limited


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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/22-23/816

Date: November 05, 2022

Page 1 of 2

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				
Sample Description	: Stack Gas				
Date & time of sampling	: 28.10.2022 at 03:40 P.M. to 04:28 P.M.				
Test Completed on	: 05.11.2022				
Parameters Tested					
Physical : Temp., Velocity, Gas flow					
Chemical : CO, CO ₂ , F & PM					
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 (a) from ground level : 40.0 M	(b) from roof level : ---				
2. Diameter of the stack (a) at bottom : ---	(b) at top : ---				
3. 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 :					
1. Fuel used : ---	2. Load : 25 PTH				
D. Results of Physical Parameters of Flue Gas :					
Barometric pressure : 755 mmHg					
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	2.82	
3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	14115	
E. Results of gaseous emission :					
SI No	Test Parameters	Test Method	Unit	Results	Norms as per CPCB
1.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2	Not Available
2.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2	Not Available
3.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	68	150 max.
4.	Gasous Fluoride	IS 11255 (Part 5) : 1990	mg/Nm ³	1.02	Not Available
E. Pollution control device					
Details of pollution control devices attached with the stack : 4 Stage Water Scrubber.					

:- END OF TEST REPORT :-

Report Verified by
S. Mondal

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

BB

TEST REPORT


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

Report No. : WB/ED -4699
 Date : 30.03.2023
 Sample Description : Stack Monitoring
 Sample Mark : SAP-1
 Date & Time of Sampling : 11.03.2023
 at 10.00 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>		
	<u>Result</u>	<u>Method</u>
1.	Temperature of emission (°C)	37 IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	756 Lab Method
3.	Velocity of gas (m/sec.)	11.75 IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	27942.06 IS 11255 (Part III),2008RA 2018
5.	Concentration of Sulphur Dioxide (mg/Nm ³)	162.0 IS 11255 (Part II)-1985, RA:2014
6.	Acid Mist (mg/Nm ³)	46.0 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

 Authorised Signatory

- The results relate only to the item(s) tested.
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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 / 22650006 / 22650007 Fax : 91 33 22650008
 Email : info@mitrask.com. Website: www.mitrask.com

Page 1 of 1

TEST REPORT


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

Report No. : WB/ED -4432
 Date : 09.03.2023
 Sample Description : Stack Monitoring
 Sample Mark : SAP-1
 Date & Time of Sampling : 23.02.2023
 at 02.45 PM

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)	38	IS 11255 (Part III),2008RA 2018
2. Barometric pressure (mm of Hg)	755	Lab Method
3. Velocity of gas (m/sec.)	11.81	IS 11255 (Part III),2008RA 2018
4. Quantity of Gas Flow (Nm ³ /hr)	27878.31	IS 11255 (Part III),2008RA 2018
5. Concentration of Sulphur Dioxide (mg/Nm ³)	140.0	IS 11255 (Part II)-1985, RA:2014
6. Acid Mist (mg/Nm ³)	45.0	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 

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TEST REPORT


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

Report No. : WB/ED -4356
 Date : 28.02.2023
 Sample No. : MSKGL/ED/2022-23/01/01418
 Sample Description : Stack Monitoring
 Sample Mark : SAP-1
 Date & Time of Sampling : 30.01.2023
 at 04.11 PM

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)	44 IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	756 Lab Method
3.	Velocity of gas (m/sec.)	9.23 IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	21554 IS 11255 (Part III),2008RA 2018
5.	Concentration of Carbonmonoxide(% v/v)	<0.2 IS 13270 : 1992
6.	Concentration of Carbondioxide (% v/v)	1.2 IS 13270 : 1992
7.	Concentration of Sulphur Dioxide (mg/Nm ³)	271.8 IS 11255 (Part II)-1985, RA:2014
8.	Concentration of Particulate Matters (mg/Nm ³)	32.3 IS : 11255 (Part I): 1985
9.	Moisture content (%)	<2.0 IS : 11255 (Part 3) : 2008
10.	Acid Mist as H ₂ SO ₄ (mg/Nm ³)	34.7 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		

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TEST REPORT

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

Report No. : WB/ED -3648
Date : 13.01.2023
Sample Description : Stack Monitoring
Sample Mark : SAP-1
Date & Time of Sampling : 19.12.2022
 at 10.00 AM

Reference No.& Date: 4700017438 ,Dtd: 13.09.2022

ANALYSIS RESULT

A .	General information about stack :		
1.	Stack connected to	: SAP-I	
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 .	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)	37	IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	756	Lab Method
3.	Velocity of gas (m/sec.)	11.37	IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	26966.96	IS 11255 (Part III),2008RA 2018
5.	Concentration of Sulphur Dioxide (mg/Nm ³)	176	IS 11255 (Part II)-1985, RA:2014
6.	Ammonia (mg/Nm ³)	45.0	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		

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for Mitra S. K. Private Limited



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TEST REPORT

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

Report No. : WB/ED -3289
Date : 06.12.2022
Sample Description : Stack Monitoring
Sample Mark : SAP-1
Date & Time of Sampling : 26.11.2022

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>		
	<u>Result</u>	<u>Method</u>
1.	Temperature of emission (°C)	36 IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	756 Lab Method
3.	Velocity of gas (m/sec.)	11.62 IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	27657.15 IS 11255 (Part III),2008RA 2018
5.	Concentration of Sulphur Dioxide (mg/Nm ³)	176.0 IS 11255 (Part II)-1985, RA:2014
6.	Ammonia (mg/Nm ³)	45.0 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		

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for Mitra S. K. Private Limited



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TEST REPORT

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

Report No. : WB/ED -2982
Date : 04.11.2022
Sample Description : Stack Monitoring
Sample Mark : SAP-1
Date & Time of Sampling : 19.10.2022
 at 10.00 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>	<u>Result</u>	<u>Method</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.)	12.28	IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	29031.61	IS 11255 (Part III),2008RA 2018
5.	Concentration of Sulphur Dioxide (mg/Nm ³)	174	IS 11255 (Part II)-1985, RA:2014
6.	Ammonia (mg/Nm ³)	48	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




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

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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-FG/22-23/1342

Date: February 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, dtd. 27.10.2022			
Sample Description	: Stack Gas			
Date & time of sampling	: 18.02.2023 at 12:30 P.M. to 01:12 P.M.			
Test Completed on	: 20.02.2023			
Parameters Tested				
Physical : Temp., Velocity, Gas flow				
Chemical : CO, CO ₂ , SO ₂ , PM & Acid Mist				
A. General information about stack :				
1. Stack connected to : SAP-2				
2. Emission due to : Process of Tail Gas				
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 (a) from ground level : 40.0 M (b) from roof level : ---				
2. Diameter of the stack (a) at bottom : --- (b) at top : ---				
3. Diameter of the stack at sampling point : 1.2 M				
4. No. of Traverse point : 12 Nos.				
C. Analysis / Characteristic of stack :				
1. Fuel used : Tail Gas				
D. Results of Physical Parameters of Flue Gas :				
Barometric pressure : 757 mmHg				
SI No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 (Part 3) : 2008	°C	40
2.	Velocity of gas in duct	IS 11255 : (Part 3) : 2008	m/sec	5.36
3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	19935
E. Results of gaseous emission :				
SI No	Test Parameters	Test Method	Unit	Results
1.	Sulphur dioxide	IS 11255 : Part 2 : 1985	mg/Nm ³	136
2.	Carbon monoxide	IS 13270 (By Orsat) : 1992	% v/v	<0.2
3.	Carbon dioxide	IS 13270 (By Orsat) : 1992	% v/v	0.2
4.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	12
5.	Acid Mist	SOP No.: RVB/SOP/01/20 Issue No. 04, Issue Date: 10.01.2018: 2018	mg/Nm ³	24
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.

