

Letter No. HIL/EHS/02/23

Date: 10.05.2023

To,

**The Director
Ministry of Environment, Forest & Climate Change
Bhubaneswar, Odisha**

Sub- Submission of Half Yearly Compliance Report

Sir,

We are enclosing our six month compliance report for the period from October- 2022 to March-2023, along with fiber dust reports, air ambient quality monitoring reports, stack monitoring reports & water quality monitoring reports.

This is for your kind perusal.

Thanking You

For HIL Limited

Unit Head

✓ Email: To- roez.bsr-mef@nic.in

CC: To State Pollution Control Board, BBSR

CC: To Regional Pollution Officer, Balasore

Name Of Project: HIL Limited (Formerly Hyderabad Industries Ltd.)

Environmental Clearance Letter No.J-11011/428/2006-IA II (I) Dated 11.10.2007

Compliance Period: From October 2022 to March 2023

Sl.	Specific Conditions	Compliance
A.	<p>SPECIFIC CONDITIONS :</p> <ul style="list-style-type: none"> i) The project proponent shall adhere to the prescribed BIS standards and laws regarding use and handling of asbestos, safety of employees etc., Raw Materials like asbestos fiber and cement shall be transported in closed containers. Asbestos fiber shall be brought in palletized form in impermeable bags and under compressed condition. ii) Only Chrysotile white asbestos fiber shall be used. Blue asbestos shall not be utilized as raw material in the manufacturing process. A written commitment in this regard shall be furnished within a period of one month. iii) There shall be no manual handling/opening of asbestos fiber bags. The company shall install fully automatic asbestos fiber debagging system before commissioning the unit. iv) Fugitive emissions shall be controlled by bringing cement in closed tankers, fly ash in covered trucks and asbestos in impervious bags opening inside a closed mixer. Pulse jet type bag filters shall be provided to fiber mill, Bag opening device (BOD), Cement and Fly ash silos to control emissions. Bag filters shall also be provided to bag shredder and to cement silo to collect the dust and recycle it into the process. Fugitive emissions generated from hopper of Jaw crusher and Pulverizer shall be channelized through hood with proper suction arrangement, bag filter and stack. Cement, fly ash and gypsum shall be stored in Silos to control fugitive emissions. v) The company shall comply with total dust emission limit of 2 mg/Nm³ as notified under the Environment (Protection) Act, 1986. Adequate measures will be adopted to control the process emission and ensure that the stack emission of asbestos fiber shall not exceed the emission limit of 0.2 fiber/cc. Asbestos fiber in work zone environment shall be maintained within 0.1 fiber/cc. 	<p>As prescribed by the BIS standards, we are always following the laws and standards relating to handling of Asbestos and Safety of employees. The Asbestos fibre are transported by closed container in palletized form in impermeable bags under compressed condition. Cement also transported in plastic bags on trucks, those bags were covered by tarpaulin.</p> <p>For manufacturing of Asbestos Sheet, we are using only the Chrysotile white Asbestos fiber as a raw material in the manufacturing process of our plant.</p> <p>Opening of fibre bags are not done manually, the impermeable bags under compressed condition fiber are feed to automatic Bag Opening Device (BOD) through inclined belt conveyor. Bags are open automatically inside the BOD (closed system). One dust collector also connected to the BOD to shock and collect all dust particles, which generated inside the system.</p> <p>Cements are coming in covered trucks and bulker, Fly-ash coming through bulker only in closed tankers and transferred directly to silos through pneumatic system. Asbestos are coming in covered truck in impervious bags. Pulsejet type bag filters with proper suction arrangement has been provided to the fibre mill, bag opening device (BOD), fiber bag shredder & storage silo to collect the dust and recycle it into process. Like that cement & fly-ash silo also have dust collector to collect the dust & recycle it into process. We have installed separate dust collector with bag filter for pulverizer to collect dust and used in the process. Cement and fly-ash are stored in closed sealed Silo.</p> <p>We are producing the test report of total dust emission, stack emission of asbestos fiber of our own and authorized agencies. This shows work place dust levels are less than permissible limit (TLV 0.1) and stack emissions are less than 0.2 f/cc of air. Copy of test report are attached. We are taking immediate corrective & preventive action to control spillage & leakage of dust particles, if any.</p>



