BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 620/2022

IN THE MATTER OF:

Kaushal Kishore Vishwakarma — Applicant

Vs.

State of Punjab & Ors. — Respondents

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S. No.	Particulars	Page No.
1.	**Reply Affidavit** on behalf of Respondent No. 2, i.e., Central Pollution Control Board, (CPCB) in compliance of Hon'ble NGT Order dated 24.11.2023 in OA No. 620/2022, Kaushal Kishore Vishwakarma Vs. State of Punjab & Ors.	
2.	**Annexure-I:** A copy of the Hon'ble NGT Order dated 24.11.2023.	
3.	**Annexure-II:** A copy of Standard Operating Procedure (SOP) for Utilization of Spent Carbon (Carbon Residue) generated from Urea Fertilizer Industry in March 2017.	
4.	**Annexure-III:** A copy of information collected by CPCB from various industries is summarized in tabular form.	

(Dinabandhu Gouda)
Scientist F
Central Pollution Control Board
Delhi-110032

Dated: 05.01.2024
Place: Delhi

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 620/2022

IN THE MATTER OF:

Kaushal Kishore Vishwakarma **Applicant**

Vs.

State of Punjab & Ors. **Respondents**

REPLY ON BEHALF OF RESPONDENT NO. 02, CENTRAL POLLUTION CONTROL BOARD (CPCB).

I, Dinabandhu Gauda, S/o Shri Brundaban Gouda, aged 51 years, working as Scientist 'F' in the Central Pollution Control Board; Parivesh Bhawan, East Arjun Nagar, Delhi-110032, do hereby solemnly affirm and declare as under:

1. That I, in the capacity of Scientist 'F' of the Central Pollution Control Board (hereinafter referred as CPCB) am fully conversant with the facts of the case and have been authorized to file the present affidavit on behalf of the Respondent No. 2 (CPCB).

NOTARY PUBLIC R.L. Chaudhary N.C.T. of Delhi Regd. No. 1519 GOVT. OF INDIA

2. Hon'ble NGT vide its order dated 24.11.2023 in the matter of OA No 620/2022 (Kaushal Kishore Vishwakarma Vs State of Punjab & Ors.) directed CPCB to obtain information about similar industries (nitrogenous and complex fertilizers industries) and storage and disposal of carbon slurry by them and compile the same in its reply/response. A copy of order is annexed as **Annexure –I**

3. Accordingly, the reply of Central Pollution Control Board (CPCB) is submitted as follows :

The Spent Carbon (Carbon Residue) is generated during the thermal cracking of hydrocarbon for manufacturing of urea fertilizer. Spent Carbon (Carbon Residue) is listed as hazardous waste under S No. 18.2 of Schedule -1 of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

CPCB had published Standard Operating Procedure (SOP) for Utilization of Spent Carbon (Carbon Residue) generated from Urea Fertilizer Industry in March 2017. The aforementioned SOP is enclosed as **Annexure - II**

The aforementioned SOP specifies the process which involves utilization of Spent Carbon (Carbon Residue) in carbon black industry to reduce consumption of raw material to achieve resource recovery. Carbon Residue is mixed with quench water and is used as quench liquor at a temperature of about 2000 ^{0}C in the reactor to reduce the temperature and in process, carbon in the Carbon Residue becomes carbon black.

The Spent carbon (Carbon Residue) may be disposed in authorized disposal facility in accordance with authorization condition, when not utilized in manufacturing of Carbon black.

As per Hon'ble NGT order dated 24.11.2023, CPCB has collected information from concerned fertilizer industries/ SPCBs and Association. CPCB through letter and Email dated 15.12.2023 requested concerned fertilizer industries, State Pollution Control Boards and Fertilizer Association of India to provide requisite information.

Out of 42 concerned industries, CPCB received information from all 42 industries.

Only one unit i.e. M/s Gujarat Narmada Valley Fertilizers & Chemicals Ltd (Unit-1),Bharuch, Gujarat has informed that it generates carbon residue (carbon soot) during partial oxidation of Low sulphur Heavy Stock(LSHS) in Ammonia making process. Since 2013 the feed stock of manufacturing of urea was replaced from LSHS to natural gas. Only a small quantity of Ammonia is being manufactured through LSHS . As per conditions of Consolidated Consent & Authorization issued by Gujarat Pollution Control Board, the unit is generated capacity of 2000 MT / Annum of Carbon soot. The unit informed that it is being utilized carbon soot in its boiler along with coal, which is in accordance with conditions of Consolidated Consent & Authorization issued by Gujarat Pollution Control Board.

