

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
ORIGINAL APPLICATION NO. 442 OF 2023**

IN THE MATTER OF:

PANKAJ SRIVASTAVA

...APPLICANT

VERSUS

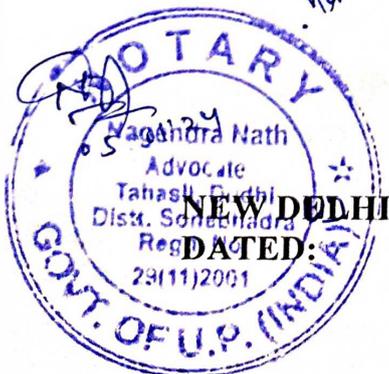
BIRLA CARBON INDIA PVT. LTD.

...RESPONDENT

INDEX

S.No.	Particulars	Page(s)
1.	Additional Affidavit on behalf of the Respondent	1-9
2.	Annexure R-1/1: The extract of the list of government recognized laboratories showing that Envirochem is a recognized laboratory with recognition letter valid till 14 February 2024	10-11
3.	Annexure R-1/2: Copy of relevant extract of Schedule I of Environment Protection Rules	12-14
4.	Annexure R-1/3: Copy of test reports of 17 th and 18 th November 2023 of the vents of the scrubbers	15-17
5.	Annexure R-1/4: Copy of letter dated 16 November 2023 sent to UPPCB	18
6.	Annexure R-1/5(Colly): Photograph of the sampling platform on all vent scrubbers	19-20
7.	Annexure R-1/6: Copy of note on production process and process flow sheet	21-27
8.	Proof of service	28

Vanita Bhargava



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ADVOCATES FOR THE RESPONDENT
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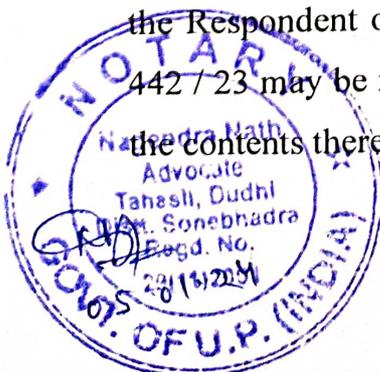
BIRLA CARBON INDIA PVT. LTD.

...RESPONDENT

ADDITIONAL AFFIDAVIT ON BEHALF OF THE
RESPONDENT

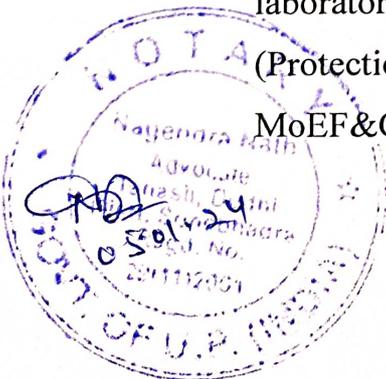
I, Varun Sabarwal, son of Shri Tarachand Sabarwal, aged about 49 years, resident of A-2, Staff Colony, Birla Carbon, Murdhwa Mode, Renukoot, Distt. Sonbhadra, Pin: 231217, Uttar Pradesh, do hereby solemnly affirm and state as hereunder:

1. That I am the authorized signatory of the Respondent Company in the above-mentioned matter, and I am well aware of the facts and circumstances of the case to the best of my personal knowledge and belief. I am therefore competent and authorized to affirm the present affidavit on behalf of the Respondent Company.
2. That the Answering Respondent is filing the present affidavit in response to the Joint Committee report dated 27 October 2023 and in pursuance to the order dated 31 October 2023 passed by this Hon'ble Tribunal. That the contents of the Reply Affidavit filed by the Respondent on 29 September 2023 to the aforementioned OA 442/23 may be read as part and parcel of the present affidavit and the contents thereof are not repeated herein for the sake of brevity.



Varun Sabarwal
[Signature]

3. At the outset, it is submitted that the Joint Committee has not found the Respondent Company to be in violation. However, by way of abundant precaution, certain recommendations have been made which has been complied with by the Respondent. The Joint Committee *inter-alia* observed as follows:
- (a) That the Unit has valid consents under the Air (Prevention and Control of Pollution) Act, 1981 (as amended) from UPPCB dated 20 January 2019; (Paragraph 6 at page 133)
 - (b) The unit has provided Online Continuous Emission Monitoring System (OCEMS) for monitoring of emission from Boiler, both dryers and both purge filters and from the data, particulate matter is found to be within limits (Para 10, Pg. 136)
 - (c) As per gaseous samples collected and analysed by the third party MoEFCC approved laboratory, Envirochem Research & Rest Labs Pvt Ltd., the value of particulate matter has been found to be within limits; (Paragraph 11 at page 136)
 - (d) As per the Ambient Air Monitoring Report carried out in September 2023 by the third party MoEFCC approved laboratory, Envirochem Research & Rest Labs Pvt Ltd., the parameters of Ambient Air Quality have been found to be within limits.
4. It is submitted that the test analysis reports being relied on by the Joint Committee are prepared on due inspection by M/s Envirochem Research & Test Labs Pvt. Ltd, which is a private environmental laboratory recognised under Section 12(1)(B) of the Environment (Protection) Act, 1986 under which Central Government namely MoEF&CC may, apart from establishing its own environmental



Nagendra Nath
Advocate

laboratories, recognize one or more laboratories or institutions as environmental laboratories to carry out the functions entrusted to an environmental laboratory under the Act. The extract of the list of government recognized laboratories showing that Envirochem is a recognized laboratory with recognition letter valid till 14 February 2024 is annexed herewith and marked as **ANNEXURE R-1/1**. Therefore, independent report has been relied upon by the Joint Committee.

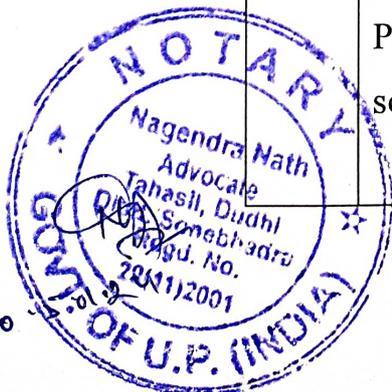
5. It is further submitted that this Hon'ble Tribunal, in paragraph 3 of the last order dated 31 October 2023 noted that on running page 150 of the Joint Committee Report relating to source emission monitoring, the parameters have not been specified. As per Schedule I of Environment Protection Rules laying down parameters and standards for various industries, the standard for Carbon Black Industry is provided for particulate matter emission only. Copy of relevant extract of Schedule I is annexed herewith and marked as **ANNEXURE R-1/2**.
6. It is submitted that Unit has complied with the recommendation as under:

S.No.	Recommendation	Compliance
1.	The Unit needs to monitor the gaseous emission emitted from Vent Scrubbers during process shutdown/off production each year.	Scrubber is placed at each reactor. It may be noted that Scrubber is used only during start up and shut down of reactor and not when Carbon black is in production. The unit has started monitoring the gaseous emission emitted from Vent scrubbers during process shutdown / off production.