	<ul style="list-style-type: none"> vi) Bags containing asbestos fiber shall be stored in enclosed area to avoid fugitive emissions of asbestos fiber from damaged bags, if any. The cut and damaged fiber bags shall immediately be repaired. Empty fiber bags will be shredded into fine particles in a bag shredder and recycled into the process. Piling of AC sheets shall be done in wet condition only. vii) Proper housekeeping shall be maintained within the plant premises. Process machinery, exhaust and ventilation systems shall be laid in accordance with Factories Act. Better house keeping practices shall be adopted for improvement of the environment within the work environment also. These include <ul style="list-style-type: none"> a) All monitoring transfer points shall be connected to dust extraction system. b) Leakages or dust from machines and ducts shall be plugged. c) Floor shall be cleaned by vacuum cleaner only. d) Enclosed belt conveyer shall be used instead of manual transportation of asbestos within the premises. viii) Regular measurement of pollutants (SPM, Asbestos fiber count) in the work zone area and stacks(s) shall be undertaken by the Project proponents. In addition, the asbestos fiber count in the work zone area shall be monitored by an Independent monitoring agency like NIOH/ITRC/NCB or any other approved agency and reports submitted to the Ministry's Regional Office at Bhubaneswar/OPCB and CPCB. ix) Total water requirement from ground water shall not exceed 500 m³/day and prior permission for the drawl of ground water from bore wells shall be obtained from the State Ground Water Board/ Central Ground Water Authority (SGWB/CGWA). All the recommendations of the SGWA/CGWA shall be implemented in time bound manner. All the treated effluent shall be recycled and reused in the manufacturing process. No process water shall be discharged outside the premises and 'Zero' discharge shall be maintained. All the domestic wastewater shall be treated in septic tank followed by soak pit and used for green belt development. 	<p>We are storing all asbestos bags in our fiber godown to avoid fugitive emission. The cut & damaged fibre bags immediately repaired. Empty fibre bags from BOD is being shredded into fine particle in a bag shredder, within closed container and recycled it into the process immediately.</p> <p>Maintaining good housekeeping within the plant premises on daily basis. Vacuum cleaners using for floor cleaning at raw material handling section. We are adopting wet mopping procedure for floor area. We are maintaining very good house keeping as per rules and procedures stipulated therein.</p> <p>All monitoring transfer points are connected to dust extraction system.</p> <p>Monitoring on daily basis to find out dust leakage & immediate action taken to control leakage and maintain area clean.</p> <p>We have two well-maintained vacuum cleaner to clean floor area, on daily basis.</p> <p>Asbestos bags are moved within the premises in palletized unit, than feed on to conveyor that leads to BOD.</p> <p>We have appointed M/s. Visiontek Consultancy Services Pvt. Limited, Bhubaneswar, M/s Visontek is accredited by MoEF and Empaneled by SPCB for regular monitoring & testing of work zone area & Stacks. Reports enclosed herewith & also submitting to Ministry of Regional Office and at OSPCB.</p> <p>Previously our water requirement per day was 500 m³/ day, now it is revised & we have taken permission from Ministry of Water Resources, Central Ground Water Authority for drawing of ground water less than 150 m³/day. We have three Nos. of cone tank & one waste recirculation tank for recycling the process water and reused in the manufacturing process.</p> <p>We have completed rain water harvesting project & maintaining the same. Quantity of ground water recharge 78396.00 m³/ year.</p> <p>All domestic wastewater treated in septic tank followed by soak pit and treated in STP (Capacity 25 KL/ D) & water reused for green belt development.</p>
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	<ul style="list-style-type: none"> x) The company shall ensure that the entire solid waste generated including process rejects, asbestos residue, cement, fly ash, dust from bag filters and empty asbestos bag shall be recycled back in the manufacturing process. Process sludge shall be 100% recycled and reused in the process after process in Ball mill and Pulverizer. Hazardous waste shall be ground in dust proof pulverizer with integrated bag filter and recycled back to the process. Asbestos fibers which cannot be further recycled due to contamination of iron dust shall be stored in HDPE lined secured landfill. The disposal facilities for asbestos waste shall be in accordance with the Bureau of Indian Standard Code. xi) Regular medical examination of the workers and health monitoring of all the employees shall be carried out and if cases of asbestosis are detected, necessary compensation shall be arranged under the existing laws. A competent occupational health physician shall be appointed to carry out medical surveillance. Occupational health of all the workers shall be monitored for lung function test, chest x-ray, sputum for acid-fast-bacilli (AFC) and asbestos body (AB), urine for sugar and albumen, blood tests for TLC, DLC, ESR, Hb and records maintained for at least 40 years from the beginning of the employment or 15 years after the retirement or cessation of employment whichever is later. Occupational Health Surveillance shall be carried out as per the directives of the Hon'ble Supreme Court. xii) To educate the workers, all the work places where asbestos dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects. xiii) Green belt shall be developed in 34,200m² out of total 87,500 m² area with local species in consultation with EFO as per CPCB guidelines. 	