National Fertilizers Ltd, Bathinda informed that it has not generated carbon slurry since November 2012 after changing feed stock from fuel oil to natural gas. The unit informed that it disposes carbon slurry to authorized Hazardous Waste recycler and has submitted documentary evidence in this regard. The unit informed that the quantity of carbon slurry stored in ponds as on 19.12.2023 is 38145.57 MT which is yet to be disposed by it.

National Fertilizers Ltd. Nangal informed that it has not generated carbon slurry since February 2013 after switched off to natural gas. It has disposed off carbon slurry as per Hazardous and Other Wastes Management and Transboundary Movement) Rules, 2016. The unit has submitted documentary evidence in this regard. The unit has informed that the all carbon slurry has been disposed off. Presently carbon slurry pond is empty.

National Fertilizers Ltd, Panipat informed that it has not generated carbon slurry since November 2012. The unit has informed that the quantity of carbon

slurry is stored in pond is 122600 MT, which is yet to be disposed off. The unit informed that it has permitted Haryana State Pollution Control Board authorized hazardous waste recycler / processor for disposal of stored carbon slurry; and has submitted documentary evidence in this regard.

In addition to above stated 04 units; 38 units that responded to the communications made by CPCB informed that they do not generate any spent carbon and have no stored quantities of spent carbon.

The information collected by CPCB from various industries is summarized in tabular form in **Annexure –III**

In light of the above, it is humbly submitted that the Answering Respondent shall abide by the Orders and directions passed by the Hon'ble Tribunal in the present case.

NOTARY PUBLIC R.L. Chaudhary N.C.T. of Delhi Regd. No. 1513 GOVT. OF INDIA

DEPONENT

दानबन्धु गौडा /Dinabandhu Gouda
प्रभागीय प्रमुख, आई.पी.सी.-I/Divisional Head, IPC-I
केन्द्रीय प्रदूषण नियंत्रण बोर्ड
Central Pollution Control Board
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
M/o Envt. Forest & Climate Change, Govt. of India
परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

VERIFICATION

05 JAN 2024

Verified at Delhi on this ..... day of January, 2024 that the contents of the above affidavit are true and correct to the best of my knowledge and belief and nothing has been concealed therein.

DEPONENT

दानबन्धु गौडा /Dinabandhu Gouda
प्रभागीय प्रमुख, आई.पी.सी.-I/Divisional Head, IPC-I
केन्द्रीय प्रदूषण नियंत्रण बोर्ड
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Parivesh Bhawan, East Arjun Nagar, Delhi-110032

ATTESTED
NOTARY PUBLIC
GOVT. OF IN
05 JAN 2024

ANNEXURE - I

Item No.5 (Court No. 2)

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI.

(Through Physical Hearing with Hybrid VC Option)

Original Application No.620/2022

Kaushal Kishore Vishwakarma ...Applicant

Versus

State of Punjab & Ors. ...Respondents

Date of hearing: 24.11.2023

CORAM: HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER.
HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER.

Applicant: None for the applicant.

Respondents: Mr. Naginder Benipal Advocate for PPCB.
With Mr. Ramandeep Singh Sidhu, EE, PPCB.
Mr. Vivek Kohli, Senior Advocate with Ms. Nikita Maheshwari, Ms. Juvas Rawal, Ms. Pari Bhardwaj and Ms. Bhavya Bhatia, Advocates for Respondents No. 4 & 7.
Mr. Rahul Khurana, Advocate for HSPCB with Mr. Dinesh, RO, HSPCB, Rohtak.
Ms. Sandhya Batra, DGM (TS) and Mr. Pawan Agarwal Sr. Manager Material, NFL, Bhatinda.
Ms. Seema Chawla, DGM (TS) and Mr. Mahesh Patil, CM Material, NFL Panipat.

Application is registered based on a letter petition received by Post.

ORDER

1. The grievance in the application is regarding violation of environmental norms in handling of carbon and hazardous waste with prayer for taking of appropriate steps for saving the lives of the labourers and protection and improvement of the environment.

2. Notices were ordered to be issued to respondents as per orders passed in the case.

3. NFL, Bhatinda and NFL, Panipat have filed replies vide emails dated 23.11.2023 respectively.

4. Vide order dated 04.10.2023 personal appearance of Officers authorized by General Manager NFL, Bhatinda and General Manager NFL, Panipat, Regional Officer, PSPCB, Bhatinda and Regional Officer, HSPCB, Rothak and duly authorized representative of respondent no. 5-M/s Shubham Sales Co. was ordered.