Handwritten signature: Anurag Labanwal

		<p>The Unit engaged M/s Envirochem Research & Test Labs Pvt. Ltd., Approved environmental Laboratory from MoEF&CC under E.P. Act 1986 for samples testing on 17th and 18th November' 2023. Copy of test reports of 17th and 18th November 2023 of the vents of the scrubbers are annexed herewith and marked as ANNEXURE R-1/3.</p>
2.	<p>The unit shall inform about next process shutdown / off production to UPPCB and UPPCB needs to monitor to ensure the gaseous emission emitted from Vent Scrubbers.</p>	<p>The Unit has informed process shutdown to UPPCB on 16th November 2023. The copy of letter dated 16 November 2023 is attached herewith and marked as ANNEXURE R-1/4. The vent scrubber was monitored by UPPCB officials at time of shut down and start up on 18th November 2023 and samples were taken.</p>
3.	<p>The unit shall install sampling platform and Port hole on each vent scrubbers.</p>	<p>The unit has installed sampling platform and port hole on each vent scrubber. Photograph of the sampling platform on all vent scrubbers is</p>



Narun Babbarwal

[Signature]

		attached herewith and marked as ANNEXURE R-1/5 (COLLY)
4.	In case of any violation found according to the analysis report, the UPPCB shall initiated action about to impose the Environment Compensation for defaulting days.	No violation has been found
5.	The unit shall install automatic monitoring system on vent scrubbers for monitoring of gaseous emission emitted during shutdown.	The unit has floated enquiry for installation of automatic monitoring system in the vent scrubbers. Offers received from Nevco Engineers Pvt. Limited and IMTB Engineers Private Limited are being technically evaluated.

7. It is submitted that the process of manufacture of Carbon Black as highlighted in brief below shows that there is no occasion of release of particulate matter in the atmosphere:

- (i) Raw material for manufacture of Carbon Black i.e., Carbon Black feedstock, fluid catalytic cracking slurry oil and coal tar purchased from refineries are pumped into the reactor where they are heated. Carbon black is produced by incomplete combustion of the raw material under controlled conditions.



[Handwritten Signature]
[Handwritten Signature]

- (ii) Once raw material is burned, carbon black, in the form of dense smoke leaves the reactor. This is cooled by passing through different heat exchanges like Air Pre Heater, Waste Heat Boiler, Oil Pre Heater, which is further cooled by passing through Quench tower.
- (iii) This cooled smoke enters the bag filters where Carbon black particles are separated from dense smoke. Clean gas called "off gases / lean gases / tail gases / process waste gas comes out of the bag filters.
- (iv) 100% of the off gases coming out from bag filter are used as fuel in dryer and boiler. They are not emitted into the atmosphere.
- (v) The off gases are partly used as fuel in dryer for carbon black pellets drying.
- (vi) Remaining off gases are used in boiler where steam is generated that is used in plant as well as for generation of electricity.
- (vii) Thus, the scheme of using off gases helps in eliminating atmospheric pollution problem by their effective utilisation.
- (viii) Scrubber is used only during start up and shut down of reactor and not when Carbon black is in production. The products of complete combustion are passed through a scrubber for separation of particulate matter (if any) before releasing into the atmosphere through scrubber vent. The vent scrubber exhaust gas analysis as recommended by Joint Committee was done on 17th and 18th November 2023 by an approved lab and intimated to UPPCB. It was within limits.



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Thus, in the entire process no emission takes place that have parameters beyond prescribed norms. Copy of note on production process and process flow sheet is annexed herewith and marked as ANNEXURE R-1/6.

8. It is submitted that the Application was filed by the Applicant on the basis of bald allegations that are bereft of merit, and the Joint Committee Report has after due examination of the Answering Respondent Unit, in compliance with the order of this Hon'ble Tribunal dated 24 July 2023 has duly considered the factual parameters and submitted the report which duly noted the valid compliance status of the Answering Respondent with respect to the CTO granted as well as the ambient air quality data around the industry and trends of ambient air quality.
9. In view of the aforesaid, it is submitted that the aforesaid application may be disposed off.

V. Anur. Subarnal
DEPONENT

VERIFICATION

I, the deponent above named do hereby verify that the contents of foregoing affidavit are true and correct to my knowledge, no part of it is false and nothing material has been concealed there from.

Verified at Dudhi on this the 05 day of January 2024.

V. Anur. Subarnal
DEPONENT



V. Anur. Subarnal
DEPONENT
05-01-24

THE ENVIRONMENTAL LABORATORIES (PRIVATE) RECOGNISED UNDER SECTION 12(1) B OF THE ENVIRONMENT (PROTECTION) ACT, 1986 WITH VALID RECOGNITION AS ON 07/07/2023

S. No.	State	Laboratory	Address	Gazette Notification	Recognition valid upto
1.	Andhra Pradesh	M/s SV Enviro Labs & Consultants	B1, Block-B, IDA, Auto Nagar, Visakhapatnam-530 012, Andhra Pradesh.	S.O. 3511(E) 24 th August, 2021	11/11/2023
2.	Andhra Pradesh	M/s Spectra Envirotech Pvt. Ltd.	Plot No.-142/1, Eruvada Junction, Eruvada Village, Sabbavaram Mandal, Visakhapatnam, Dist., Andhra Pradesh (S)531035, India.	Legal 42(3)/2022 , 28 th March, 2022	23/09/2023
3.	Andhra Pradesh	M/s Lotus Granges (India) Limited	No.: 371/10, 2nd Railway Bridge, / Sheela Nagar-VSEZ Road, Sattivanipalem, Visakhapatnam-533012	Recognition Letter Issued.	07/02/2024
4.	Bihar	M/s Public Health Environment Engineering Testing (PHEET)Lab	Bhagirathi Lane, Opposite Malaria Control Office, Ashok Raj-Path, Mahindra, Patna- 800006, Bihar.	Legal 42(3)/2022 , 28 th March, 2022	29/02/2024
5.	Chhattisgarh	M/s Ultimate Envirolytical Solutions	HDD272, Phase-III, Kabir Nagar / Raipur, Chhattisgarh, Raipur – 492099.	Legal 42(3)/2022 , 25 th November, 2022	26/10/2023
6.	Daman & Diu	M/s Konark Research Foundation	Plot No.338/1, Kachgam, Daman - 396 210.	Legal 42(3)/2022 , 28 th March, 2022	02/03/2024
7.	Delhi	M/s Shree Krishna Analytical Services	A-5/4, Phase-II, Mayapuri Industrial Area, New Delhi-110064.	S.O. 3744(E), 17 th October, 2019	16/10/2024
8.	Delhi	M/s Shriram Institute for Industrial Research	(A unit of Shriram Scientific and Industrial, Research Foundation),19 University Road, Delhi-110007.	S.O. 3744(E), 17 th October, 2019	16/10/2024
9.	Delhi	M/s Quality Research and Analytical Labs	341, Ground Floor, Functional Industrial Estate, Patparganj, New Delhi-110092.	S.O. 2131(E), 1 st June, 2021	21/10/2023
10.	Delhi	M/s Agss Analytical and Research Lab Pvt. Ltd.,	C-37/2, Lawrence Road Industrial Area, Delhi-110035.	S.O. 3744(E), 17 th October, 2019	16/10/2024
11.	Delhi	M/s FICCI Research & Analysis Centre	Plot No. 2a, Sector-8, Dwarka, New Delhi-110077.	Recognition Letter Issued.	08/03/2024