<p>We have one Ball Mill and one Pulverizer unit to recycling the entire solid and semi solid waste generated including process rejects. We have bag shredder for shredding the Asbestos empty bags & recycled back to the process.</p> <p>All Asbestos residue, Cement, Flyash, dust from bag filters are directly feed to corresponding hydration tank through closed screw conveyor feeder.</p> <p>We are not disposing any Asbestos Fibre or other process waste. We are reusing all contaminated asbestos waste by proper segregating and reusing them through pulverizer and ball mill.</p> <p>We are conducting periodic medical examination for our employees & workers (including contractual) on regular basis, as per requirement, also we conducted pre medical checkup for all new employees. We had completed our periodic medical checkup on September-2022 and maintaining all reports as per the rules & procedures. Health records of all employees are maintained for at least 40 years from the beginning of the employment or up to 15 years after the retirement.</p> <p>We have displayed caution board and Doe's & Don'ts for educating all employees about the hazards of Asbestos Fiber and other dust. Also distributed leaflet to all employees for more awareness about hazard of asbestos.</p> <p>Total green belt developed 34,243m², We have planted 3838 plants in our factory premises. Out of those 3319 nos. are surviving. This year we had done 65 nos. of plantation inside factory premises at vacant land boundary side, also we increased our green belt area by developing new garden near office building, near main gate and on roadside walkway.</p>
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<p>B.</p> <p>GENERAL CONDITIONS :</p> <ul style="list-style-type: none"> i) The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board and the State Government. ii) No further expansion / modifications in the plant shall be carried out without prior approval of the Ministry of Environment and forests. iii) The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management & Handling) Rules, 2003. iv) The company shall also undertake rain water harvesting measures and plan of action shall be submitted to the Ministry of Environment and forests within three months. v) The project proponent shall also comply with safeguards recommended in the EIA/EMP Report. vi) The project authorities shall set up a separate environmental management cell for effective implementation of all the above stipulations under control of Senior Executive. vii) As mentioned in the EIA/EMP, Rs.57.00 Lakhs and Rs.5.00 Lakhs kept towards capital cost and recurring cost/annum for environmental pollution control measures shall be judiciously used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule to comply with all the conditions stipulated herein shall be submitted to the Ministry's Regional Office at Bhubaneswar/OPCB and CPCB. The funds so provided shall not be diverted for any other purposes. 	<p>We are following the guide lines of Odisha Pollution Control Board & the State Government.</p> <p>No further expansion/ modification done in plant within this period.</p> <p>We strictly followed the standard procedure for handling and disposal of hazardous waste & having the technology for total recycling of the hazardous waste and re used in process.</p> <p>We have already completed the Rain Water Harvesting System and a plan of same is already submitted.</p> <p>We have complied as per the procedure of the EIA notification.</p> <p>Our corporate offices have Environment, Health & Safety department under the guidance of Vice-President (EHS).</p> <p>We have installed the following units as per Environmental Pollution Control Measures.</p> <p>A.</p> <ol style="list-style-type: none"> 1. Separate Dust collector with bag filter for fibre handling system, Cement handling system, Fly-ash handling system, Fibre handling system & for pulverizer. 2. Recirculation tank for process waste. 3. Green waste recirculation system by waste dissolver and by Ball mill operation 4. Using vacuum cleaner for floor cleaning. 5. We are maintaining all dust collector in good condition. 6. We installed 25 KL capacity STP for sewage treatment and reuse of water for gardening. 	<p>B.</p> <ol style="list-style-type: none"> 1. Green belt developed & maintaining greenery area. 2. Display board at various location for employee's awareness. 3. Personal protective equipment's provided to all employees as required.
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	<ul style="list-style-type: none"> viii) The Regional Office of this Ministry at Bhubaneswar /OPCB and CPCB shall monitor the stipulated conditions. A six monthly compliance status report and the monitored data along with statistical interpretation shall be submitted to them regularly. ix) 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 Orissa Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Bhubaneswar. x) The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work, if any. 	<p>Last compliance status report and the monitoring data have been submitted on November-2022.</p> <p>No public hearing/consultation is required as the project is located in notified Somnathpur Industrial Area as certified by the IDCO vide letter dtd.7th March-2010.</p> <p>Not applicable.</p>
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HIL LIMITED, BALASORE, ODISHA