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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-FG/22-23/989

Date: December 16, 2022

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	<u>Parameters Tested</u>		
Sample Description	: Stack Gas	Physical : Temp., Velocity, Gas flow		
Date & time of sampling	: 15.12.2022 at 04:15 P.M. to 04:57 P.M.	Chemical : CO, CO ₂ , SO ₂ , PM & Acid Mist		
Test Completed on	: 16.12.2022			
A. General information about stack :				
1. Stack connected to	: SAP-2			
2. Emission due to	: Process of Tail Gas			
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	(a) from ground level : 40.0 M	(b) from roof level : ---		
2. Diameter of the stack	(a) at bottom : ---	(b) at top : ---		
3. Diameter of the stack at sampling point	: 1.2 M			
4. No. of Traverse point	: 12 Nos.			
C. Analysis / Characteristic of stack :				
1. Fuel used	: Tail Gas			
D. Results of Physical Parameters of Flue Gas :		Barometric pressure : 759 mmHg		
SI 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	5.40
3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	20304
E. Results of gaseous emission :				
SI No	Test Parameters	Test Method	Unit	Results
1.	Sulphur dioxide	IS 11255 : Part 2 : 1985	mg/Nm ³	145
2.	Carbon monoxide	IS 13270 (By Orsat): 1992	% v/v	<0.2
3.	Carbon dioxide	IS 13270 (By Orsat): 1992	% v/v	0.2
4.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	10
5.	Acid Mist	SOP No.: RVB/SOP/01/20 Issue No. 04, Issue Date: 10.01.2018: 2018	mg/Nm ³	19.6
F. Pollution control device				
Details of pollution control devices attached with the stack : Continious 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.

BB

TEST REPORT

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

Report No. : WB/ED -3099
Date : 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00775
Sample Description : Stack Monitoring
Sample Mark : SAP-2
Date & Time of Sampling : 11.11.2022
 at 01.50 PM

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	: ----
B . Physical characteristics of stack :		
1 .	Height of the stack from ground level	: 40 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	: 0.7085 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)	32 IS 11255 (Part III),2008RA 2018
2.	Barometric pressure (mm of Hg)	755 Lab Method
3.	Velocity of gas (m/sec.)	5.78 IS 11255 (Part III),2008RA 2018
4.	Quantity of Gas Flow (Nm ³ /hr)	22201 IS 11255 (Part III),2008RA 2018
5.	Concentration of Carbonmonoxide (% v/v)	<0.2 IS 13270:1992, Rffm 2009
6.	Concentration of Carbondioxide (% v/v)	1.2 IS:13270 :1992 Reaff,2014
7.	Concentration of Sulphur dioxide (mg/Nm ³)	232.5 IS 11255 (Part II)-1985, RA:2014
8.	Concentration of Particulate Matters (mg/Nm ³)	9.2 IS 11255 (Part I):1985,RA 2014
9.	Moisture content (%)	2.7 IS 11255 (Part III),2008RA 2018
10.	Acid Mist as H ₂ SO ₄ (mg/Nm ³)	31.0 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

Authorised Signatory

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ANALYTICAL CONSULTING & TECHNICAL CHEMISTS

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

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CIN : U51109WB1931PTC007007

TEST REPORT

No. AP-FG/22-23/815

Date: November 05, 2022

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			
Sample Description	: Stack Gas			
Date & time of sampling	: 29.10.2022 at 10:15 A.M. to 10:57 A.M.			
Test Completed on	: 05.11.2022			
Parameters Tested				
Physical : Temp., Velocity, Gas flow				
Chemical : CO, CO ₂ , SO ₂ , PM & Acid Mist				
A. General information about stack :				
1. Stack connected to	: SAP-2			
2. Emission due to	: Process of Tail Gas			
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 (a) from ground level : 40.0 M	(b) from roof level : ---			
2. Diameter of the stack (a) at bottom : ---	(b) at top : ---			
3. Diameter of the stack at sampling point	: 1.2 M			
4. No. of Traverse point	: 12 Nos.			
C. Analysis / Characteristic of stack :				
1. Fuel used	: Tail Gas			
D. Results of Physical Parameters of Flue Gas :				
Barometric pressure : 755 mmHg				
SI No	Test Parameters	Test Method	Unit	Results
1.	Temperature of emission	IS 11255 (Part 3) : 2008	°C	37
2.	Velocity of gas in duct	IS 11255 : (Part 3) : 2008	m/sec	5.43
3.	Quantity of gas flow	IS 11255 : (Part 3) : 2008	NM ³ /hr	20473
E. Results of gaseous emission :				
SI No	Test Parameters	Test Method	Unit	Results
1.	Sulphur dioxide	IS 11255 : Part 2 : 1985	mg/Nm ³	86
2.	Carbon monoxide	IS 13270 (By Orsat): 1992	% v/v	<0.2
3.	Carbon dioxide	IS 13270 (By Orsat): 1992	% v/v	0.2
4.	Particulate Matters	IS 11255 : (Part 1) : 1985	mg/Nm ³	12
5.	Acid Mist	SOP No.: RVB/SOP/01/20 Issue No. 04, Issue Date: 10.01.2018: 2018	mg/Nm ³	13
F. Pollution control device				
Details of pollution control devices attached with the stack : Continious 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.

BB

Monitoring Reports

Annexure-2

TEST REPORT

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

Report No. : WB/ED-4706
Date: : 29.03.2023
Sample No. : MSKGL/ED/2022-23/03/01074
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		06.03.2023 to 07.03.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	88.6	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	50.7	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	9.7	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	50.2	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	56.2	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	30.6	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	18.2	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.51	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.; 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	36.8	100	Method of Air Samping 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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 - 721602,

Report No. : WB/ED-4707
Date : 29.03.2023
Sample No. : MSKGL/ED/2022-23/03/01075
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Near Main Gate (Inside Plant)		
Date of sampling :		06.03.2023 to 07.03.2023		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	97.4	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	57.1	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	36.1	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	54.3	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	62.8	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	57.9	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	29.4	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.72	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	29.3	100	Method of Air Samping 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4708
Date : 29.03.2023
Sample No. : MSKGL/ED/2022-23/03/01076
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		07.03.2023 to 08.03.2023		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	72.6	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	35.8	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	8.6	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	35.9	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	43.6	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	23.4	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	18.5	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.25	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	29.1	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4709
Date: : 29.03.2023
Sample No. : MSKGL/ED/2022-23/03/01077
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Ammonium Terminal Station-1		
Date of sampling :		07.03.2023 to 08.03.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	89.2	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	43.5	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	12.5	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	39.2	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	72.8	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	39.2	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	35.2	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.44	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	29.5	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4710
Date: : 29.03.2023
Sample No. : MSKGL/ED/2022-23/03/01078
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		15.03.2023 to 16.03.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	63.1	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	36.7	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	7.4	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	41.1	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	39.0	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	18.7	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	13.3	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.21	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	20.2	100	Method of Air Samping 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

Report Prepared By



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TEST REPORT

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

Report No. : WB/ED-4711
Date: : 29.03.2023
Sample No. : MSKGL/ED/2022-23/03/01079
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Near Main Gate (Inside Plant)		
Date of sampling :		15.03.2023 to 16.03.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10µm) in µg/m ³	90.6	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5µm) in µg/m ³	44.9	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO ₂) in µg/m ³	40.8	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO ₂) in µg/m ³	46.7	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH ₃) in µg/m ³	67.2	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO ₃ + Acid Mist in µg/m ³	61.5	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in µg/m ³	24.6	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m ³	0.58	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in µg/m ³	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m ³	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m ³	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m ³	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C ₆ H ₆) in µg/m ³	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O ₃) in µg/m ³	35.2	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

Report Prepared By 

for Mitra S. K. Private Limited


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TEST REPORT

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

Report No. : WB/ED-4712
Date: : 29.03.2023
Sample No. : MSKGL/ED/2022-23/03/01080
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		16.03.2023 to 17.03.2023		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	95.3	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	52.0	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	8.4	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	40.9	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	50.9	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	21.8	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	23.4	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.60	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.,: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	25.9	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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 - 721602,

Report No. : WB/ED-4713
Date: : 29.03.2023
Sample No. : MSKGL/ED/2022-23/03/01081
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Ammonium Terminal Station-1		
Date of sampling :		16.03.2023 to 17.03.2023		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	81.9	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	47.2	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	10.4	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	42.9	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	65.4	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	28.5	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	42.7	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.37	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.,: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	33.7	100	Method of Air Samping 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