5. Ms. Sandhya Batra, DGM (TS) and Mr. Pawan Agarwal Sr. Manager Material, NFL Bhatinda, Ms. Seema Chawla, DGM (TS), Mr. Mahesh Patil, CM Material, NFL, Panipat, Mr. Ramandeep Singh Sidhu, EE, PPCB and Mr. Dinesh, RO, HSPCB, Rohtak have appeared in person and we have interacted with them.

6. The case involves the aspect of storage and disposal of hazardous waste in violation of the Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016.

7. The material placed on record shows that respondents no. 4 and 7 started their commercial production in the year 1979. They used Fuel Oil ("FO") / Low Sulphur Heavy Stock ("LSHS") as feedstock for the production of Urea from 1979 till November, 2012. The Plants were based on the partial oxidation of Fuel Oil by the Shell Gasification process with the help of oxygen and steam at 55 kg/cm2 at a temperature of 1350 degrees Celsius. During the partial oxidation of Fuel Oil, which was an energy-intensive process, carbon was generated due to

inevitable thermal cracking. The carbon so generated was removed from the raw gas by water and collected in a carbon separator called "Carbon Slurry", a mixture of carbon and water. As per the design, about 80% of the generated carbon was recycled back to the process in the form of carbon oil as feed through the carbon recovery unit, while the balance quantity was sent as Carbon Slurry to the separate designated brick-lined Carbon Slurry Ponds. In an endeavour to keep in pace with clean technology and with a commitment to sustainable development, the Plants were restructured in November, 2012. The feedstock was replaced from LSHS to Natural Gas, which not only reduced the specific energy per metric ton of urea, but also lowered the carbon footprint. The change of feedstock from Fuel Oil to Natural Gas also annulled the generation of carbon slurry as a by-product. As a result, there was no generation of carbon slurry at the Plants since 2012. It is stated that leftover carbon slurry amounting to approximately 85000 metric ton was stored in NFL, Panipat and leftover carbon slurry amounting to approximately 53100 metric ton was stored in NFL, Bhatinda in the designated carbon slurry ponds after following all the rules, regulations, guidelines and taking all necessary precautions.

8. It may be observed here that carbon residue in production of nitrogenous and complex fertilizers was categorized as "Hazardous Waste" under Category 18.2 of Schedule - I after the notification of the Hazardous Waste (Management and Transboundary Movement) Rules, 2016.

9. Replies filed by NFL, Panipat and NFL, Bhatinda reveal that huge quantity of carbon slurry, which was earlier considered to be a by-product of manufacturing of fertilizers by NFL but now falls within the

definition of hazardous waste under the above said rules, is stored by NFL, Bhatinda as well as NFL, Panipat.

10. In view of the averments in the application and the factual position of storage of hazardous waste by respondents no. 4 and 7 for very long period of time, we consider it appropriate to have response of MoEF & CC, through its Secretary and CPCB, through its Member Secretary regarding issuance of guidelines and monitoring mechanism for monitoring storage and disposal of such hazardous waste of carbon slurry by similar industry throughout India to be essential for just and proper adjudication of environmental questions involved in the case.

11. We have also noticed that similar Plant was being run by M/s National Fertilizer Ltd. at Nangal. Learned Senior Counsel appearing for NFL, Panipat and Bhatinda has submitted that such carbon slurry/hazardous waste has already been disposed of by NFL, Nangal. We consider presence of NFL, Nangal to be necessary for verifying the factual position regarding storage and disposal of carbon slurry in its plant and apprising this Tribunal about the practices adopted for disposal thereof.

12. Accordingly MoEF & CC, through its Secretary, CPCB, through its Member Secretary and NFL, Nangal through its Managing Director are impleaded as respondents no. 8 to 10.

13. The Registry is directed to amend the memo of parties and attach the same with the application and issue notices to respondents no. 8 to 10 requiring them to file there reply/response within one month by e-mail at judicial-ngt@gov.inpreferably in the form of searchable PDF/OCR Supported PDF and not in the form of Image PDF.

14. In its reply MoEF & CC may give its specific response regarding storage/disposal of carbon slurry which now falls under the definition of hazardous waste.

15. CPCB is directed to obtain information about similar industries and storage and disposal of carbon slurry by them and compile the same in its reply/response.