Plot No. Z-2 IDCO Industrial Estate, P.O. Somnathpur, Balasore - 756019

Registered Office: L7 Floor, Sln Terminus, SY. No. 133, Beside Botanical Garden, Gachibowli, Hyderabad, Telengana, India
CIN: L7499TG1955PLC000656 : Ph: +91 40 30999000 : Fax: +91 40 30999240 : Email: info@hil.in : Website: www.hil.in

HIL LIMITED
RESULTS OF DUST SAMPLES (WORK PLACE ENVIRONMENT) OF BALASORE UNIT
FOR THE MONTH OF MARCH 2023

S. NO	CODE	LOCATION	DATE	DUST CONC. FCC OF AIR	SHIFT A/B/C/ G	TYPE OF SAMPLE STATIC PERSONAL	FLOW RATE LPM	DURATION IN MINUTES	WORK CONDITIONS	REMARKS
1	B-1	Fibre Godown [B-1]	06.03.2023	< 0.1 (0.02)	B	STATIC	1.0	60	Normal Working Conditions	—
2	B-2	Fibre Feeding Area [B - 2]	10.03.2023	< 0.1 (0.01)	A	PERSONAL	1.0	60	Normal Working Conditions	—
3	B-3	Milling Area [B - 3]	14.03.2023	< 0.1 (0.03)	B	PERSONAL	1.0	60	Normal Working Conditions	—
4	B-4	Reclamation Area [B - 4]	21.03.2023	< 0.1 (0.04)	A	STATIC	1.0	60	Normal Working Conditions	—
5	B-5	Stock Yard [B - 5]	24.03.2023	< 0.1 (0.01)	G	STATIC	1.0	60	Normal Working Conditions	—
6	B-6	Factory Premises Near Main Gate [B - 6]	30.03.2023	< 0.1 (0.02)	G	STATIC	1.0	60	Normal Working Conditions	—

Samples Collected by Mr. Paramananda Mohanta

Samples Counted by Mr. P. Krishna Kishore



Dr. S. P. Vivek Chandra Rao
Vice President Occupational Health

HIL LIMITED

RESULTS OF DUST SAMPLES (WORK PLACE ENVIRONMENT) OF BALASORE UNIT
FOR THE MONTH OF FEBRUARY 2023

S. NO	CODE	LOCATION	DATE	DUST CONC. F/ICC OF AIR	SHIFT A/B/C/ G	TYPE OF SAMPLE STATIC PERSONAL	FLOW RATE LPM	DURATION IN MINUTES	WORK CONDITIONS	REMARKS
1	B-1	Fibre Godown [B-1]	04.02.2023	< 0.1 (0.01)	A	PERSONAL	1.0	60	Normal Working Conditions	—
2	B-2	Fibre Feeding Area [B-2]	09.02.2023	< 0.1 (0.02)	B	STATIC	1.0	60	Normal Working Conditions	—
3	B-3	Milling Area [B-3]	14.02.2023	< 0.1 (0.02)	A	PERSONAL	1.0	60	Normal Working Conditions	—
4	B-4	Reclamation Area [B-4]	18.02.2023	< 0.1 (0.03)	B	PERSONAL	1.0	60	Normal Working Conditions	—
5	B-5	Stock Yard [B-5]	25.02.2023	< 0.1 (0.04)	G	STATIC	1.0	60	Normal Working Conditions	—
6	B-6	Factory Premises Near Main Gate [B-6]	28.02.2023	< 0.1 (0.02)	G	STATIC	1.0	60	Normal Working Conditions	—

Samples Collected by Mr. Paramananda Mohanta

Samples Counted by Mr. P. Krishna Kishore

V.P.
Dr. S. P. Vivek Chandra Rao
Vice President Occupational Health

HIL LIMITED

RESULTS OF DUST SAMPLES (WORK PLACE ENVIRONMENT) OF BALASORE UNIT
FOR THE MONTH OF JANUARY 2023

S. NO	CODE	LOCATION	DATE	DUST CONC. F/CC OF AIR	SHIFT A/B/C/ G	TYPE OF SAMPLE STATIC PERSONAL	FLOW RATE LPM	DURATION IN MINUTES	WORK CONDITIONS	REMARKS
1	B-1	Fibre Godown [B - 1]	04.01.2023	< 0.1 (0.02)	B	PERSONAL	1.0	60	Normal Working Conditions	—
2	B-2	Fibre Feeding Area [B - 2]	10.01.2023	< 0.1 (0.04)	A	PERSONAL	1.0	60	Normal Working Conditions	—
3	B-3	Milling Area [B - 3]	13.01.2023	< 0.1 (0.03)	B	STATIC	1.0	60	Normal Working Conditions	—
4	B-4	Reclamation Area [B - 4]	19.01.2023	< 0.1 (0.04)	A	PERSONAL	1.0	60	Normal Working Conditions	—
5	B-5	Stock Yard [B - 5]	25.01.2023	< 0.1 (0.03)	G	STATIC	1.0	60	Normal Working Conditions	—
6	B-6	Factory Premises Near Main Gate [B - 6]	31.01.2023	< 0.1 (0.02)	G	STATIC	1.0	60	Normal Working Conditions	—