Report Prepared By



for Mitra S. K. Private Limited

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TEST REPORT

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

Report No. : WB/ED-4562
Date: : 17.03.2023
Sample No. : MSKGL/ED/2022-23/02/01289
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		06.02.2023 to 07.02.2023		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	91.7	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	44.2	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	10.5	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	51.7	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	25.9	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	32.4	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	15.7	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.58	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	34.2	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT


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

Report No. : WB/ED-4563
Date: : 17.03.2023
Sample No. : MSKGL/ED/2022-23/02/01290
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Near Main Gate		
Date of sampling :		06.02.2023 to 07.02.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	98.9	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um)in $\mu\text{g}/\text{m}^3$	57.1	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2)in $\mu\text{g}/\text{m}^3$	32.7	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2)in $\mu\text{g}/\text{m}^3$	58.6	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	36.1	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	52.6	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	26.2	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.84	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.03	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP)in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6)in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	27.9	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4564
Date: : 17.03.2023
Sample No. : MSKGL/ED/2022-23/02/01291
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		07.02.2023 to 08.02.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	79.4	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	37.2	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	9.4	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	40.9	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	35.9	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	15.2	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	19.9	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.49	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.,: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	24.0	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4565
Date : 17.03.2023
Sample No. : MSKGL/ED/2022-23/02/01292
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Ammonium Terminal Station-1		
Date of sampling :		07.02.2023 to 08.02.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	84.7	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	47.2	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	12.0	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	41.0	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	52.7	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	36.1	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	31.2	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.51	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	33.9	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4566
Date : 17.03.2023
Sample No. : MSKGL/ED/2022-23/02/01293
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		17.02.2023 to 18.02.2023		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	68.2	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	31.9	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	8.0	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	44.8	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	30.8	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	19.3	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	12.0	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.43	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	38.0	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4567
Date: : 17.03.2023
Sample No. : MSKGL/ED/2022-23/02/01294
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Near Main Gate		
Date of sampling :		17.02.2023 to 18.02.2023		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	95.6	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	54.8	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	44	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	50.2	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	27.4	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	59.4	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	28.7	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.72	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.02	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	31.1	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4568
Date: : 17.03.2023
Sample No. : MSKGL/ED/2022-23/02/01295
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		18.02.2023 to 19.02.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	82.8	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	45.6	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	9.6	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	42.3	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	32.4	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	25.3	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	21.2	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.63	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	22.8	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4569
Date: : 17.03.2023
Sample No. : MSKGL/ED/2022-23/02/01296
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Ammonium Terminal Station-1		
Date of sampling :		18.02.2023 to 19.02.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	92.4	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	51.3	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	9.9	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	46.2	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	48.1	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	27.5	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	39.5	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.37	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June, 1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June, 1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012, 3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	29.2	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4146
Date: : 24.02.2023
Sample No. : MSKGL/ED/2022-23/02/00947
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		04.01.2023 to 05.01.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	82.7	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	42.8	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	8.6	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	55.2	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	63.5	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	20.1	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	18.6	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.78	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.02	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	28.5	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4147
Date: : 24.02.2023
Sample No. : MSKGL/ED/2022-23/02/00948
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Near Main Gate		
Date of sampling :		04.01.2023 to 05.01.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	98.6	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	52.3	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	36.5	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	57.6	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	68.7	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	51.3	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	27.5	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.89	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.03	1	EPA-IO3.2 -June, 1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June, 1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012, 3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	32.6	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT


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

Report No. : WB/ED-4148
Date: 24.02.2023
Sample No. : MSKGL/ED/2022-23/02/00949
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		05.01.2023 to 06.01.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	78.6	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	45.4	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	7.2	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	35.6	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	47.3	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	20.9	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	14.6	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	25.3	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	25.3	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4149
Date : 24.02.2023
Sample No. : MSKGL/ED/2022-23/02/00950
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Ammonium Terminal Station-1		
Date of sampling :		05.01.2023 to 06.01.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	87.3	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	44.7	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	18.6	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	43.2	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	78.6	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	36.2	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	23.2	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.65	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	30.7	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4150
Date: : 24.02.2023
Sample No. : MSKGL/ED/2022-23/02/00951
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		30.01.2023 to 31.01.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	76.8	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	36.5	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	7.8	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	49.7	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	51.2	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	17.7	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	21.5	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.67	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.02	1	EPA-IO3.2 -June, 1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June, 1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012, 3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	33.7	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4151
Date: : 24.02.2023
Sample No. : MSKGL/ED/2022-23/02/00952
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Near Main Gate		
Date of sampling :		30.01.2023 to 31.01.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	89.8	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	48.5	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	28.7	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	47.8	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	51.4	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	40.6	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	31.4	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.78	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.03	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	27.6	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4152
Date : 24.02.2023
Sample No. : MSKGL/ED/2022-23/02/00953
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		31.01.2023 to 01.02.2023		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	69.9	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um)in $\mu\text{g}/\text{m}^3$	33.5	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2)in $\mu\text{g}/\text{m}^3$	6.8	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2)in $\mu\text{g}/\text{m}^3$	40.2	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	38.7	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	17.4	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	11.7	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.21	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP)in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff,: 2009
13	Benzene (C_6H_6)in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	21.8	100	Method of Air Samping 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-4153
Date: : 24.02.2023
Sample No. : MSKGL/ED/2022-23/02/00954
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Ammonium Terminal Station-1		
Date of sampling :		31.01.2023 to 01.02.2023		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	91.8	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	54.3	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	22.6	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	51.7	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	67.5	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	25.2	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	32.7	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.53	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	26.5	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT


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

Report No. : WB/ED-3876
Date: : 31.01.2023
Sample No. : MSKGL/ED/2022-23/12/01948
Sample Description : Ambient Air

Reference No. & Date: 4700016680

ANALYSIS RESULT

Location :		Near Main Gate		
Date of sampling :		06.12.2022 to 07.12.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	94.3	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	54.3	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	40.9	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	52.5	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	36.3	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	57.2	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	28.6	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.59	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.,: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	26.2	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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for Mitra S. K. Private Limited

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Head Office: Shrachi Centre (5th floor), 74B, A.J.C. Bose Road, Kolkata - 700 016, West Bengal, India.
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 Email : info@mitrask.com. Website: www.mitrask.com

Page 1 of 1

TEST REPORT


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

Report No. : WB/ED-3877
Date: : 31.01.2023
Sample No. : MSKGL/ED/2022-23/12/01949
Sample Description : Ambient Air

Reference No. & Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		06.12.2022 to 07.12.2022		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	76.9	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	32.6	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	9.6	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	30.6	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	27.2	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	18.6	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	15.4	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.38	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	36.1	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

Report Prepared By 

for Mitra S. K. Private Limited

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 Tel. : 91 33 40143000 / 22650006 / 22650007 Fax : 91 33 22650008
 Email : info@mitrask.com. Website: www.mitrask.com

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TEST REPORT


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

Report No. : WB/ED-3878
Date: : 31.01.2023
Sample No. : MSKGL/ED/2022-23/12/01950
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location	:	Ammonium Terminal Station -1		
Date of sampling	:	07.12.2022 to 08.12.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	88.3	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	50.2	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	8.4	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	45.9	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	57.1	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	24.3	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	22.3	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.47	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.,: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	24.8	100	Method of Air Samping 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

Report Prepared By 

for Mitra S. K. Private Limited

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TEST REPORT


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

Report No. : WB/ED-3879
Date: : 31.01.2023
Sample No. : MSKGL/ED/2022-23/12/01951
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		07.12.2022 to 08.12.2022		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	90.7	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	42.1	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	10.3	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	50.0	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	40.8	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	26.5	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	16.1	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.62	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	31.9	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

Report Prepared By 

for Mitra S. K. Private Limited

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 Email : info@mitrask.com. Website: www.mitrask.com