190.	Uttar Pradesh	M/s Mantec Consultants Pvt. Ltd.	D-36, Sector-6, Noida, Gautam Buddh Nagar Noida -201301, Uttar Pradesh.	Recognition Letter Issued.	10/06/2024
191.	Uttar Pradesh	M/s Envirochem Research & Test Labs Pvt. Ltd,	Sector-E, Aliganj, Lucknow- 226024, Uttar Pradesh	Recognition Letter Issued.	14/02/2024
192.	Uttarakhand	M/s Devansh Testing & Research Laboratory Pvt. Ltd.	94, Shiv Ganga Industrial Estate, Lakeshari, Bhagwanpur-247661, Roorkee, Dist- Haridwar, Uttarakhand.	Legal 42(3)/2022, 25th November, 2022.	23/11/2023
193.	Uttarakhand	M/s Econ Laboratory & Consultancy	Vill. Khabarwala, P.O- Jaintanwala, Near Gahri Cantt., Dehradun, Uttrakhand-248003.	Legal42(3)/2022, 28th March, 2022	07/09/2023
194.	Uttarakhand	M/s Sophisticated Industrial Materials Analytic Labs Pvt. Ltd.,	Plot No. 37, Sec-7, I.I.E. SIIDCUL, Haridwar – 249403, Uttarakhand.	Recognition Letter Issued.	01/11/2024
195.	West Bengal	M/s Envirotech East Pvt. Ltd.	Bengal Ambuja Commercial Complex, UN-F-13, 1050/1, Survey Park, Kolkata-700075.	S.O. 5768 (E), 15 th November, 2018	14/11/2023
196.	West Bengal	M/s SGS India Pvt. Ltd.	CS Plot No. 512(P), Mouza-Hanspukuria, Diamond Harbour Road, PO- Joka, Dist- South 24 Parganas, Kolkata-700104, West Bengal.	S.O. 3744(E), 17th October,2019	16/10/2024
197.	West Bengal	M/s Scientific Research Laboratory	Shyamali Apartment, 90, Lake East, 4 th Road, Santoshpur, Jadavpur, Kolkata- 700075.	S.O. 2131(E), 1st June, 2021.	11/04/2024
198.	West Bengal	M/s R.V. Briggs & Company Pvt. Ltd.	Taher Mansion, 1st Floor 8/9, Bentinck Street, Kolkata-700001.	Legal42(3)/2022, 28th March, 2022	29/08/2023
199.	West Bengal	M/s Mitra S.K. Private Ltd. (Behala Laboratory)	P-48, Udyam Industrial Estate, 3 Pagladanga Road, Kolkata – 700015, West Bengal.	Legal42(3)/2022, 28th March, 2022	17/09/2023
200.	West Bengal	M/s Edward Food Research & Analysis Centre Limited,	Nilgunj Bazar, Subhasnagar, Barasat Kolkata-700121, West Bengal.	Recognition Letter Issued.	09/09/2023

(TRUE COPY)

UNIVERSAL'S
NEW DELHI - INDIA

The
**Environment (Protection)
Act, 1986**
(29 of 1986)

with

- The Environment (Protection) Rules, 1986 as amended by (Second Amendment) Rules, 2022
- The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
- The Noise Pollution (Regulation and Control) Rules, 2000
- The Ozone Depleting Substances (Regulation and Control) Rules, 2000
- The Battery Waste Management Rules, 2022
- The Wetlands (Conservation and Management) Rules, 2017
- The E-waste (Management) Rules, 2016
- The Plastic Waste Management Rules, 2016 as amended by (Second Amendment) Rules, 2022
- The Bio-Medical Waste Management Rules, 2016
- The Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 as amended by (Amendment) Rules, 2022
- The Construction and Demolition Waste Management Rules, 2016
- The Regulation of Lead Contents in Household and Decorative Paints Rules, 2016
- The Wood-Based Industries (Establishment and Regulation) Guidelines, 2016
- The Solid Waste Management Rules, 2016 as amended by (Amendment) Rules, 2020
- The Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021 (29 of 2021)
- The Commission for Air Quality Management in National Capital Region and Adjoining Areas (Manner of Taking Samples and Form of Notice) Rules, 2021
- The Lead Stabilizer in Polyvinyl Chloride (PVC) Pipes and Fittings Rules, 2021 as amended by (Amendment) Rules, 2022

2023

**BARE ACT
WITH SHORT NOTES**

Price ₹ 660

Universal



LexisNexis

notified under clause (i) may do so in writing to the Central Government within thirty days from the date of publication of the notification in the Official Gazette.

- (iv) The Central Government shall within a period of sixty days from the date of publication of the notification in the Official Gazette consider all the objections received against such notification and may impose prohibition or restrictions on the handling of hazardous substances in a region or an area.]

¹[14. Submission of environment ²[statement].—Every person carrying on an industry, operation or process requiring consent under section 25 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) or both or authorisation under the Hazardous Waters (Management and Handling) Rules, 1989 issued under the Environment (Protection) Act, 1986 (29 of 1986) shall submit an environmental ²[statement] for the financial year ending on the 31st March in Form V to the concerned State Pollution Control Board on or before the ²[thirtieth day of September] every year, beginning 1993.]

³[SCHEDULE I]

(See rule 3)

Sl. No.	Industry	Parameter	Standards
1	2	3	4
1.	Caustic soda to exceed, milligramme per litre (except for pH and flow)	Total concentration of mercury in the final effluent* Mercury bearing waste- water generation (flow) pH *Final effluent is the combined effluent from (a) cell house, (b) brine plant, (c) chlorine handling, (d) hydrogen handling, (e) hydrochloric acid plant.	Concentration not industry 0.01 10 kilolitres/tonne of caustic soda produced 5.5 to 9.0

1. Ins. by G.S.R. 329(E), dated 13th March, 1992 (w.e.f. 13-3-1992).

2. Subs. by G.S.R. 386(E), dated 22nd April, 1993 (w.e.f. 28-4-1993).

3. Schedule renumbered as Schedule I by S.O. 82(E), dated 16th February, 1987 (w.e.f. 16-2-1987).

Sch. I

Sch. II

The Environment (Protection) Rules, 1986

49

Sl. No.	Industry	Parameter	Standards	
		—Arc Furnace	150 milligramme per normal cubic metre]	
1[20.	Carbon Black	Particulate Matter Emission:	150 milligramme per normal cubic metre]	
2[21.	Zinc Smelting Plant	Copper, Lead or	Emission standards	
			a. Concentrator Existing Units	New Unit
		Particulate Matter (mg/Nm ³)	100	75
			b. Sulphur Dioxide Recovery Unit Limiting Concentration in mg/Nm ³ Plant capacity for 100% convertible concentration of Sulphuric Acid (tonne/day)	Existing Unit New Unit
		Sulphur Dioxide (SO ₂)	Upto 300	1370 1250
			Above 300	1250 950
		Acid Mist/Sulphur Trioxide	Upto 300	90 70
			Above 300	70 50

Notes.—

- Capacity in above stipulation means the installed capacity of Sulphuric Acid Plant.
- Scrubbing units shall have on-line pH meters with auto recording facility.
- Plant commissioned on or after the date of notification, shall be termed as 'New Unit'.
- The height of the Stack emitting Sulphur Dioxide or acid mist shall be a minimum of 30 metres or as per the formula $H = 14(Q)^{0.3}$ (whichever is more), where "H" is the height of stack in metres; and "Q" is the maximum quantity of SO₂ in kg/hr, expected to be emitted through the stack at 110 per cent. rated capacity of the Tail Gas plant(s) and calculated as per the norms of gaseous emission.
- Tail Gas plants having more than one stream or unit of sulphuric acid at one location, the combined capacity of all the streams or units shall be taken into consideration for determining the stack height and applicability of emission standards.
- Tail Gas plants having separate stack for gaseous emission for the scrubbing unit, the height of this stack shall be equal to main stack or 30 metres, whichever is higher.]