Samples Collected by Mr. Paramananda Mohanta

Samples Counted by Mr. P. Krishna Kishore

Dr. S. P. Vivek Chandra Rao
Vice President Occupational Health

HIL LIMITED

RESULTS OF DUST SAMPLES (WORK PLACE ENVIRONMENT) OF BALASORE UNIT
FOR THE MONTH OF DECEMBER 2022

S. NO	CODE	LOCATION	DATE	DUST CONC. F/C/C OF AIR	SHIFT A/B/C/ G	TYPE OF SAMPLE STATIC PERSONAL	FLOW RATE LPM	DURATION IN MINUTES	WORK CONDITIONS	REMARKS
1	B-1	Fibre Godown [B - 1]	06.12.2022	< 0.1 (0.03)	A	STATIC	1.0	60	Normal Working Conditions	—
2	B-2	Fibre Feeding Area [B - 2]	12.12.2022	< 0.1 (0.04)	B	PERSONAL	1.0	60	Normal Working Conditions	—
3	B-3	Milling Area [B - 3]	17.12.2022	< 0.1 (0.02)	A	PERSONAL	1.0	60	Normal Working Conditions	—
4	B-4	Reclamation Area [B - 4]	19.12.2022	< 0.1 (0.05)	B	STATIC	1.0	60	Normal Working Conditions	—
5	B-5	Stock Yard [B - 5]	21.12.2022	< 0.1 (0.03)	G	STATIC	1.0	60	Normal Working Conditions	—
6	B-6	Factory Premises Near Main Gate [B - 6]	30.12.2022	< 0.1 (0.02)	G	STATIC	1.0	60	Normal Working Conditions	—

Samples Collected by Mr. Paramananda Mohanta

Samples Counted by Mr. P. Krishna Kishore

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Dr. S. P. Vivek Chandra Rao
Vice President Occupational Health

HIL LIMITED

**RESULTS OF DUST SAMPLES (WORK PLACE ENVIRONMENT) OF BALASORE UNIT
FOR THE MONTH OF NOVEMBER 2022**

S. No	CODE	LOCATION	DATE	DUST CONC. F/CC OF AIR	SHIFT A/B/C/ G	TYPE OF SAMPLE STATIC PERSONAL	FLOW RATE LPM	DURATION IN MINUTES	WORK CONDITIONS	REMARKS
1	B-1	Fibre Godown [B - 1]	05.11.2022	< 0.1 (0.01)	B	PERSONAL	1.0	60	Normal Working Conditions	
2	B-2	Fibre Feeding Area [B - 2]	10.11.2022	< 0.1 (0.04)	A	STATIC	1.0	60	Normal Working Conditions	
3	B-3	Milling Area [B - 3]	14.11.2022	< 0.1 (0.02)	B	PERSONAL	1.0	60	Normal Working Conditions	
4	B-4	Reclamation Area [B - 4]	22.11.2022	< 0.1 (0.02)	A	PERSONAL	1.0	60	Normal Working Conditions	
5	B-5	Stock Yard [B - 5]	25.11.2022	< 0.1 (0.03)	G	STATIC	1.0	60	Normal Working Conditions	
6	B-6	Factory Premises Near Main Gate [B - 6]	30.11.2022	< 0.1 (0.02)	G	PERSONAL	1.0	60	Normal Working Conditions	

Samples Collected by Mr. Paramananda Mohanta

Samples Counted by Mr. P. Krishna Kishore

Dr. S. P. Vivek Chandra Rao
Vice President Occupational Health

HIL LIMITED

RESULTS OF DUST SAMPLES (WORK PLACE ENVIRONMENT) OF BALASORE UNIT
FOR THE MONTH OF OCTOBER 2022

S. NO	CODE	LOCATION	DATE	DUST CONC. F/CC OF AIR	SHIFT A/B/C/ G	TYPE OF SAMPLE STATIC PERSONAL	FLOW RATE LPM	DURATION IN MINUTES	WORK CONDITIONS	REMARKS
1	B-1	Fibre Godown [B - 1]	08.10.2022	< 0.1 (0.01)	A	PERSONAL	1.0	60	Normal Working Conditions
2	B-2	Fibre Feeding Area [B - 2]	12.10.2022	< 0.1 (0.02)	B	PERSONAL	1.0	60	Normal Working Conditions
3	B-3	Milling Area [B - 3]	15.10.2022	< 0.1 (0.03)	A	STATIC	1.0	60	Normal Working Conditions
4	B-4	Reclamation Area [B - 4]	20.10.2022	< 0.1 (0.04)	B	STATIC	1.0	60	Normal Working Conditions
5	B-5	Stock Yard [B - 5]	25.10.2022	< 0.1 (0.02)	G	STATIC	1.0	60	Normal Working Conditions
6	B-6	Factory Premises Near Main Gate [B - 6]	29.10.2022	< 0.1 (0.03)	G	PERSONAL	1.0	60	Normal Working Conditions

Samples Collected by Mr. Paramananda Mohanta

Samples Counted by Mr. P. Krishna Kishore


Dr. S. P. Vivek Chandra Rao
Vice President Occupational Health



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017

Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

- Infrastructure Engineering
- Water Resource Management
- Environmental & Social Study

- Surface & Sub-Surface Investigation
- Quality Control & Project Management
- Renewable Energy

- Agricultural Development
- Information Technology
- Public Health Engineering

- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services
Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