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TEST REPORT


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

Report No. : WB/ED-3880
Date : 31.01.2023
Sample No. : MSKGL/ED/2022-23/12/01952
Sample Description : Ambient Air

Reference No. & Date: 4700016680

ANALYSIS RESULT

Location	:	Priyambada		
Date of sampling	:	28.12.2022 to 29.12.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	68.5	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um)in $\mu\text{g}/\text{m}^3$	44.1	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2)in $\mu\text{g}/\text{m}^3$	8.9	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2)in $\mu\text{g}/\text{m}^3$	39.5	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	19.1	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	20.1	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	12.6	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.43	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP)in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff,: 2009
13	Benzene (C_6H_6)in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	30.6	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT


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

Report No. : WB/ED-3881
Date: : 31.01.2023
Sample No. : MSKGL/ED/2022-23/12/01953
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		28.12.2022 to 29.12.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	84.0	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	48.0	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	9.1	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	57.3	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	33.2	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	15.7	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	19.5	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.55	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff,: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	<20.0	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT


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

Report No. : WB/ED-3882
Date: : 31.01.2023
Sample No. : MSKGL/ED/2022-23/12/01954
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location	:	Near Main Gate		
Date of sampling	:	29.12.2022 to 30.12.2022		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	87.6	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	50.2	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	51.8	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	58.6	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	43.9	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	54.9	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	36.9	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.68	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	33.9	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

Report Prepared By 

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TEST REPORT


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

Report No. : WB/ED-3883
Date: : 31.01.2023
Sample No. : MSKGL/ED/2022-23/12/01955
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location	:	Ammonium Terminal Station -1		
Date of sampling	:	29.12.2022 to 30.12.2022		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	80.8	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	46.7	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	10.7	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	41.3	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	51.8	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	21.6	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	17.6	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.40	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff,: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	<20.0	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

Report Prepared By: 

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TEST REPORT

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

Report No. : WB/ED-3338
Date : 26.12.2022
Sample No. : MSKGL/ED/2022-23/12/00436
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		10.11.2022 to 11.11.2022		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	85.8	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	48.3	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	12.8	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	51.0	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	35.1	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	18.0	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	16.3	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.75	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.02	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	42.8	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

Report Prepared By 

for Mitra S. K. Private Limited




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TEST REPORT

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

Report No. : WB/ED-3339
Date: : 26.12.2022
Sample No. : MSKGL/ED/2022-23/12/00437
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		11.11.2022 to 12.11.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	80.7	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	42.9	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	8.7	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	35.3	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	19.7	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	22.1	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	15.1	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.51	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	36.1	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3340
Date: : 26.12.2022
Sample No. : MSKGL/ED/2022-23/12/00438
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Ammonium Terminal Station-1		
Date of sampling :		11.11.2022 to 12.11.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	81.6	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	50.2	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	8.0	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	47.3	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	51.6	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	34.2	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	24.2	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.53	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.,: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	30.5	100	Method of Air Samping 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3341
Date: : 26.12.2022
Sample No. : MSKGL/ED/2022-23/12/00439
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		28.11.2022 to 29.11.2022		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10µm) in µg/m ³	68.5	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5µm) in µg/m ³	35.2	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO ₂) in µg/m ³	7.9	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO ₂) in µg/m ³	30.0	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH ₃) in µg/m ³	26.2	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO ₃ + Acid Mist in µg/m ³	14.7	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in µg/m ³	13.9	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m ³	0.34	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in µg/m ³	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m ³	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m ³	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m ³	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C ₆ H ₆) in µg/m ³	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O ₃) in µg/m ³	30.3	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3343
Date: : 26.12.2022
Sample No. : MSKGL/ED/2022-23/12/00441
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		29.11.2022 to 30.11.2022		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	94.1	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	42.5	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	9.6	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	42.8	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	28.3	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	26.1	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	20.0	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.63	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.04	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	36.4	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3344
Date: : 26.12.2022
Sample No. : MSKGL/ED/2022-23/12/00442
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Ammonium Terminal Station-1		
Date of sampling :		29.11.2022 to 30.11.2022		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	89.8	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	51.7	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	6.5	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	37.2	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	42.8	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	22.8	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	19.5	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.29	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.02	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	25.7	100	Method of Air Samping 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3242
Date: : 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00001
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		10.10.2022 to 11.10.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	71.9	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	34.3	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	7.7	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	35.7	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	30.7	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	29.2	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	15.9	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.51	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	37.6	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3243
Date: : 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00002
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		10.10.2022 to 11.10.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	85.9	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	40.9	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	6.8	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	45.0	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	21.8	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	21.9	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	13.7	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.89	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.02	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	31.7	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3244
Date: 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00003
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Near Main Gate		
Date of sampling :		11.10.2022 to 12.10.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	92.2	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	53.8	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	10.2	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	37.1	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	29.4	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	40.3	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	17.9	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.47	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.03	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	36.4	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3245
Date: : 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00004
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Ammonium Terminal Station-1		
Date of sampling :		11.10.2022 to 12.10.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	86.3	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	48.2	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	9.8	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	32.4	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	45.7	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	35.5	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	22.4	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.72	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.02	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff., 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	29.0	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3246
Date: : 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00005
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Priyambada		
Date of sampling :		26.10.2022 to 27.10.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	79.5	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	42.8	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	7.2	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	42.1	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	22.0	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	24.4	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	22.9	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.33	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.02	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.,: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	32.5	100	Method of Air Samping 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3247
Date : 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00006
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Near Main Gate		
Date of sampling :		26.10.2022 to 27.10.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	81.7	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	44.7	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	8.9	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	29.5	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	36.2	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	31.1	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	21.7	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.59	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	<0.01	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.,: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	22.0	100	Method of Air Samping 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3248
Date: : 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00007
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Durgachak		
Date of sampling :		27.10.2022 to 28.10.2022		
SI No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	97.3	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	51.3	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	8.5	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	55.8	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	35.4	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	35.7	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	26.4	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	1.29	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.03	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	24.9	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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TEST REPORT

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

Report No. : WB/ED-3249
Date: : 30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00008
Sample Description : Ambient Air

Reference No.& Date: 4700016680

ANALYSIS RESULT

Location :		Ammonium Terminal Station-1		
Date of sampling :		27.10.2022 to 28.10.2022		
Sl No	Parameters	RESULT	LIMIT	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10um) in $\mu\text{g}/\text{m}^3$	96.1	100	IS 5182: Part 23:2006 (Reaff. 2012)
2.	Particulate Matter (<2.5um) in $\mu\text{g}/\text{m}^3$	54.1	60	Lab Sop No. TPM/MSK/E/5/C Based on USEPA CFR 40, part 50 Appendix L, 2006/CPCB Vol. I
3.	Sulphur Dioxide (SO_2) in $\mu\text{g}/\text{m}^3$	11.6	80	IS 5182 : Part 2 :2001 (Reaff.2012)
4.	Nitrogen Dioxide (NO_2) in $\mu\text{g}/\text{m}^3$	41.5	80	IS 5182 : Part 6 :2006 (Reaff.2012)
5.	Ammonia (NH_3) in $\mu\text{g}/\text{m}^3$	53.4	400	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
6.	SO_3 + Acid Mist in $\mu\text{g}/\text{m}^3$	49.3	---	NIOSH 1977 (Method 187)
7.	Fluoride (F) in $\mu\text{g}/\text{m}^3$	15.9	---	IS 5182 (Part 13)- 1991
8	Carbon monoxide (as CO) in mg/m^3	0.91	2	IS 13270:1992, Rffm 2009
9	Lead (as Pb) in $\mu\text{g}/\text{m}^3$	0.04	1	EPA-IO3.2 -June,1999
10	Nickel (as Ni) in ng/m^3	<5.0	20	EPA-IO3.2 -June,1999
11	Arsenic (as As) in ng/m^3	<1.0	6	APHA 22 nd Edtn 2012,3114 C
12	Benzo(a)Pyrene (BaP) in ng/m^3	<0.5	1	IS:5182(Part-12):2004 Reaff.: 2009
13	Benzene (C_6H_6) in $\mu\text{g}/\text{m}^3$	<4.2	5	IS:5182(Part-11):2006
14	Ozone (as O_3) in $\mu\text{g}/\text{m}^3$	36.4	100	Method of Air Sampling 3 rd Edn By James P Lodge (Method 411)
NOTE: Limit as per CPCB notification, New Delhi, 18 th November 2009, for Ambient air quality				