1[22.	Nitric Acid (emission of oxides of nitrogen)	Emission of Oxides of Nitrogen	3 kilogramme of oxides of nitrogen per tonne of weak acid (before concentration) produced]	
3[23.	Sulphuric Acid Plant	Emission standards		
		Limiting concentration in mg./Nm ³ , Unless stated		
		Plant capacity for 100% concentration of Sulphuric Acid (tonne/day)	Existing Unit	New Unit

- Ins. by S.O. 64(E), dated 18th January, 1988 (w.e.f. 18-1-1988).
- Subs. by G.S.R. 354(E), dated 2nd May, 2011, for Serial No. 21 (w.e.f. 2-5-2011). Earlier it was inserted by S.O. 64(E), dated 18th January, 1988 (w.e.f. 18-1-1988).
- Subs. by G.S.R. 344(E), dated 7th May, 2008 (w.e.f. 7-5-2008). Earlier Serial No. 23 was inserted by S.O. 64(E), dated 18th January, 1988 (w.e.f. 18-1-1988).

(TRUE COPY)



Envirochem Research & Test Labs Pvt. Ltd.

Specialist in : Environmental Impact Assessment, Environmental Monitoring & Management

Approved Environmental Laboratory From MoEF&CC Under E.P.Act 1986, Science 2001 & UPPCB, Lucknow, Since 1995

ISO 14001:2015 Cert No. 210503029101 ■ ISO 45001:2018 Cert No. 210503039101 ■ ISO 9001:2015 Cert No. 210503019101



MSCB 154



TC-7516

HIG - 79, Sector - E, Aliganj, Lucknow - 226 024 Ph. : 0522-3584345, 8318644902 E-mail : etl_2@yahoo.com, ertireport22@gmail.com

TEST REPORT

Report No. ST/01

Date: 21.11.2023

SOURCE EMISSION MONITORING REPORT

1.	Name & Address of Industry	M/s BIRLA CARBON INDIA PVT. LTD. UNIT MURDHAWA (RENUCOOT) INDUSTRIAL AREA, P.O. RENUKOOT, DISTT. SONBHADRA, (U.P.) - 231 217			
2.	ULR Code	TC751623000001091			
3.	Sample Code	ERTL/ST01/2023/11/17/372			
4.	Monitoring Done By	Lab Representative			
5.	Name of Instrument Used	Stack Monitoring Kit VSS-1, Flue Gas Analyzer			
6.	Source of Monitoring	Scrubber Vent			
7.	Attached to	Soft Black Reactor A			
8.	Date of Monitoring	17.11.2023			
9.	Material of Scrubber vent	M.S.			
10.	Capacity	7000 Nm ³ /hr			
11.	Type of Fuel Used	LDO (Light Diesel Oil)			
12.	Operating Load	85%			
13.	Quantity of Fuel Consumption	4.8 Kg/m			
14.	Diameter of scrubber vent	0.7 mtr			
15.	Height of stack	15 mtr			
S.N.	PARAMETERS	UNIT	METHOD	MEASURED VALUES	LIMIT (AS PER CPCB)
1.	Ambient Temperature	°C	IS:11255 (PART-1)	30.4	-
2.	Exhaust Gas Temperature	°C	IS:11255 (PART-1)	85.4	-
3.	Velocity of Exhaust Gas	m/sec	IS:11255 (PART-1)	5.7	-
4.	Concentration of PM	mg/Nm ³	IS:11255 (PART-1)	28.2	150 mg/Nm ³
5.	Concentration of SO ₂	mg/Nm ³	IS:11255 (PART-2)	17.8	-
6.	Concentration of NO _x	ppm	IS:11255 (PART-7)	115.0	-
7.	Concentration of CO	mg/Nm ³	IS:13270:1992	5.0	-
8.	Concentration of CO ₂	%	IS:13270:1992	7.0	-
9.	Concentration of O ₂	%	IS:13270:1992	8.7	-

Analyst

Checked By

(Laboratory In-charge)

Note : 1. The above results are related only to the test performed on the sample. Endorsement of product is neither inferred nor implied. 2. This report is not to be reproduced wholly or in part and can not be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing. 3. Sample will be destroyed after fifteen days from the date of reporting. 4. Total liability of our lab is limited to the invoiced amount. 5. Report refers to the sample received by Envirochem Research & Test Labs Pvt. Ltd. unless mentioned otherwise.



Envirochem Research & Test Labs Pvt. Ltd.

Specialist in : Environmental Impact Assessment, Environmental Monitoring & Management

Approved Environmental Laboratory From MoEF&CC Under E.P.Act 1986, Science 2001 & UPPCB, Lucknow, Since 1995

ISO 14001:2015 Cert No. 210503029101 ■ ISO 45001:2018 Cert No. 210503039101 ■ ISO 9001:2015 Cert No. 210503019101



HIG - 79, Sector - E, Aliganj, Lucknow - 226 024 Ph. : 0522-3584345, 8318644902 E-mail : etl_2@yahoo.com, ertlreport22@gmail.com

Report No. ST/0.2

TEST REPORT

Date: 21.11.2023

SOURCE EMISSION MONITORING REPORT

1.	Name & Address of Industry	M/s BIRLA CARBON INDIA PVT. LTD. UNIT MURDHAWA (RENUCOOT) INDUSTRIAL AREA, P.O. RENUKOOT, DISTT. SONBHADRA, (U.P.) - 231 217			
2.	ULR Code	TC751623000001092			
3.	Sample Code	ERTL/ST02/2023/11/17/373			
4.	Monitoring Done By	Lab Representative			
5.	Name of Instrument Used	Stack Monitoring Kit VSS-1Flue, Gas Analyzer			
6.	Source of Monitoring	Scrubber Vent			
7.	Attached to	Soft Black Reactor B			
8.	Date of Monitoring	17.11.2023			
9.	Material of Scrubber vent	M.S.			
10.	Capacity	7000 Nm ³ /hr			
11.	Type of Fuel Used	LDO (Light Diesel Oil)			
12.	Operating Load	85%			
13.	Quantity of Fuel Consumption	4.8 Kg/min Kg/m			
14.	Diameter of scrubber vent	0.7 mtr			
15.	Height of stack	15 mtr			
S.N.	PARAMETERS	UNIT	METHOD	MEASURED VALUES	LIMIT (AS PER CPCB)
1.	Ambient Temperature	°C	IS:11255 (PART-1)	32.2	-
2.	Exhaust Gas Temperature	°C	IS:11255 (PART-1)	80.0	-
3.	Velocity of Exhaust Gas	m/sec	IS:11255 (PART-1)	5.5	-
4.	Concentration of PM	mg/Nm ³	IS:11255 (PART-1)	32.0	150 mg/Nm ³
5.	Concentration of SO ₂	mg/Nm ³	IS:11255 (PART-2)	12.3	-
6.	Concentration of NO _x	ppm	IS:11255 (PART-7)	103.0	-
7.	Concentration of CO	mg/Nm ³	IS:13270:1992	8.0	-
8.	Concentration of CO ₂	%	IS:13270:1992	7.3	-
9.	Concentration of O ₂	%	IS:13270:1992	8.1	-