Ref No.: Envlab/22-23/TR-00481

Date: 07.04.2023

AMBIENT AIR QUALITY MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED, Balasore.
2. Date of Sampling : 29.03.2023
3. Sampling Location : A-1: Near Main Gate of the Plant
4. Date of Analysis : 30.03.2023 to 03.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results	Testing Methods	NAAQ Standard
Particulate Matter (size less than 10 μm) or PM ₁₀	$\mu\text{g} / \text{m}^3$	61.3	Gravimetric Method	100
Particulate Matter (size less than 2.5 μm) or PM _{2.5}	$\mu\text{g} / \text{m}^3$	31.4	Gravimetric Method	60
Sulphur Dioxide as SO ₂	$\mu\text{g} / \text{m}^3$	8.1	Improved West and Gaeke Method	80
Nitrogen Dioxide as NO _x	$\mu\text{g} / \text{m}^3$	15.8	Modified Jacob & Hochheiser (Na-Arsenite)	80
Carbon Monoxide as CO	mg / m^3	0.28	NDIR Spectroscopy	4

Prepared by:



Fagun
Verified by:
Nayak



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017

Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

- Infrastructure Engineering
- Water Resource Management
- Environmental & Social Study

- Surface & Sub-Surface Investigation
- Quality Control & Project Management
- Renewable Energy

- Agricultural Development
- Information Technology
- Public Health Engineering

- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services
Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

Ref No.: Envlab/22-23/TR-00482

Date: 07.04.2023

AMBIENT AIR QUALITY MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED; Balasore.
2. Date of Sampling : 29.03.2023
3. Sampling Location : A-2: Near Admin Building
4. Date of Analysis : 30.03.2023 to 03.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results	Testing Methods	NAAQ Standard
Particulate Matter (size less than 10 μm) or PM ₁₀	$\mu\text{g} / \text{m}^3$	55.6	Gravimetric Method	100
Particulate Matter (size less than 2.5 μm) or PM _{2.5}	$\mu\text{g} / \text{m}^3$	28.6	Gravimetric Method	60
Sulphur Dioxide as SO ₂	$\mu\text{g} / \text{m}^3$	5.5	Improved West and Gaeke Method	80
Nitrogen Dioxide as NO _x	$\mu\text{g} / \text{m}^3$	12.3	Modified Jacob & Hochheiser (Na-Arsenite)	80
Carbon Monoxide as CO	mg / m^3	0.27	NDIR Spectroscopy	4

Prepared by:



Verified by:





Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017

Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

- Infrastructure Engineering
- Water Resource Management
- Environmental & Social Study

- Surface & Sub-Surface Investigation
- Quality Control & Project Management
- Renewable Energy
- Agricultural Development
- Information Technology
- Public Health Engineering

- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services
Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

Ref No.: Envlab/22-23/TR-00483

Date: 07.04.2023

AMBIENT AIR QUALITY MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED; Balasore.
 2. Date of Sampling : 29.03.2023
 3. Sampling Location : A-3: Near DG Room
 4. Date of Analysis : 30.03.2023 to 03.04.2023
 5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results	Testing Methods	NAAQ Standard
Particulate Matter (size less than 10 μm) or PM ₁₀	$\mu\text{g} / \text{m}^3$	58.6	Gravimetric Method	100
Particulate Matter (size less than 2.5 μm) or PM _{2.5}	$\mu\text{g} / \text{m}^3$	29.4	Gravimetric Method	60
Sulphur Dioxide as SO ₂	$\mu\text{g} / \text{m}^3$	9.3	Improved West and Gaeke Method	80
Nitrogen Dioxide as NO _x	$\mu\text{g} / \text{m}^3$	18.5	Modified Jacob & Hochheiser (Na-Arsenite)	80
Carbon Monoxide as CO	mg / m ³	0.48	NDIR Spectroscopy	4

Bijalp
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Fazal
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Ref No.: Envlab/22-23/TR-00484

Date: 07.04.2023

AMBIENT AIR QUALITY MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED; Balasore.
2. Date of Sampling : 29.03.2023
3. Sampling Location : A-4: Plant Outside Near Main gate
4. Date of Testing : 30.03.2023 to 03.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results	Testing Methods	NAAQ Standard
Particulate Matter (size less than 10 μm) or PM ₁₀	$\mu\text{g} / \text{m}^3$	59.8	Gravimetric Method	100
Particulate Matter (size less than 2.5 μm) or PM _{2.5}	$\mu\text{g} / \text{m}^3$	31.3	Gravimetric Method	60
Sulphur Dioxide as SO ₂	$\mu\text{g} / \text{m}^3$	5.7	Improved West and Gaeke Method	80
Nitrogen Dioxide as NO _x	$\mu\text{g} / \text{m}^3$	12.8	Modified Jacob & Hochheiser (Na-Arsenite)	80
Carbon Monoxide as CO	mg / m^3	0.30	NDIR Spectroscopy	4

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Ref No.: Envlab/22-23/TR-00485