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Monitoring Reports

Annexure-3

TEST REPORT**Name & Address of the Customer :****Indorama India Private Limited**Durgachak, Haldia, Dist. – Purba Medinipur,
Pin- 721602**Report No. :** WB/ED-4561**Date :** 17.03.2023**Sample No. :** MSKGL/ED/2022-23/03/00523-26**Sample Description :** Noise**Ref. No. & Date :** 4700013546, dtd:20.08.2021**ANALYSIS RESULT**

Location	Near DAP Gate	Near DG Room	Near Main Gate	Near Parking Area
Monitoring Date	11.03.2023 to 12.03.2023	11.03.2023 to 12.03.2023	13.03.2023 to 14.03.2023	13.03.2023 to 14.03.2023
Time (In Hrs.)	Hourly Leq dB(A)			
06.00-07.00	59.1	55.1	56.1	53.7
07.00-08.00	61.2	55.3	56.4	54.1
08.00-09.00	62.7	55.0	57.9	55.1
09.00-10.00	63.8	54.2	58.2	55.9
10.00-11.00	65.1	56.7	58.5	54.3
11.00-12.00	63.4	56.7	57.0	54.8
12.00-13.00	61.8	56.1	56.4	54.2
13.00-14.00	61.3	55.3	56.2	53.6
14.00-15.00	61.2	53.6	55.4	53.3
15.00-16.00	58.3	53.3	54.8	53.1
16.00-17.00	59.2	52.0	53.5	51.4
17.00-18.00	59.2	51.6	53.8	50.2
18.00-19.00	57.8	51.5	51.7	48.8
19.00-20.00	55.8	50.2	52.0	48.1
20.00-21.00	58.0	49.7	51.5	47.8
21.00-22.00	57.2	50.1	50.6	47.5
22.00-23.00	56.3	49.2	49.2	47.6
23.00-00.00	53.9	48.5	49.0	46.8
00.00-01.00	52.4	48.3	50.5	48.7
01.00-02.00	53.3	50.2	51.5	49.0
02.00-03.00	54.9	50.4	51.7	49.1
03.00-04.00	56.7	52.7	52.2	50.2
04.00-05.00	57.4	54.0	53.5	51.2
05.00-06.00	58.7	54.3	55.8	52.7
Results in Leq dB(A) Day Time	59.3	53.7	55.1	52.6
Results in Leq dB(A) Night Time	57.0	50.3	51.4	48.5

Noise Limit as per CPCB			NOTE : Day Time : 06.00 Hr.-22.00 Hr. Night Time:22.00 Hr.-06.00 Hr.
Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time	
Industrial	75	70	
Commercial	65	55	
Residential	55	45	
Silence	50	40	

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TEST REPORT**Name & Address of the Customer :****Indorama India Private Limited**

Durgachak, Haldia, Dist. – Purba Medinipur,

Pin- 721602

Report No. : WB/ED-3904**Date :** 31.01.2023**Sample No. :** MSKGL/ED/2022-23/03/00519-522**Sample Description :** Noise**Ref. No. & Date :** 4700013546, dtd:20.08.2021**ANALYSIS RESULT**

Location	Near DG Room	Near Main Gate	Near Parking Gate	Near DAP Gate
Monitoring Date	26.12.2022 to 27.12.2022	26.12.2022 to 27.12.2022	27.12.2022 to 28.12.2022	27.12.2022 to 28.12.2022
Time (In Hrs.)	Hourly Leq dB(A)			
06.00-07.00	55.2	56.1	48.8	63.3
07.00-08.00	55.9	57.0	50.9	65.2
08.00-09.00	56.5	58.5	52.5	65.1
09.00-10.00	57.4	59.4	53.5	66.6
10.00-11.00	56.8	60.2	54.6	67.6
11.00-12.00	57.5	61.2	56.2	67.7
12.00-13.00	57.9	62.2	56.7	67.3
13.00-14.00	58.1	61.0	55.9	65.2
14.00-15.00	56.4	61.2	54.8	63.6
15.00-16.00	55.8	59.5	53.1	63.1
16.00-17.00	55.0	58.7	53.4	62.3
17.00-18.00	54.2	57.8	53.5	61.0
18.00-19.00	52.3	56.7	51.9	61.0
19.00-20.00	52.0	55.8	52.4	60.3
20.00-21.00	52.5	54.7	51.3	59.5
21.00-22.00	49.0	54.8	50.7	59.4
22.00-23.00	49.3	53.5	48.2	59.9
23.00-00.00	48.9	53.2	47.7	59.2
00.00-01.00	47.9	51.0	46.4	58.6
01.00-02.00	50.7	51.9	49.0	59.6
02.00-03.00	51.4	53.0	48.9	58.8
03.00-04.00	51.8	53.9	47.8	60.0
04.00-05.00	53.4	54.8	49.1	61.0
05.00-06.00	54.1	55.4	50.4	62.2
Results in Leq dB(A) Day Time	54.7	57.2	51.5	63.3
Results in Leq dB(A) Night Time	51.5	55.5	51.0	60.3

Noise Limit as per CPCB			
Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time	NOTE : Day Time : 06.00 Hr.-22.00 Hr. Night Time:22.00 Hr.-06.00 Hr.
Industrial	75	70	
Commercial	65	55	
Residential	55	45	
Silence	50	40	

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Monitoring Reports

Annexure-4

TEST REPORT

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

Report No. : WB/ED-0166
Date : 27.04.2023
Sample No. : MSKGL/ED/2022-23/03/01725
Sample Description : Effluent Water
Sampling Location: ETP Treated Water
from Plant Outlet
Sample Drawn on: 30.03.2023

Reference No.& Date: 4700017438

ANALYSIS RESULT

Sl No.	Test Parameters	Unit	Result	Method
1.	pH value at 25° C	---	7.46	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	0.51	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	9.6	APHA (23rd Edition) 5210B : 2017
5.	Chemical Oxygen Demand (COD)	mg/l	37	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	0.07	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)

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TEST REPORT


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

Report No. : WB/ED-4705
Date : 30.03.2023
Sample No. : MSKGL/ED/2022-23/02/01236
Sample Description : Effluent Water
Sampling Location: ETP Treated Water
from Plant Outlet
Sample Drawn on: 17.02.2023

Reference No.& Date: 4700017438

ANALYSIS RESULT

Sl No.	Test Parameters	Unit	Result	Method
1.	pH value at 25° C	----	7.52	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	0.52	APHA (23rd Edition) 4500 -F- C/D: 2017
3.	Total Suspended Solid	mg/l	<2.5	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	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_(O)
8.	Dissolved Phosphate (as P)	mg/l	0.22	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)

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TEST REPORT

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

Report No. :WB/ED-4360
Date: :28.02.2023
Sample No. : MSKGL/ED/2022-23/02/00129
Sample Description : Effluent Water
Sampling Location: ETP Treated Water
from Plant Outlet
Sample Drawn on: 30.01.2023

Reference No.& Date: 4700017438

ANALYSIS RESULT

SI No.	Test Parameters	Unit	Result	Method
1.	pH value at 25.5° C	---	7.80	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	0.52	APHA (23rd Edition) 4500 -F- C/D: 2017
3.	Total Suspended Solid	mg/l	5.1	APHA (23rd Edition) 2540D : 2017
4.	Biochemical Oxygen Demand	mg/l	<2.0	APHA (23rd Edition) 5210B : 2017
5.	Chemical Oxygen Demand	mg/l	<4.0	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	0.33	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

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TEST REPORT


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

Report No. : WB/ED-3885
Date : 31.01.2023
Sample No. : MSKGL/ED/2022-23/01/00061
Sample Description : Effluent Water
Sampling Location: ETP Outlet Water
 From Final Outside Drain
Sample Drawn on: 29.12.2022