16. List for further consideration on 08.01.2024.

17. A copy of this order be sent to Secretary, MoEF & CC, Secretary, CPCB, General Managers, NFL, Bhatinda, NFL, Panipat and NFL, Nangal respectively, Member Secretaries, PSPCB and HSPCB by email for requisite compliance.

Arun Kumar Tyagi, JM

Dr. Afroz Ahmad, EM

November 24, 2023
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ANNEXURE-II

Standard Operating Procedure and Checklist of Minimal Requisite Facilities for utilization of hazardous waste under Rule 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

Utilization of Spent Carbon (Carbon Residue) generated from Urea Fertilizer Industry

March, 2017

Central Pollution Control Board
(Ministry of Environment, Forest & Climate Change, Government of India)
Parivesh Bhawan, East Arjun Nagar,
Shahdara, Delhi – 110032

Procedure for grant of authorisation by SPCBs/PCCs for utilization of Hazardous Waste

(i) While granting authorisation for utilization of hazardous wastes, SPCBs/PCCs shall ensure the following:

a. The waste (intended for utilization) belongs to similar source of generation as specified in SoPs.

b. The utilization process is similar to the process of utilization described in SoPs.

c. End-use / product produced from the waste shall be same as specified in SoPs.

d. Authorisation be granted only after verification of utilization process and minimum requisite facilities as given in SoPs.

e. Issuance of passbooks (similar to the passbooks issued for recycling of used oil, waste oil, non-ferrous scrap, etc.) for maintaining records of receipt of hazardous wastes for utilization.

(ii) After issuance of authorization, SPCB shall verify the utilization process, checklist and SOPs on quarterly basis for initial 2 years; followed by random checks in the subsequent period for atleast once a year.

In-case of lack of requisite infrastructures with the SPCB/PCC, they may engage 3rd party institutions or laboratories having EPA/NABL/ISO17025 accreditation/recognition for monitoring and analysis of prescribed parameters in SoPs for verification purpose.

(iii) SPCBs shall provide half yearly updated list of units permitted under Rule 9 of HOWM Rule, 2016 to CPCB and also upload the same on SPCB website, periodically. Such updated list shall be sent to CPCB on a half yearly basis i.e by July and January respectively.

(iv) Authorisation for utilisation shall not be given to the units located in the State/UT where there is no Common TSDF, unless the unit ensures authorised captive disposal of the hazardous waste (generated during utilisation) or its complete utilisation or arrangement of sharing with any other authorised disposal facility.

(v) In case utilization proposal is not similar with respect to source of generation or utilization process or end-use as outlined in this SoP, the same may be referred to CPCB for clarification / conducting trial utilization studies and developing SoPs thereof.

(vi) The source and work zone standards suggested in the SoPs are based on the E(P)A notified and OSHA standards respectively, however, SPCB/PCC may impose more stringent standards based on the location or process specific conditions.

25.0 Utilization of Spent Carbon (Carbon Residue)

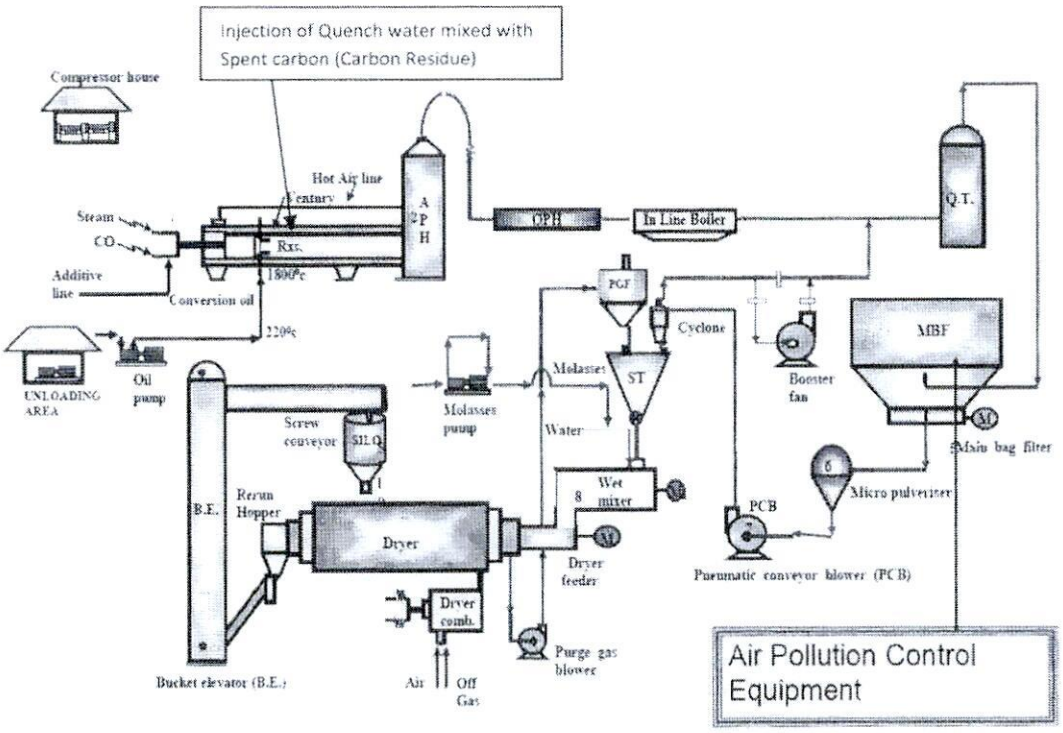
Type of HW	Source of generation	Recovery/Product
Spent Carbon (carbon Residue – listed at Sl No. 18.2 of Schedule-I of HOWM Rules, 2016	From Urea Manufacturing plant	Carbon Black