Date: 07.04.2023

AMBIENT AIR QUALITY MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED; Balasore.
2. Date of Sampling : 29.03.2023
3. Sampling Location : A-5: Near FG Yard
4. Date of Testing : 30.03.2023 to 03.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results	Testing Methods	NAAQ Standard
Particulate Matter (size less than 10 μm) or PM ₁₀	$\mu\text{g} / \text{m}^3$	52.3	Gravimetric Method	100
Particulate Matter (size less than 2.5 μm) or PM _{2.5}	$\mu\text{g} / \text{m}^3$	28.9	Gravimetric Method	60
Sulphur Dioxide as SO ₂	$\mu\text{g} / \text{m}^3$	4.7	Improved West and Gaeke Method	80
Nitrogen Dioxide as NO _x	$\mu\text{g} / \text{m}^3$	9.8	Modified Jacob & Hochheiser (Na-Arsenite)	80
Carbon Monoxide as CO	mg / m^3	0.24	NDIR Spectroscopy	4

Prepared by:



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Fagmala Nag



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Ref No.: Envlab/22-23/TR-00486

Date: 07.04.2023

AMBIENT AIR QUALITY MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED; Balasore.
2. Date of Sampling : 29.03.2023
3. Sampling Location : A-6: Near Pulverize Area
4. Date of Analysis : 30.03.2023 to 03.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results	Testing Methods	NAAQ Standard
Particulate Matter (size less than 10 μm) or PM ₁₀	$\mu\text{g} / \text{m}^3$	59.8	Gravimetric Method	100
Particulate Matter (size less than 2.5 μm) or PM _{2.5}	$\mu\text{g} / \text{m}^3$	30.4	Gravimetric Method	60
Sulphur Dioxide as SO ₂	$\mu\text{g} / \text{m}^3$	4.5	Improved West and Gaeke Method	80
Nitrogen Dioxide as NO _x	$\mu\text{g} / \text{m}^3$	10.7	Modified Jacob & Hochheiser (Na-Arsenite)	80
Carbon Monoxide as CO	mg / m^3	0.29	NDIR Spectroscopy	4

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Ref No.: Envlab/22-23/TR-00488

Date: 07.04.2023

STATIONARY EMISSION MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED; Balasore.
2. Date of Sampling : 30.03.2023
3. Sampling Location : ST-1: Stack connected to Fly ash Handling System
4. Date of Analysis : 31.03.2023 to 05.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results
Stack Temperature	°C	37.0
Internal Diameter at exit of Stack	m	0.2
Velocity of Flue Gas	m/sec	6.5
Volumetric Flow Rate	Nm ³ /hr	690.7
Concentration of Particulate Matter as PM	mg/Nm ³	27.3
Sulphur dioxide as SO ₂	mg/Nm ³	12.8
Oxides of Nitrogen as NO _x	mg/Nm ³	28.6
Carbon Monoxide as CO	mg/Nm ³	3.8

Prepared by:



Fagmath
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Ref No.: Envlab/22-23/TR-00489

Date: 07.04.2023

STATIONARY EMISSION MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED; Balasore.
2. Date of Sampling : 30.03.2023
3. Sampling Location : ST-2: Stack connected to DG Set-01 (250 KW)
4. Date of Analysis : 31.03.2023 to 05.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results
Stack Temperature	°C	115.0
Internal Diameter at exit of Stack	m	0.7
Velocity of Flue Gas	m/sec	12.8
Volumetric Flow Rate	Nm ³ /hr	13313.0
Concentration of Particulate Matter as PM	mg/Nm ³	32.8
Sulphur dioxide as SO ₂	mg/Nm ³	49.3
Oxides of Nitrogen as NO _x	mg/Nm ³	68.8
Carbon Monoxide as CO	mg/Nm ³	8.2

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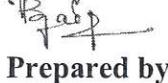
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Date: 07.04.2023

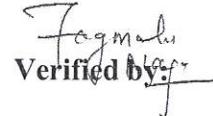
STATIONARY EMISSION MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED; Balesore.
2. Date of Sampling : 30.03.2023
3. Sampling Location : ST-3: Stack connected to DG Set-02 (1010 KW)
4. Date of Analysis : 31.03.2023 to 05.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results
Stack Temperature	°C	132.0
Internal Diameter at exit of Stack	m	0.4
Velocity of Flue Gas	m/sec	20.9
Volumetric Flow Rate	Nm ³ /hr	6800.0
Concentration of Particulate Matter as PM	mg/Nm ³	30.2
Sulphur dioxide as SO ₂	mg/Nm ³	38.7
Oxides of Nitrogen as NO _x	mg/Nm ³	52.3
Carbon Monoxide as CO	mg/Nm ³	6.9