Reference No.& Date: 4700017438

ANALYSIS RESULT

Sl No.	Test Parameters	Unit	Result	Method
1.	pH value at 23° C	----	7.65	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	0.65	APHA (23rd Edition) 4500 - F C/D, 2017_(O)
3.	Total Suspended Solid	mg/l	14	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	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	0.21	APHA (23rd Edition) 4500- P B, D 2017_(O)
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

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TEST REPORT

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

Report No. : WB/ED-3352
Date: :31.12.2022
Sample No. : MSKGL/ED/2022-23/11/00779
Sample Description : Effluent Water
Sampling Location:ETP Outlet Water
 From Final Outside Drain
Sample Drawn on: 11.11.2022

Reference No.& Date: 4700017438

ANALYSIS RESULT

SI No.	Test Parameters	Unit	Result	Method
1.	pH value at 25°C	---	7.68	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	0.54	APHA (23rd Edition) 4500 - F C/D, 2017_(O)
3.	Total Suspended Solid	mg/l	<2.5	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	3.1	APHA (23rd Edition) 4500-NH3-F 2017_(O)
8.	Dissolved Phosphate (as P)	mg/l	<0.05	APHA (23rd Edition) 4500- P B, D 2017_(O)
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	2.0	APHA (23rd Edition) 4500-NH3-F 2017_(O)

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TEST REPORT

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

Report No. : WB/ED-3251
Date: :30.11.2022
Sample No. : MSKGL/ED/2022-23/11/00108
Sample Description : Effluent Water
Sampling Location:ETP Outlet Water
From Final Outside Drain
Sample Drawn on: 31.10.2022

Reference No.& Date: 4700017438

ANALYSIS RESULT

SI No.	Test Parameters	Unit	Result	Method
1.	pH value at 25°C	---	7.85	APHA (23rd Edition) 4500 -H-B : 2017
2.	Fluoride (as F)	mg/l	<0.1	APHA (23rd Edition) 4500 - F C/D, 2017_(O)
3.	Total Suspended Solid	mg/l	6.7	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	0.30	APHA (23rd Edition) 4500-NH3-F 2017_(O)
8.	Dissolved Phosphate (as P)	mg/l	<0.05	APHA (23rd Edition) 4500- P B, D 2017_(O)
9.	Total Kjeldahl Nitrogen (as N)	mg/l	0.38	APHA (23rd Edition) 2017 4500 -Norg B: 2017
10.	Free Ammoniacal Nitrogen (as N)	mg/l	0.16	APHA (23rd Edition) 4500-NH3-F 2017_(O)

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Ground Water Monitoring Reports

TEST REPORT

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

Report No. : WB/ED-4721
Date: :29.03.2023
Sample No. : MSKGL/ED/2022-23/03/00516
Sample Description : Ground Water
Sampling Location: Deep Tube Well-1
Sample Drawn on: 13.03.2023

Reference No.& Date: 4700016682

ANALYSIS RESULT

SI No.	Test Parameters	Unit	Result	Method
1.	Colour	Hazen	<5.0	APHA (23rd Edition) 2120B : 2017
2.	pH value at 31° C	----	7.20	APHA (23rd Edition) 4500 -H-B : 2017
3.	Turbidity	N.T.U.	8.0	APHA (23rd Edition) 2130B : 2017
4.	Total Dissolved Solids	mg/l	798	APHA (23rd Edition) 2540C : 2017
5.	Aluminium (as Al)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
6.	Barium (as Ba)	mg/l	<0.05	APHA (23rd Edition) 3120B 2017 (ICP OES)_(O)
7.	Boron (as B)	mg/l	<0.5	APHA (23 rd Edition) 2540C_(O)
8.	Calcium (as Ca)	mg/l	52	APHA (23rd Edition) 3500 Ca B, 2017_(O)
9.	Chloride (as Cl)	mg/l	263	APHA (23rd Edition) 4500 -Cl B : 2017
10.	Copper (as Cu)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
11.	Fluoride (as F)	mg/l	0.37	APHA (23rd Edition) 4500 -F- C/D: 2017
12.	Iron (as Fe)	mg/l	0.29	APHA (23rd Edition) 3500 Fe B : 2017
13.	Manganese (as Mn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
14.	Nitrate (as NO ₃)	mg/l	<0.5	APHA (23rd Edition) 4500 -NO ₃ - _ E: 2017
15.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	<0.001	APHA (23rd Edition) 5530C : 2017
16.	Selenium (as Se)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
17.	Silver (as Ag)	mg/l	<0.005	APHA (23rd Edition) 3120B 2017_(O)
18.	Sulphate (as SO ₄)	mg/l	<1.0	APHA (23rd Edition) 4500 -SO ₄ - E : 2017
19.	Total Hardness (as CaCO ₃)	mg/l	249	APHA (23rd Edition) , 2340 C : 2017
20.	Cadmium (as Cd)	mg/l	<0.001	APHA (23rd Edition) 3120B 2017_(O)
21.	Cyanide (as CN)	mg/l	<0.02	APHA (23rd Edition) 4500 -CN- F: 2017
22.	Lead (as Pb)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
23.	Mercury (as Hg)	mg/l	<0.001	IS 3025 (Part 48)
24.	Nickel (as Ni)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017



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Sl No.	Test Parameters	Unit	Result	Method
25	Arsenic(as As)	mg/l	<0.005	APHA (23rd Edition)3120B 2017 (ICP OES)_(O)
26	Total Chromium (as Cr)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
27	Zinc (as Zn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
28	Sulphide (as H ₂ S)	mg/l	<0.01	APHA 23rd Edition, 4500 S2- D: 2017
29	Magnesium (as Mg ⁺²)	mg/l	28	APHA (23rd Edition) 3500 Mg B,2017_(O)
30	Total Alkalinity (as CaCO ₃)	mg/l	303	APHA 23rd Edtn-2017, 2320B_(O)
31	E.coli	/100ml	Not detected	APHA 23rd Edition 9221 F_(O)
32	Total coliform	MPN/100ml	6.8	APHA 23rd Edition 9221 B_(O)

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TEST REPORT

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

Report No. : WB/ED-4722
Date : 29.03.2023
Sample No. : MSKGL/ED/2022-23/03/00517
Sample Description : Ground Water
Sampling Location: Deep Tube Well-2
Sample Drawn on: 13.03.2023

Reference No.& Date: 4700016682

ANALYSIS RESULT

SI No.	Test Parameters	Unit	Result	Method
1.	Colour	Hazen	<5.0	APHA (23rd Edition) 2120B : 2017
2.	pH value at 30° C	----	7.10	APHA (23rd Edition) 4500 -H-B : 2017
3.	Turbidity	N.T.U.	22	APHA (23rd Edition) 2130B : 2017
4.	Total Dissolved Solids	mg/l	1132	APHA (23rd Edition) 2540C : 2017
5.	Aluminium (as Al)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
6.	Barium (as Ba)	mg/l	<0.05	APHA (23rd Edition) 3120B 2017 (ICP OES)_(O)
7.	Boron (as B)	mg/l	<0.5	APHA (23 rd Edition) 2540C_(O)
8.	Calcium (as Ca)	mg/l	83	APHA (23rd Edition) 3500 Ca B, 2017_(O)
9.	Chloride (as Cl)	mg/l	480	APHA (23rd Edition) 4500 -Cl B : 2017
10.	Copper (as Cu)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
11.	Fluoride (as F)	mg/l	0.42	APHA (23rd Edition) 4500 -F- C/D: 2017
12.	Iron (as Fe)	mg/l	0.94	APHA (23rd Edition) 3500 Fe B : 2017
13.	Manganese (as Mn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
14.	Nitrate (as NO ₃)	mg/l	<0.5	APHA (23rd Edition) 4500 -NO ₃ - _ E: 2017
15.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	<0.001	APHA (23rd Edition) 5530C : 2017
16.	Selenium (as Se)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
17.	Silver (as Ag)	mg/l	<0.005	APHA (23rd Edition) 3120B 2017_(O)
18.	Sulphate (as SO ₄)	mg/l	<1.0	APHA (23rd Edition) 4500 -SO ₄ - E : 2017
19.	Total Hardness (as CaCO ₃)	mg/l	367	APHA (23rd Edition) , 2340 C : 2017
20.	Cadmium (as Cd)	mg/l	<0.001	APHA (23rd Edition) 3120B 2017_(O)
21.	Cyanide (as CN)	mg/l	<0.02	APHA (23rd Edition) 4500 -CN- F: 2017
22.	Lead (as Pb)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
23.	Mercury (as Hg)	mg/l	<0.001	IS 3025 (Part 48)
24.	Nickel (as Ni)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017