25.1 Source of Waste

The Spent Carbon (Carbon Residue) is generated during the thermal cracking of hydrocarbon for manufacturing of urea fertilizer. The Spent carbon (Carbon Residue) is categorized as hazardous waste under S.No 18.2 of schedule-I of HOWM Rules, 2016, which are required to be disposed in authorized disposal facility in accordance with authorization condition, when not utilized in manufacturing of Carbon black.

25.2 Utilisation Process

The process involves utilization of Spent Carbon (Carbon Residue) in carbon black industry to reduce consumption of raw material (Carbon black feedstock) to achieve resource recovery. Carbon Residue is mixed with quench water and is used as quench liquor at a temperature of about 2000 ^{0}C in the reactor (where partial combustion/pyrolysis of carbon black feed takes place) to reduce the temperature and in process, carbon in the Carbon Residue becomes part of the product i.e. carbon black.



25.3 Product Usage / Utilization

The Spent Carbon (Carbon Residue) mixed with water for quenching of hot gases in the said Reactor to regulate the temperature of flue gas and the carbon present in the slurry contributes as supplementary resource in manufacturing of carbon black.

25.4 Standard Operating Procedure for utilization

This SoP is applicable only for utilization of Spent carbon (Carbon Residue) generated from Urea fertiliser manufacturing plant, as a supplementary resource in manufacturing of Carbon Black.

(1) The Spent Carbon (Carbon Residue) (with 85 % moisture) shall be procured in non-reactive drums/container in accordance with the provisions stipulated in Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

(2) There should be a designated space for storage of Spent Carbon (Carbon Residue) under cool, dry, well ventilated and covered storage shed, as authorized by the concerned SPCB/PCC under the HoWM Rules, 2016 so as to eliminate water intrusion. Such shed shall have impervious lined floor, adequate slope, seepage collection pit. The loading/unloading space for Spent Carbon (Carbon Residue) shall also be under the covered shed.

(3) The seepage from the collection pit shall be pumped to mixing vessel/ slurry preparation tank (where Spent carbon is mixed with water) to feed the same into the Carbon Black Reactor.

(4) The Spent Carbon (Carbon Residue), if not in cake form shall be stored in silo. Loading of spent carbon into silo shall be carried out mechanically using pump.

(5) The spent carbon (Carbon Residue) shall be directly transferred to slurry preparation tank through mechanised system with no manual handling.

(6) Utilisation of Spent Carbon (dry weight) shall not exceed 5 % to the product i.e Carbon black manufactured.

(7) The carbon slurry mixed with water from the slurry preparation tank shall be injected as quench liquor through pipeline into the reactor.

(8) The reactor shall maintain temperature not less than 2000°C.

(9) Utilization of spent carbon shall not be carried out during unstable/breakdown conditions in the reactor.

(10) The unit shall ensure that all personnel involved in the plant operation shall wear proper personal protective equipment such as masks, gloves, goggles, shoes etc. for safety, suitable for power plant operation.