[Signature]
Analyst

[Signature]
Checked By

[Signature]
(Laboratory In-charge)

Note : 1. The above results are related only to the test performed on the sample. Endorsement of product is neither inferred not implied. 2. This report is not to be reproduce wholly or in part and can not be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing. 3. Sample will be destroyed after fifteen days from the date of reporting. 4. Total liability of our lab is limited to the invoiced amount. 5. Report refers to the sample received by Envirochem Research & Test Labs Pvt. Ltd. unless mentioned otherwise.



Envirochem Research & Test Labs Pvt. Ltd.

Specialist in : Environmental Impact Assessment, Environmental Monitoring & Management

Approved Environmental Laboratory From MoEF&CC Under E.P.Act 1986, Science 2001 & UPPCB, Lucknow, Since 1995

ISO 14001:2015 Cert No. 210503029101 ■ ISO 45001:2018 Cert No. 210503039101 ■ ISO 9001:2015 Cert No. 210503019101



HIG - 79, Sector - E, Aliganj, Lucknow - 226 024 Ph. : 0522-3584345, 8318644902 E-mail : etl_2@yahoo.com, ertreport22@gmail.com

TEST REPORT

Report No. ST/03

Date: 21.11.2023

SOURCE EMISSION MONITORING REPORT

1.	Name & Address of Industry	M/s BIRLA CARBON INDIA PVT. LTD. UNIT MURDHAWA (RENUCOOT) INDUSTRIAL AREA, P.O. RENUKOOT, DISTT. SONEBHADRA, (U.P.) - 231 217			
2.	ULR Code	TC751623000001093			
3.	Sample Code	ERTL/ST03/2023/11/18/374			
4.	Monitoring Done By	Lab Representative			
5.	Name of Instrument Used	Stack Monitoring Kit VSS-1Flue, Gas Analyzer			
6.	Source of Monitoring	Scrubber Vent			
7.	Attached to	Hard Black Reactor C			
8.	Date of Monitoring	18.11.2023			
9.	Material of Scrubber vent	M.S.			
10.	Capacity	7000 Nm ³ /hr			
11.	Type of Fuel Used	LDO (Light Diesel Oil)			
12.	Operating Load	90%			
13.	Quantity of Fuel Consumption	5.3 Kg/m			
14.	Diameter of scrubber vent	0.4 mtr			
15.	Height of stack	15 mtr			
S.N.	PARAMETERS	UNIT	METHOD	MEASURED VALUES	LIMIT (AS PER CPCB)
1.	Ambient Temperature	°C	IS:11255 (PART-1)	28.4	-
2.	Exhaust Gas Temperature	°C	IS:11255 (PART-1)	75.2	-
3.	Velocity of Exhaust Gas	m/sec	IS:11255 (PART-1)	6.19	-
4.	Concentration of PM	mg/Nm ³	IS:11255 (PART-1)	31.0	150 mg/Nm ³
5.	Concentration of SO ₂	mg/Nm ³	IS:11255 (PART-2)	18.4	-
6.	Concentration of NO _x	ppm	IS:11255 (PART-7)	105.0	-
7.	Concentration of CO	mg/Nm ³	IS:13270:1992	4.0	-
8.	Concentration of CO ₂	%	IS:13270:1992	6.2	-
9.	Concentration of O ₂	%	IS:13270:1992	9.7	-

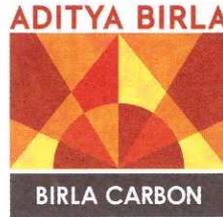
Analyst

Checked By

(Laboratory In-charge)

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**ANNEXURE R-4**

BC/ EHS/2023-24/ 120
16-Nov-2023

To,

Regional Officer
Uttar Pradesh Pollution Control Board
H.NO 162, Uttar Mohal (Near chandi Hotel).
Robertsganj,
Distt. Sonbhadra- 231216

Sub. Information about Plant off production and stack monitoring.

Ref: NGT Committee recommendation of OA 442/2023 hearing dated 31.10.2023.

Dear Sir,

This is with reference to the recommendation on OA 442/2023 hearing dated 31.10.2023 (shown below) our Reactors vent scrubber sampling is planned for 17.11.2023 & 18.11.2023.

Recommendations:-

- i) The unit needs to monitor the gaseous emission emitted from Vent Scrubbers during process shutdown/off production each year.
- ii) The unit shall inform about next process shutdown/off production to UPPCB and UPPCB needs to monitor to ensure the gaseous emission emitted from Vent Scrubbers.

It may kindly be noted that these samplings shall be done by MOEF&CC and NABL approved laboratory.

This is for your information and necessary action.

Thanking you,
Your faithfully,

For Birla Carbon India Private Limited
Unit: Renukoot


Syed M Islam
(Head EHS)