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Sl No.	Test Parameters	Unit	Result	Method
25	Arsenic(as As)	mg/l	<0.005	APHA (23rd Edition)3120B 2017 (ICP OES)_(O)
26	Total Chromium (as Cr)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
27	Zinc (as Zn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
28	Sulphide (as H ₂ S)	mg/l	<0.01	APHA 23rd Edition, 4500 S2- D: 2017
29	Magnesium (as Mg ⁺²)	mg/l	38	APHA (23rd Edition) 3500 Mg B,2017_(O)
30	Total Alkalinity (as CaCO ₃)	mg/l	327	APHA 23rd Edtn-2017, 2320B_(O)
31	E.coli	/100ml	Not detected	APHA 23rd Edition 9221 F_(O)
32	Total coliform	MPN/100ml	11	APHA 23rd Edition 9221 B_(O)

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for Mitra S. K. Private Limited


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TEST REPORT

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

Report No. : WB/ED-4723
Date: 29.03.2023
Sample No. : MSKGL/ED/2022-23/03/00518
Sample Description : Ground Water
Sampling Location: (Kumarchak Village)
 Beside Plant
Sample Drawn on: 13.03.2023

Reference No.& Date: 4700016682

ANALYSIS RESULT

SI No.	Test Parameters	Unit	Result	Method
1.	Colour	Hazen	<5.0	APHA (23rd Edition) 2120B : 2017
2.	pH value at 27° C	----	6.90	APHA (23rd Edition) 4500 -H-B : 2017
3.	Turbidity	N.T.U.	3.2	APHA (23rd Edition) 2130B : 2017
4.	Total Dissolved Solids	mg/l	1196	APHA (23rd Edition) 2540C : 2017
5.	Aluminium (as Al)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
6.	Barium (as Ba)	mg/l	<0.05	APHA (23rd Edition) 3120B 2017 (ICP OES)_(O)
7.	Boron (as B)	mg/l	<0.5	APHA (23 rd Edition) 2540C_(O)
8.	Calcium (as Ca)	mg/l	51	APHA (23rd Edition) 3500 Ca B, 2017_(O)
9.	Chloride (as Cl)	mg/l	523	APHA (23rd Edition) 4500 -Cl B : 2017
10.	Copper (as Cu)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
11.	Fluoride (as F)	mg/l	0.34	APHA (23rd Edition) 4500 -F- C/D : 2017
12.	Iron (as Fe)	mg/l	0.08	APHA (23rd Edition) 3500 Fe B : 2017
13.	Manganese (as Mn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
14.	Nitrate (as NO ₃)	mg/l	1.3	APHA (23rd Edition) 4500 -NO ₃ - _ E : 2017
15.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	<0.001	APHA (23rd Edition) 5530C : 2017
16.	Selenium (as Se)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
17.	Silver (as Ag)	mg/l	<0.005	APHA (23rd Edition) 3120B 2017_(O)
18.	Sulphate (as SO ₄)	mg/l	89	APHA (23rd Edition) 4500 -SO ₄ - E : 2017
19.	Total Hardness (as CaCO ₃)	mg/l	326	APHA (23rd Edition) , 2340 C : 2017
20.	Cadmium (as Cd)	mg/l	<0.001	APHA (23rd Edition) 3120B 2017_(O)
21.	Cyanide (as CN)	mg/l	<0.02	APHA (23rd Edition) 4500 -CN- F : 2017
22.	Lead (as Pb)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
23.	Mercury (as Hg)	mg/l	<0.001	IS 3025 (Part 48)
24.	Nickel (as Ni)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017



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Sl No.	Test Parameters	Unit	Result	Method
25	Arsenic(as As)	mg/l	<0.005	APHA (23rd Edition)3120B 2017 (ICP OES)_(O)
26	Total Chromium (as Cr)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
27	Zinc (as Zn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
28	Sulphide (as H ₂ S)	mg/l	<0.01	APHA 23rd Edition, 4500 S2- D: 2017
29	Magnesium (as Mg ⁺²)	mg/l	48	APHA (23rd Edition) 3500 Mg B,2017_(O)
30	Total Alkalinity (as CaCO ₃)	mg/l	186	APHA 23rd Edtn-2017, 2320B_(O)
31	E.coli	/100ml	Not detected	APHA 23rd Edition 9221 F_(O)
32	Total coliform	MPN/100ml	17	APHA 23rd Edition 9221 B_(O)

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TEST REPORT

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

Report No. :WB/ED-3905
 Date: :31.01.2023
 Sample No. : MSKGL/ED/2022-23/12/01591
 Sample Description : Ground Water
 Sampling Location: Deep Tube Well-1
 Sample Drawn on: 27.12.2022

Reference No.& Date: 4700016682

ANALYSIS RESULT

SI No.	Test Parameters	Unit	Result	Method
1.	Colour	Hazen	<5.0	APHA (23rd Edition) 2120B : 2017
2.	pH value at 20° C	----	8.06	APHA (23rd Edition) 4500 -H-B : 2017
3.	Turbidity	N.T.U.	32	APHA (23rd Edition) 2130B : 2017
4.	Total Dissolved Solids	mg/l	888	APHA (23rd Edition) 2540C : 2017
5.	Aluminium (as Al)	mg/l	<0.01	APHA (23rd Edition)3120 B : 2017
6.	Barium (as Ba)	mg/l	<0.05	APHA (23rd Edition)3120B 2017 (ICP OES)_(O)
7.	Boron (as B)	mg/l	<0.5	APHA (23 rd Edition)2540C_(O)
8.	Calcium (as Ca)	mg/l	56	APHA (23rd Edition) 3500 Ca B,2017_(O)
9.	Chloride (as Cl)	mg/l	261	APHA (23rd Edition) 4500 -Cl B : 2017
10.	Copper (as Cu)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
11.	Fluoride (as F)	mg/l	0.43	APHA (23rd Edition)4500 - F C/D, 2017_(O)
12.	Iron (as Fe)	mg/l	2.6	APHA (23rd Edition) 3500 Fe B : 2017
13.	Manganese (as Mn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
14.	Nitrate (as NO ₃)	mg/l	<0.5	APHA (23rd Edition) 4500 -NO ₃ - _E: 2017
15.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	<0.001	APHA (23rd Edition) 5530C : 2017
16.	Selenium (as Se)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
17.	Silver (as Ag)	mg/l	<0.005	APHA (23rd Edition)3120B 2017_(O)
18.	Sulphate (as SO ₄)	mg/l	<1.0	APHA (23rd Edition) 4500 -SO ₄ - E : 2017
19.	Total Hardness (as CaCO ₃)	mg/l	247	APHA (23rd Edition) , 2340 C : 2017
20.	Cadmium (as Cd)	mg/l	<0.001	APHA (23rd Edition)3120B 2017_(O)
21.	Cyanide (as CN)	mg/l	<0.02	APHA (23rd Edition) 4500 -CN- F: 2017
22.	Lead (as Pb)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
23.	Mercury (as Hg)	mg/l	<0.001	IS 3025 (Part 48): 1994
24.	Nickel (as Ni)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017