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Date: 07.04.2023

STATIONARY EMISSION MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED; Balasore.
2. Date of Sampling : 30.03.2023
3. Sampling Location : ST-4: Stack connected to Fibre handling system
4. Date of Analysis : 31.03.2023 to 05.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results
Stack Temperature	°C	45.0
Internal Diameter at exit of Stack	m	0.412
Velocity of Flue Gas	m/sec	11.1
Volumetric Flow Rate	Nm ³ /hr	4873.6
Concentration of Particulate Matter as PM	mg/Nm ³	18.6
Sulphur dioxide as SO ₂	mg/Nm ³	17.3
Oxides of Nitrogen as NO _x	mg/Nm ³	38.2
Carbon Monoxide as CO	mg/Nm ³	5.6

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Ref No.: Envlab/22-23/TR-00492

Date: 07.04.2023

STATIONARY EMISSION MONITORING REPORT

1. Name of Industry : M/s HIL LIMITED; Balasore.
2. Date of Sampling : 30.03.2023
3. Sampling Location : ST-5: Stack connected to Cement Handling System
4. Date of Analysis : 31.03.2023 to 05.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results
Stack Temperature	°C	45.0
Internal Diameter at exit of Stack	m	0.312
Velocity of Flue Gas	m/sec	9.19
Volumetric Flow Rate	Nm ³ /hr	2316.8
Concentration of Particulate Matter as PM	mg/Nm ³	17.3
Sulphur dioxide as SO ₂	mg/Nm ³	16.2
Oxides of Nitrogen as NO _x	mg/Nm ³	30.4
Carbon Monoxide as CO	mg/Nm ³	6.8

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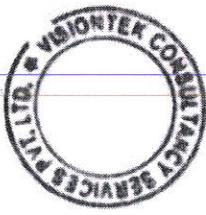
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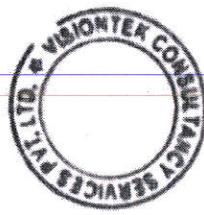
1. Name of Industry : M/s HIL LIMITED; Balasore.
2. Date of Sampling : 30.03.2023
3. Sampling Location : ST-6: Stack connected to Pulverizer Area
4. Date of Analysis : 31.03.2023 to 05.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Parameters	Unit	Analysis Results
Stack Temperature	°C	58.0
Internal Diameter at exit of Stack	m	0.3
Velocity of Flue Gas	m/sec	8.16
Volumetric Flow Rate	Nm ³ /hr	1827.3
Concentration of Particulate Matter as PM	mg/Nm ³	25.3
Sulphur dioxide as SO ₂	mg/Nm ³	21.4
Oxides of Nitrogen as NO _x	mg/Nm ³	37.3
Carbon Monoxide as CO	mg/Nm ³	6.1

Rajalp
Prepared by:



Jagmohan
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Ref No.: Envlab/22-23/TR-00495

Date: 07.04.2023

GROUND WATER QUALITY ANALYSIS REPORT

1. Name of Industry : M/s HIL LIMITED; Balasore.
2. Sampling Location : GW-1: Bore Well Water
3. Date of Sampling : 30.03.2023
4. Date of Analysis : 31.03.2023 to 06.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

Sl. No.	Parameter	Testing Methods	Unit	Standard as per IS10500:2012 Amended on 2015 & 2018		Analysis Results GW-1
				250	1000	
1	Chloride (as Cl)	APHA 4500Cl B	mg/l	250	1000	8.7
2	Sulphate (as SO ₄)	APHA 4500 SO ₄ ²⁻ E	mg/l	200	400	11.4
3	Total Solids as TS	APHA 2540 B	mg/l	--	--	185.6
4	Sodium as Na	APHA 3500 Na B	mg/l	--	--	11.2
5	Potassium as K ₂ O	APHA 3500 K B	mg/l	---	--	0.68

Bijay
Prepared by:



Jagmohan
Verified by: *Nagar*



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EFFLUENT WATER ANALYSIS REPORT

1. Name of Industry : M/s HIL LIMITED; Balesore.
2. Sampling Location : EW-1: STP Discharge Water
3. Date of Sampling : 30.03.2023
4. Date of Analysis : 31.03.2023 to 06.04.2023
5. Sample Collected by : VCSPL Representative in presence of HIL Representative.

SL.No.	Parameters	Testing Methods	Unit	Public Sewer of Effluents: Part A	Analysis Result
					EW1
1	Suspended Solids as SS	APHA 2540 D	mg/l	600	52.0
2	pH	APHA 4500 H ⁺ B	mg/l	5.5-9.0	7.45
3	Oil & Grease as O & G	APHA 5520 B	mg/l	20	1.5
4	Biochemical Oxygen Demand as BOD	APHA 5210 B	mg/l	350	6.2
5	Chemical Oxygen Demand as COD	APHA 5220 C	mg/l	--	34.0
6	Sulphate as SO ₄ ²⁻	APHA 4500 SO ₄ ²⁻	mg/l	--	3.7

Balaji
Prepared by:



Jagmohan
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