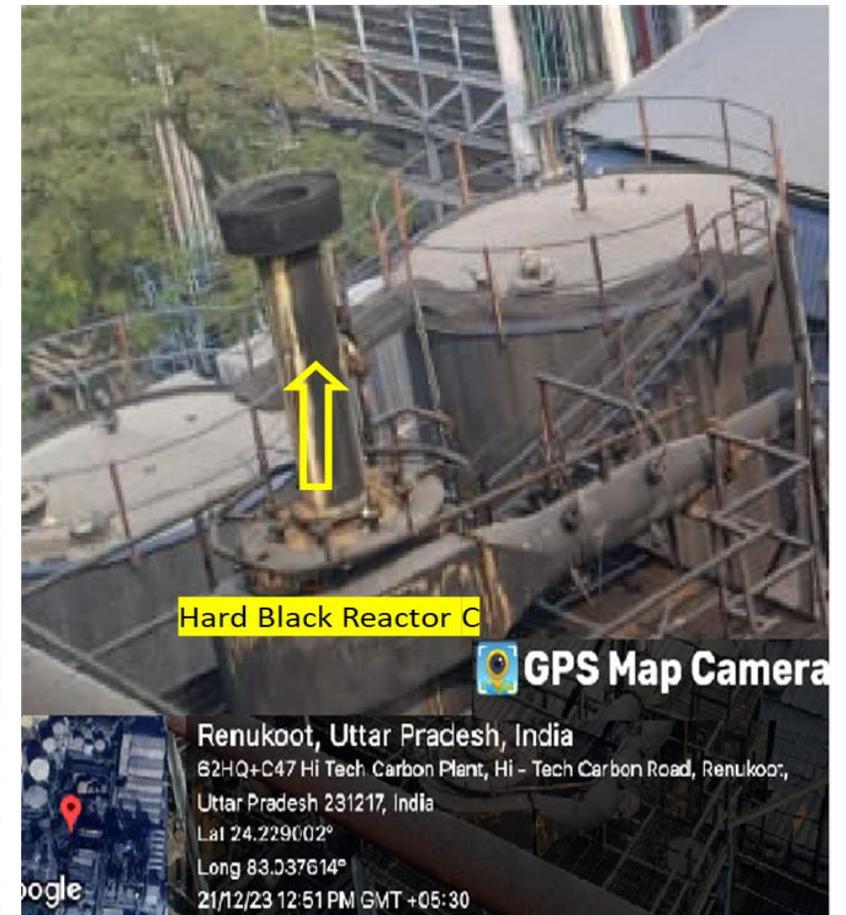
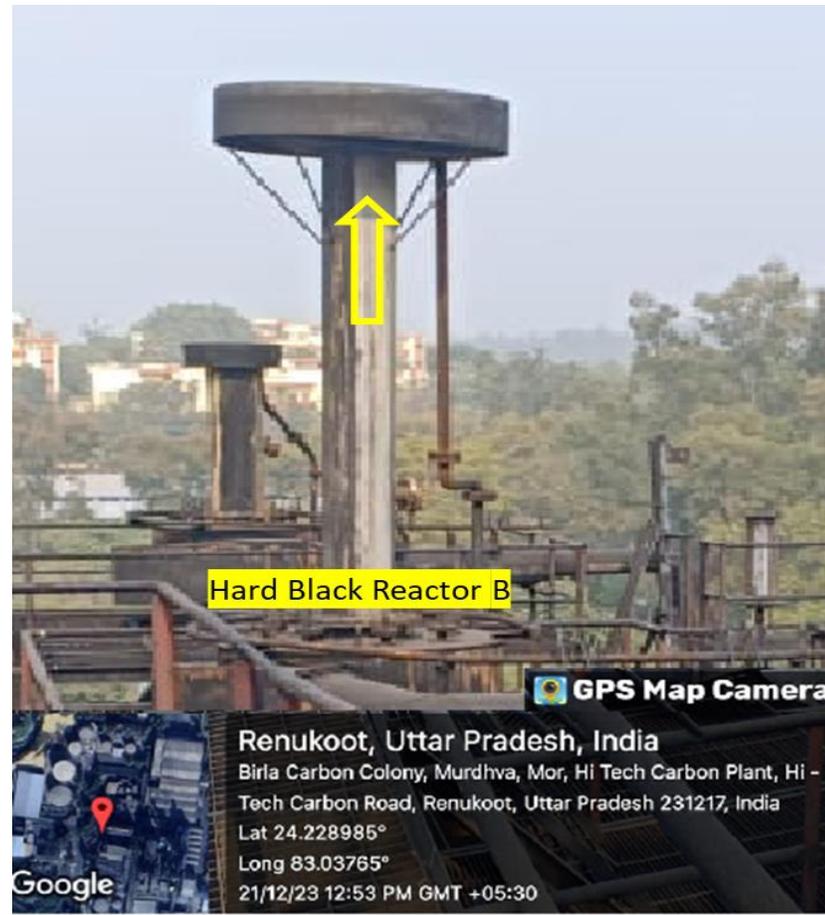
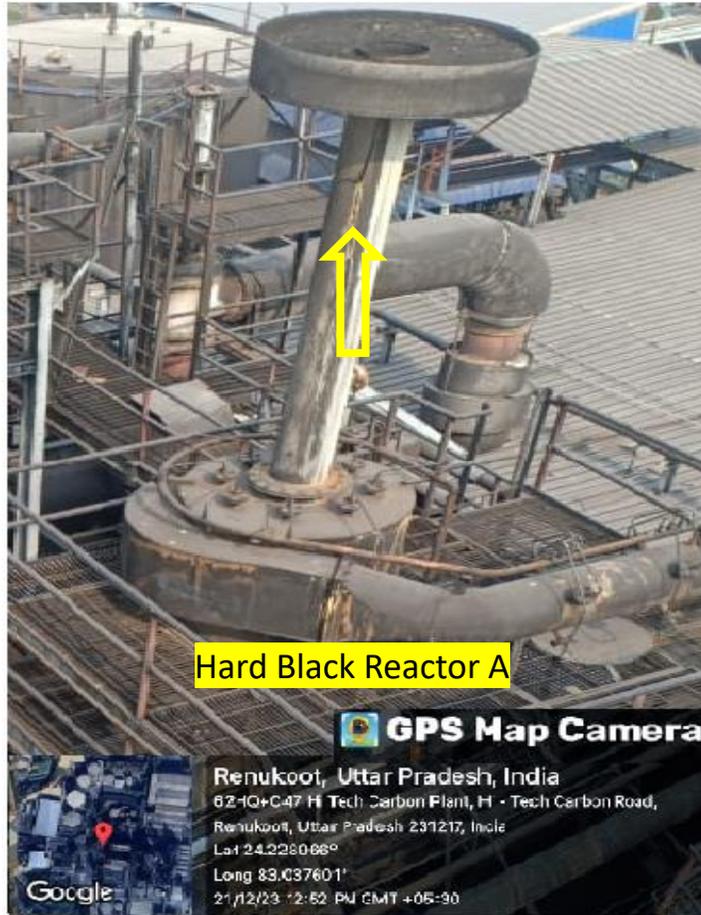
Birla Carbon India Private Limited
(Formerly known as SKI Carbon Black (India) Private Limited)
Unit : Renukoot

(TRUE COPY)

Murdhwa IndL Area, P.O. Renukoot, Dist. Sonbhadra - 231 217, U.P., India

T : +91 5446 252388 - 91 / 255020 | F : +91.5446 252387 | W : www.birlacarbon.com | CIN : U23201MH2013PTC241741

Line 1 : Reactor¹⁸² Vent Scrubbers



Line 2 : Reactor¹⁸³ Vent Scrubbers



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ANNEXURE R-6**AN INTRODUCTION OF CARBON BLACK**

CARBON BLACK is a generic term for the family of finely divided highly carbonaceous pigment which is produced by burning liquid hydrocarbon feedstock in a deficiency of air under carefully controlled conditions. PHILLIPS PETROLEUM Co. USA is pioneer in CARBON BLACK industry, BIRLA CARBON, RENUKOOT is assisted by their technology to produce all grades of carbon black ranging in surface area from 7 to 150 sq./gm. a range which broadly represents the carbon black spectrum used for rubber compounding and accounts for about 95% of global carbon black production. The remaining 5% is used in the paint and ink industry.