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Sl No.	Test Parameters	Unit	Result	Method
25	Arsenic(as As)	mg/l	<0.005	APHA (23rd Edition)3120B 2017 (ICP OES)_(O)
26	Total Chromium (as Cr)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
27	Zinc (as Zn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
28	Sulphide (as H ₂ S)	mg/l	<0.01	APHA 23rd Edition, 4500 S2- D: 2017
29	Magnesium (as Mg ⁺²)	mg/l	25	APHA (23rd Edition) 3500 Mg B,2017_(O)
30	Total Alkalinity (as CaCO ₃)	mg/l	341	APHA 23rd Edtn-2017, 2320B_(O)
31	E.coli	/100ml	Not Detected	APHA 23rd Edition 9221 F_(O)
32	Total coliform	MPN/100ml	14	APHA 23rd Edition 9221 B_(O)

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TEST REPORT

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

Report No. : WB/ED-3906
 Date: : 31.01.2023
 Sample No. : MSKGL/ED/2022-23/12/01592
 Sample Description : Ground Water
 Sampling Location: Deep Tube Well-2
 Sample Drawn on: 27.12.2022

Reference No.& Date: 4700016682

ANALYSIS RESULT

Sl No.	Test Parameters	Unit	Result	Method
1.	Colour	Hazen	<5.0	APHA (23rd Edition) 2120B : 2017
2.	pH value at 20° C	----	8.34	APHA (23rd Edition) 4500 -H-B : 2017
3.	Turbidity	N.T.U.	4.6	APHA (23rd Edition) 2130B : 2017
4.	Total Dissolved Solids	mg/l	1226	APHA (23rd Edition) 2540C : 2017
5.	Aluminium (as Al)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
6.	Barium (as Ba)	mg/l	<0.05	APHA (23rd Edition) 3120B 2017 (ICP OES)_(O)
7.	Boron (as B)	mg/l	<0.5	APHA (23 rd Edition) 2540C_(O)
8.	Calcium (as Ca)	mg/l	85	APHA (23rd Edition) 3500 Ca B, 2017_(O)
9.	Chloride (as Cl)	mg/l	474	APHA (23rd Edition) 4500 -Cl B : 2017
10.	Copper (as Cu)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
11.	Fluoride (as F)	mg/l	0.36	APHA (23rd Edition) 4500 - F C/D, 2017_(O)
12.	Iron (as Fe)	mg/l	0.40	APHA (23rd Edition) 3500 Fe B : 2017
13.	Manganese (as Mn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
14.	Nitrate (as NO ₃)	mg/l	<0.5	APHA (23rd Edition) 4500 -NO ₃ - E: 2017
15.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	<0.001	APHA (23rd Edition) 5530C : 2017
16.	Selenium (as Se)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
17.	Silver (as Ag)	mg/l	<0.005	APHA (23rd Edition) 3120B 2017_(O)
18.	Sulphate (as SO ₄)	mg/l	1.5	APHA (23rd Edition) 4500 -SO ₄ - E : 2017
19.	Total Hardness (as CaCO ₃)	mg/l	388	APHA (23rd Edition) , 2340 C : 2017
20.	Cadmium (as Cd)	mg/l	<0.001	APHA (23rd Edition) 3120B 2017_(O)
21.	Cyanide (as CN)	mg/l	<0.02	APHA (23rd Edition) 4500 -CN- F: 2017
22.	Lead (as Pb)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
23.	Mercury (as Hg)	mg/l	<0.001	IS 3025 (Part 48): 1994
24.	Nickel (as Ni)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017

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Sl No.	Test Parameters	Unit	Result	Method
25	Arsenic(as As)	mg/l	<0.005	APHA (23rd Edition)3120B 2017 (ICP OES) (O)
26	Total Chromium (as Cr)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
27	Zinc (as Zn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
28	Sulphide (as H ₂ S)	mg/l	<0.01	APHA 23rd Edition, 4500 S2- D: 2017
29	Magnesium (as Mg ⁺²)	mg/l	42	APHA (23rd Edition) 3500 Mg B,2017_(O)
30	Total Alkalinity (as CaCO ₃)	mg/l	314	APHA 23rd Edtn-2017, 2320B_(O)
31	E.coli	/100ml	Not Detected	APHA 23rd Edition 9221 F_(O)
32	Total coliform	MPN/100ml	<1.8	APHA 23rd Edition 9221 B_(O)

Report Prepared By 
 for Mitra S. K. Private Limited

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TEST REPORT

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

Report No. : WB/ED-3907
 Date: : 31.01.2023
 Sample No. : MSKGL/ED/2022-23/12/01593
 Sample Description : Ground Water
 Sampling Location: (Kumarchak Village)
 Beside Plant
 Sample Drawn on: 27.12.2022

Reference No. & Date: 4700016682

ANALYSIS RESULT

SI No.	Test Parameters	Unit	Result	Method
1.	Colour	Hazen	<5.0	APHA (23rd Edition) 2120B : 2017
2.	pH value at 20° C	----	8.45	APHA (23rd Edition) 4500 -H-B : 2017
3.	Turbidity	N.T.U.	<1.0	APHA (23rd Edition) 2130B : 2017
4.	Total Dissolved Solids	mg/l	62	APHA (23rd Edition) 2540C : 2017
5.	Aluminium (as Al)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
6.	Barium (as Ba)	mg/l	<0.05	APHA (23rd Edition) 3120B 2017 (ICP OES)_(O)
7.	Boron (as B)	mg/l	<0.5	APHA (23rd Edition) 2540C_(O)
8.	Calcium (as Ca)	mg/l	9.4	APHA (23rd Edition) 3500 Ca B, 2017_(O)
9.	Chloride (as Cl)	mg/l	8.5	APHA (23rd Edition) 4500 -Cl B : 2017
10.	Copper (as Cu)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
11.	Fluoride (as F)	mg/l	0.10	APHA (23rd Edition) 4500 - F C/D, 2017_(O)
12.	Iron (as Fe)	mg/l	<0.05	APHA (23rd Edition) 3500 Fe B : 2017
13.	Manganese (as Mn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
14.	Nitrate (as NO ₃)	mg/l	0.62	APHA (23rd Edition) 4500 -NO ₃ - _E: 2017
15.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	<0.001	APHA (23rd Edition) 5530C : 2017
16.	Selenium (as Se)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
17.	Silver (as Ag)	mg/l	<0.005	APHA (23rd Edition) 3120B 2017_(O)
18.	Sulphate (as SO ₄)	mg/l	1.7	APHA (23rd Edition) 4500 -SO ₄ - E : 2017
19.	Total Hardness (as CaCO ₃)	mg/l	27	APHA (23rd Edition) , 2340 C : 2017
20.	Cadmium (as Cd)	mg/l	<0.001	APHA (23rd Edition) 3120B 2017_(O)
21.	Cyanide (as CN)	mg/l	<0.02	APHA (23rd Edition) 4500 -CN- F: 2017
22.	Lead (as Pb)	mg/l	<0.005	APHA (23rd Edition) 3120 B : 2017
23.	Mercury (as Hg)	mg/l	<0.001	IS 3025 (Part 48): 1994
24.	Nickel (as Ni)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017

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Sl No.	Test Parameters	Unit	Result	Method
25	Arsenic(as As)	mg/l	<0.005	APHA (23rd Edition)3120B 2017 (ICP OES) (O)
26	Total Chromium (as Cr)	mg/l	<0.01	APHA (23rd Edition) 3120 B : 2017
27	Zinc (as Zn)	mg/l	<0.02	APHA (23rd Edition) 3120 B : 2017
28	Sulphide (as H ₂ S)	mg/l	<0.01	APHA 23rd Edition, 4500 S2- D: 2017
29	Magnesium (as Mg ⁺²)	mg/l	<0.96	APHA (23rd Edition) 3500 Mg B,2017_(O)
30	Total Alkalinity (as CaCO ₃)	mg/l	39	APHA 23rd Edtn-2017, 2320B_(O)
31	E.coli	/100ml	Not Detected	APHA 23rd Edition 9221 F_(O)
32	Total coliform	MPN/100ml	21	APHA 23rd Edition 9221 B_(O)

Report Prepared By

 for Mitra S. K. Private Limited
 Authorised Signatory

- The results relate only to the item(s) tested.
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