(11) Prior to utilization of Spent Carbon (Carbon Residue), the unit shall obtain authorization for generation, storage and utilisation of Spent Carbon (Carbon Residue) from the concerned State Pollution Control Board, under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016,

(12) The hazardous wastes (viz. contaminated gloves, masks, dusters, liners, etc., as applicable) generated from utilization process shall be collected, and stored temporarily in drums/bags in a dedicated hazardous waste storage area within the

unit premises. The same shall be sent to Common hazardous waste treatment, storage and disposal facility (TSDF) or other authorized facility, within 90 days from generation of waste. Such storage area shall be covered and properly ventilated.

(13) Transportation of the aforesaid waste shall be carried out by the sender or receiver (utilizer) after obtaining authorization from the concerned SPCB under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.

(14) In case of environmental damages arising due to improper handling of hazardous wastes (viz., accidental spillage during generation, storage, processing, transportation and disposal), the unit shall be liable to implement immediate corrective measures, environmental site assessment and remediation of contaminated soil/groundwater/sediment etc. as per the "Guidelines on Implementing Liabilities for Environmental Damages due to Handling & Disposal of Hazardous Wastes and Penalty" published by CPCB.

(15) During the process of utilization and handling of hazardous waste, the unit shall comply with the requirements in accordance with the Public Liability Insurance Act, 1991 as amended, wherever applicable.

25.5 Records & Returns

(1) The unit shall maintain a passbook issued by concerned SPCB/PCC wherein the following details with respect to each procurement of Spent Carbon (Carbon Residue) shall be entered:

- Address of the sender
- Date of dispatch
- Quantity procured
- Seal and signature of the sender
- Date of receipt in the premises

(2) The unit shall submit quarterly and annual information on Spent carbon (Carbon Residue) consumed, quantity utilised, product manufactured, hazardous waste generated, resources conserved (specifying the details like type and quantity of resources conserved) etc., to the concerned SPCB.

(3) A log book shall be maintained with information on source, quantity, date wise utilization of Spent Carbon (Carbon Residue), product recovered, hazardous waste generated, etc. and record of analysis report of emission monitoring & effluent discharged, as applicable shall be maintained.

(4) The unit shall maintain record of hazardous waste generated, utilised and disposed as per Form 3 & shall file annual returns in Form 4 as per Rule 20 (1) and (2) of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, to SPCB.

25.6 Standards

(i) Source emission standards for Particulate Matter, SO_2, NO_x, heavy metals (Cd, Th + their compounds; Co, Mn, Ni, Cr, Sb, As, Pb, Cu, V + their compounds) shall comply with the standards notified under the Environment (Protection) Act, 1986 vide Notification No. G.S.R. 481(E) dated 26/06/2008 for Common Hazardous Waste Incinerators or as prescribed by the concerned SPCB/PCC, whichever is stringent.

(ii) Monitoring of the specified source emissions shall be carried out quarterly. The monitoring shall be carried out by NABL/EPA accredited laboratories and the results shall be submitted to the concerned SPCB quarterly.

25.7 Siting of Industry

This SOP is applicable only for utilization of Spent Carbon in the Carbon black manufacturing Industry which is already in operation and cited in accordance with Consent to Establish issued by the concerned SPCB/PCC.

25.8 Size of Plant & Efficiency of utilisation

Utilisation of Spent Carbon (dry weight) shall not exceed 5 % to the product i.e Carbon black manufactured. Hence, requisite facilities of adequate size shall be installed accordingly as mentioned under para 25.10 below.

25.9 On-line detectors / Alarms / Analysers

Online emission analysers for PM, SO_2 and NO_x in the stack shall be installed and the online data be connected to the server of the concerned SPCB/PCC and CPCB.

25.10 Checklist of Minimal Requisite Facilities:

S.No	Requisite Facilities
1.	Designated space for storage of Spent Carbon (Carbon Residue) under cool, dry, well ventilated and covered storage shed, so as to eliminate water intrusion.
2.	Storage shed with impervious lined floor, adequate slope, seepage collection pit
3	The loading/unloading space for Spent Carbon (Carbon Residue) under covered shed.
4.	Mechanised systems for handling & transfer of Spent carbon from storage shed to mixing vessel.
5.	Mixing vessel/slurry preparation tank with appropriate mechanised system for mixing of Spent carbon with water.

6.	Pumping system for transfer of collected seepage from seepage pit into mixing vessel/ slurry preparation tank
7.	Piping arrangement for injecting the mixed slurry into carbon black reactor.
8.	Carbon Black Reactor(s)
9.	Air Preheater
10.	Oil Preheater
11.	Waste Heat Recovery Boiler
12.	Air Pollution Control Systems
13.	Stack of height as prescribed by SPCB with easy access to port hole, for conducting stack monitoring
14.	Online analyzers for monitoring Particulate Matter, SO_2 and NOx emission in stack and the online data be connected to the server of the concerned SPCB/PCC and CPCB.