MANUFACTURING PROCESS

The three basic methods for producing carbon blacks are:

1. The Channel process. (commercially not viable produced by burning feedstock in deficiency of air)
2. The Furnace process (commercially viable produced by burning feedstock in deficiency of air)
3. The Thermal process (in absence of air by pyrolysis)

The Furnace black manufacturing process at Hi –Tech Carbon Renukoot has following sections:

Feedstock storage and pumping
 Reactor Section
 Bag Filter Section
 Palletization and drying Section
 Purge gas filter Section
 Conveying and Storage Section
 Packing and dispatch Section
 Energy conservation Section
 Utility Section

A brief description of each section is given below to understand the process in totality.

Feedstock storage and pumping:

Carbon Black feedstock / Aux. Fuel received from the refineries in tanker/ wagon rakes are unloaded into the feedstock / Aux. Fuel storage tanks separately. Since the feedstock is quite viscous in nature, special type of pumps and steam heating of the fluid is required for ease of handling and pumping.

Feedstock is stored in large MS tanks and oil temp. being maintained at about 60 - 90 °C. in the tank through internal steam coil or hot feedstock return from the plant.

Feedstock or Aux. Fuel is supplied to the plant by pipe (80 NB St. 80) at high pressure of 25 - 30 kg/ cm² through pumps suitable for handling high viscosity fluids. To make the fluid free flow able, steam coiled heat exchangers are provided at pump suction.

The feedstock is filtered through a fine mesh strainer to remove extraneous materials, At pump suction.

Feedstock header pressure is maintained in auto by suitable control valves and controlling stations. Principally carbon black feed stock are the bye-products of petroleum refineries. The most important characteristics of carbon black raw materials are high aromaticity (BMCI) and uniformity. Impurities like Sulphur, high inorganic ash and even water above certain levels are detrimental to product quality and process efficiency. The carbon black industry is, therefore, dependent to a large extent on petroleum refineries in the country and *abroad* to get an assured and continuous supply of the raw material of rigid specifications.

Reactor Section:

Since various types of Carbon Black can be produced in the oil FURNACE BLACK PROCESS under varying reaction conditions, two different designs of reactors are employed for manufacturing of all grades of CB which are required by rubber plastic and pigment Industries.

HARD BLACK REACTORS are used to produce the following grades of Carbon black conforming to ASTM, Standards. All these grades of Carbon Black are used in the treads of tyre as these are highly abrasion resistant.

Grades		Product Application.
N – 110	SAF	Tysetread
N – 219		Otrtyre
N - 220	ISAF	Footwear, Inks and Mech.Goods
N – 231		Otrtyre and Tysetread
N - 234		Conveyor belt, Mech.Goods and Retread
N - 326	HAF – LS	Hose, Inks, Mech. Goods Molded product, Pigments and Tyrecarcass
N - 330	HAF	Ext. Product, Plastics, Inks Conveyor belts, Footwear- Belt Mech. Goods, Molded products, Pigments, Retread, Rubber sol and Wire/Cable
N - 347/ N-339	HAF-HS	Mech. Goods, Plastics, Pigments
N - 375	HAF – IMPROVED	Conveyor belt, Mech. Goods and Tysetread

SOFT BLACK REACTORS are used to produce the following grades of Carbon black conforming to ASTM standards.

Grades		Product Application
N - 550	FEF	Airbags, Ext. Product, Hose, Inks, Mech. Goods, Otrtyre, Plastics, Tubes, Tyrecarcass, V-Belt and Wire / Cable
N - 650	GPF-HS	Ext. Product, Footwear, Hose, Mech. Goods Ext. Product, Footwear, Hose, Mech goods, Molded products, Retread, Tubes, Belts and Wire/ Cable Tyrecarcuss.
N - 660	GPF	Conveyorbelt,Ext.Product,Footwear Hose, Mech.Goods, Molded Products, Retread, Tubes, Tyrecarcass, Wire/Cable and V-belt
N - 774	SRF	Footwear, Hose, Inks, Mech goods, Molded product, Plastics Pigments and Wire/Cables.

Carbon Black is produced in Phillips patented cylindrical horizontal furnaces Or reactors lined with precast high temp. Chrome Alumina shapes having precise dimensional and temp. tolerances. The Preheated feedstock at about 200 - 250°C is finally injected axially/ radially into the reactor through a spray nozzle at about 1400°C to 1800°C at a pressure of 0.5kg / cm square which distributes it over a wide area. Heat required for thermal cracking is introduced by controlled condition of air and another stream of feedstock introduced axially. (only in Hard Black). The high temp. attained in the combustion cracks the feedstock into carbon and hydrogen moves at a very high velocity. The reaction is stopped by water quench at the outlet end of the reactor at about 900-1000 degree celcius. The property of the black is controlled by controlling the time, temperature and flow patterns in the reactor. A schematic diagram of a typical reactor is shown in fig.

The carbon black leaves the reactor in the form of dense smoke which is further cooled by passing through different heat exchangers like Air Pre Heater, West Heat Boiler and Oil Pre Heater, which is further cooled by passing through water quench tower to 280-300 degree celcius prior to filtering. Resulting in high savings of fuel with increased efficiency and pollution free reactor operation.

Product gasses laden with Carbon Black particles (now here after referred as smoke a mixture of CO, CO₂, CH₄, C₂H₂, N₂, H₂, Argon and water vapors).

Bag Filter Section:

Bag filter is a large rectangular house having 7 compartments and a hopper made of MS. Each compartment has 492 bags; bags are made of graphite + silicon coated / anti acid treated fiber glass bags. The bags have only bottom opening and are fixed securely to the bottom thimbles and the top closed ends are secured to the hangers.

Smoke coming from reactor section at 280 - 300°C enters through the bottom of bags and CB particles are deposited inside the bags. Clean gas filtered out and goes to "off gas header".

Cleaning of filter bag is done by reverse flow technique in which each compartment is subjected to reverse flow of clean off gas through the bags causing the deposited CB particles inside the filter bags to drop down into the hopper. The reverse flow of off gas is achieved by sucking off gas from off gas header and injecting into each compartment by a repressor blower. The opening / closing of valves in each compartment is regulated by a timer and through automatic control systems for efficient filtration and utilization of bag filters.

CB material collected in the hopper section of bag filter is conveyed through screw to a pneumatic blower/ cyclone system to a surge tank for pelletizing and drying section. Before conveying, the material passes through a Micropulverizer which crushes some hard carbonaceous particles to - 325 mesh and densify the fluffy carbon black to some extent.

Off gases collected in the off gas header are sent to drying and boiler section for their 100 % energy utilization and thus eliminate the risk of Atmospheric pollution.

Pelletizing and Drying section :

Carbon Black material collected in a large SS surge tank is sent to a pelletizer at a controlled rate through a variable speed drive rotary valve to a pelletizer where it is mixed with water and molasses solution to form strong wet pellets.

Pelletizer is a specially designed equipment and is equipped with a rotating shaft fixed with sharp edge pins in a double helix configuration. The close gap between the pins and the inner smooth surface of pelletizer accompanied by the conveying and rotating action of pins converts the paste into wet and strong spherical pellets.

These wet pellets are fed into a long rotary SS dryer through a dryer screw feeder. Pellets are dried inside the hot rotating dryer by slow tumbling, agitating and

falling action without damaging the pellets. Dryer shell is enclosed in a refractory lined box all along its length and the heat is supplied by burning of off gases received from the Bag filter section in a specially designed refractory lined combustor furnace.