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Annexure –III

S No.	Name of the Fertilizer Unit	Carbon slurry generated per annum	Quantity of carbon slurry stored	Mode of disposal of carbon slurry	In case, no carbon slurry is generated by the unit, since which year carbon slurry is not being generated.
1.	M/S. Coromandel International Ltd., Beach Road, Kakinada, East Godavari District., Kakinada , Andhra Pradesh-533003	NIL	NIL	Not Applicable	Not Applicable
2.	M/S. Coromandel International Limited, Sriharipuram, Visakhapatnam, Visakhapatnam, Andhra Pradesh-530011	NIL	NIL	Not Applicable	Not Applicable
3.	Brahmaputra Valley Fertilizer Corporation Limited P.S. - Namrup, P.O. - Parbatpur, Dist. - Dibrugarh -786623, Namrup, Assam-786623	NIL	NIL	Not Applicable	Not Applicable
4.	Hindustan Urvarak And Rasayan Limited P.O. Barauni Urvarak Nagar, Thana-H.F.C., Dist-Begusarai, Barauni, Bihar-851115	NIL	NIL	Not Applicable	Not Applicable

5.	Paradeep Phosphates Limited (Formerly Zuari Agro Chemicals Limited) Jai Kisaan Bhawan, Zuarinagar, Goa, Sancoale, Goa-403726	NIL	NIL	Not Applicable	Not Applicable
6.	Krishak Bharti Co-Operative Ltd., Kawas, Dist.Surat, Surat, Gujarat-394515	Nil	Nil	Not applicable	Not applicable
7.	IFFCO, Kalol 712,846-Saij, 17-37-Dhanaj, PO- Kasturinagar, Kalol, Dist- Gandhinagar, Gujarat-382423	Nil	Nil	Not applicable	Not applicable
8.	Gujarat Narmda Valley Fertilizers & Chemicals Ltd (Unit-1) PO:- NARMADANAGAR, Taluka & Dist: Bharuch, Bharuch, Gujarat-392015	2000 MTA	Nil	At Boiler along with Coal	Not Specified
9.	Gujarat State Fertilizers & Chemicals Ltd. (Sikka Unit), At & Po Moti Khavadi, Dist. Jamnagar, Jamnagar, Gujarat-361140	Nil	Nil	Not applicable	Not applicable
10.	GSFC – Gujarat State Fertilizer And Chemicals Ltd. P.O. Fertilizer Nagar, NH-8, Vadodara, Gujarat-391750	NIL	NIL	Not Applicable	Not Applicable

11.	NFL Panipat Gohana Road Panipat, Haryana-132106	Nil	122600 MT	Authorized HW Recycler	Nov-12
12.	Hindustan Urvarak And Rasayan Limited Mauza-Rohraband, P S Sindri, District Dhanbad, Jharkhand, 828122	No Information Provided	No Information Provided	No Information Provided	No Information Provided
13.	Mangalore Chemicals & Fertilizers Ltd., Panambur, Mangalore. D.K. Dist., Mangalore, Karnataka -575010	NIL	NIL	Not Applicable	Not Applicable
14.	The Fertilizers And Chemicals Travancore Ltd -Cochin Division Ambalamedu P.O Ernakulam District Kerala-682303, Kochi , Kerala-682303	Nil	Nil	Not applicable	Not applicable
15.	Fertilizers & Chemicals Travancore Ltd, Udyogamandal Complex- Fertilizer Plants, Udyogamandal P.O., Eloor, Ernakulam District, Kerala	Nil	Nil	Not applicable	Not applicable
16.	National Fertilizers Ltd Vijaipur, Distt. Guna, Madhya Pradesh-473 111	NIL	NIL	Not Applicable	Not Applicable