Dry pellets with moisture less than 0.5 % exit at the other end of the dryer for storage in the silos. Modern techniques and reliable electronic instruments are used in this section to give a dried pelleted production of consistent quality at all times and make the process smooth and efficient.

Purge gas filter section:

Water evaporated due to drying of wet pellets in the dryer along with some powdered material is removed by a purge gas blower at the feed end of the dryer. These hot gases are sent through a cylindrical bag filter house called purge gas filter to remove and collect the CB particles and let out into the atmosphere very clean, purge gases. The Purge gas filter has 4 compartments and operates on the principle of pulse jet system.

Carbon Black collected in the conical hopper is fed to the surge tank through a rotary valve and no carbon black loss is there in the drying operation.

Conveying and storage section:

Dried pellets coming out at the exit end of the dryer are fed into a bucket elevator, made of SS buckets to carry the material to the top of the silos. The material can be fed into any of the silos via three nos. SS Screw conveyers located on the top of silos.

There are 12 nos. of silos to store the various grades of products. These silos are made of MS but epoxy lined from inside to prevent contamination of product during storage.

Packing & Dispatch section:

Material stored in the silos is packed in 25 kg paper bags & 550,600,1000,1150,1200,1250 kg bulk bag through an automatic packing machine. This portable packing machine can be connected to any of the 12 nos. storage silo. Fully automatic packing machine along with the moving roller conveyors and bag shapers make the handling of paper bags very fast, convenient and clean. Packed bags are stacked on steel pellets for storage and subsequent dispatch materials in truck to the consumers.

Energy Conservation section:

Low Btu off gases generated in the manufacturing process of CB in the reactor section and separated from accompanying CB particles in BF section are collected in the off gas header. In spite of their low calorific value, these gas are being utilized to recover their calorific value in a specially designed boiler system to generate high pressure steam and in a specially designed dryer combustor furnace to supply the heat energy requirement in the drying wet pellets.

The quantum of high pressure steam which can be generated through burning of these off gases meets the plant requirement of steam and power. Excess steam is exported to neighboring Unit (HINDALCO), from the same power colony power requirements is also being fulfilled.

High pressure boiler which can be run on a combination of off gas + fuel oil or fuel oil alone generates high pressure super-heated steam at 42 kg/ cm²g.

This high pressure steam is used to generate sufficient power required for plant consumption through a 2.5 mw condensing type Turbo-generator system and excess steam is supplied to neighboring unit. TG-4 10 MW turbine installed in 2011 for power export UPPCL. and we are exporting power 7.5 MW /hr. and as when steam required by Hindalco also steam export given to Hindalco.

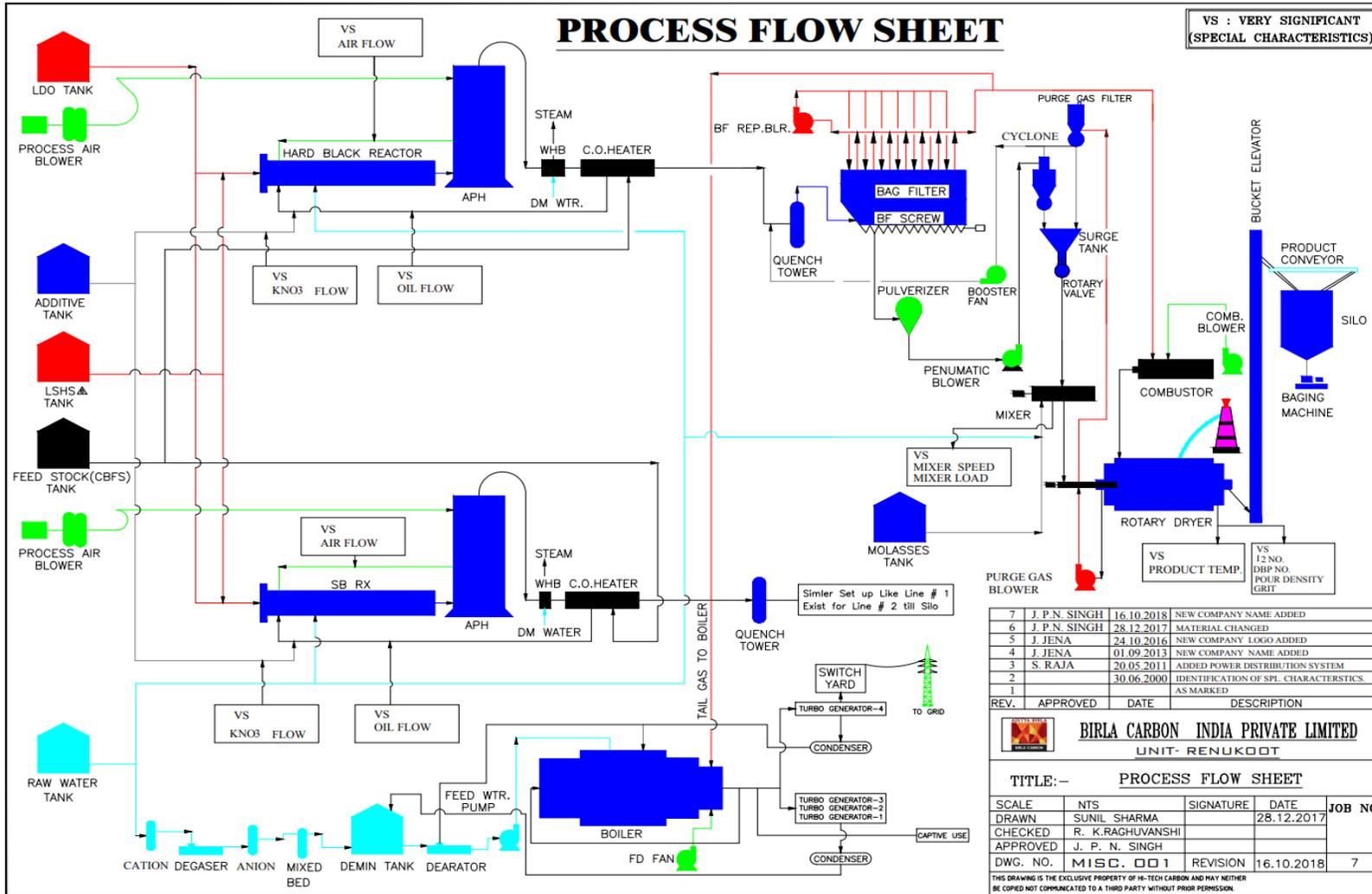
The scheme also helps in eliminating the atmospheric pollution problem by their effective utilization.

Utilities Section:

Utilities section has following major systems which meet the requirement of plants.

- a. Instrument Air system
- b. Compressed Air System at 7.5 kg/cm² pressure.
- c. Raw water
- d. Fire fighting system.
- e. Cooling water system
- f. Demineralized water system
- g. Diesel Generating set
- h. Fuel Recovery from Effluent Treatment Plant.

These systems are provided with necessary equipment e.g. Pumps, Blowers, Compressors, Tanks, Tower etc. as necessary.



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