17.	Smartchem Technologies Limited Plot No. K-7 & K-8, MIDC Taloja, Tal. Panvel, Dist. Raigad, Maharashtra-410208	NIL	NIL	Not Applicable	Not Applicable
18.	Rashtriya Chemicals And Fertilizers Ltd (Trombay Unit) 127, Chembur (Marwali),1,5,5,1 To 6 (Anik), Chembur, Mumbai, Maharashtra-400074	NIL	NIL	Not Applicable	Not Applicable
19.	M/S. Reshtriya Chemicals & Fertilizers Ltd., Thal Unit, Survey No. 2, Village Tal-Vaishet, Taluka - Alibag, Raigad, Maharashtra-402208	Nil	Nil	Not applicable	Not applicable
20.	M/S. Smartchem Technologies Limited, Plot No. K-1, (Part-1), K-1 (Part-2), MIDC Taloja, Tal. Panvel, Dist. Raigad - 410208., Taloja, Maharashtra-410208	NIL	NIL	Not Applicable	Not Applicable
21.	National Fertilizers Ltd. Sibian Road, Bathinda, Punjab-151003	NIL	38145.57	Authorized HW Recycler	Nov-12
22.	National Fertilizers Ltd Nangal Unit, Anandpur Sahib, Rupnagar, Punjab-140126	NIL	NIL	Authorized HW Recycler	Feb-13

23.	Shri Ram Fertilizer & Chemicals, Shriram Nagar, Kota, Rajasthan-324004	NIL	NIL	Not Applicable	Not Applicable
24.	Chambal Fertilizer And Chemicals Limited UNIT III , PO Gadepan, District : Kota, Rajasthan-325208	NIL	NIL	Not Applicable	Not Applicable
25.	Tuticorin Alkali Chemicals And Fertilizers Limited S.F No.435/2,436,437,438,439,411, Mullakkadu Part 1 Village., Thoothukudi, Tamilnadu-628005	NIL	NIL	Not Applicable	Not Applicable
26.	M/S. Madras Fertilizers Ltd., Manali Madhavaram Taluk Tiruvallur Distt., Chennai, Tamilnadu-600068	NIL	NIL	Not Applicable	Not Applicable
27.	M/S. Greenstar Fertilizers Limited S.F. No. S.F. No.239/2, 240/2, 242, 243, 244/2, 244/3, 245, 246, 247/1, 247/2, 248/2, 249/1B, 250/2, 251/2B, 424/3A, 425, 426/1, 427/1, 429/3B, 439part, 444/1, 244/1, 248/2A, 424/3B , MULLAKKADU PART 1 Village, Thoothukkudi Taluk, Thoothukkudi District, Tuticorin, Tamilnadu-628005	NIL	NIL	Not Applicable	Not Applicable

28.	M/S. SPIC Ltd., SPIC Nagar, Thoothukudi – 628005 , Thoothukudi Taluk, Thoothukudi, Tamilnadu-628005	NIL	NIL	Not Applicable	1975
29.	M/S. Ramagundam Fertilizers & Chemicals Limited (Joint Venture Company Of EIL, NFL& FCIL) Fertilizer City, Ramagundam(M), Peddapalli District., Ramagundam, Telangana-505210	NIL	NIL	Not Applicable	Not Applicable
30.	Nagarjuna Fertilizers And Chemicals Limited Nagarjuna Road, Kakinada, East Godavari-District, A.P-533003 KAKINADA, Telangana-533003	NIL	NIL	Not Applicable	Not Applicable
31.	Yara Fertilisers India Pvt. Ltd. Formerly Known As Tata Chemicals Ltd. Indira Dham, Babrala, Dist. Sambhal, BABRALA, UP-242021	NIL	NIL	Not Applicable	Not Applicable
32.	Hindustan Urvarak And Rasayan Limited Fertilizer Campus, Gorakhpur, UP-273007	NIL	NIL	Not Applicable	Not Applicable
33.	IFFCO Phoolpur , Allahabad, UP-212404	Nil	Nil	Not applicable	Not applicable

34.	Kanpur Fertilizers & Cement Limited "CEE KAY ESTATE " Udyog Vihar Panki Industrial Area Kanpur 208022 (UP)	Nil	Nil	Not appli cable	Not applicable
35.	IFFCO, IFFCO Aonla Unit P.O.- IFFCO Townshi p District –Bareilly, UP-243403	NIL	Nil	Not Appli cable	Not applicable
36.	Indorama India Privat e Limited Jagdishpur Industrial Area Dist. Sultanpur (UP) - 227817	NIL	NIL	Not Appli cable	Not Applicable
37.	Kribhco Fertilizers Lt d. Jalalabad Road, Pipro la, Shahjahanpur, UP-24 2001	NIL	NIL	Not Appli cable	Not Applicable
38.	Indorama India Pvt Lt d, (Formerly Known As Irc Agrochemicals Private Limited.) For merly Known As Tata Chemicals Limited H aldia, Po- Durgachuk, Haldia, Midnapore, W est Bengal-721602	NIL	NIL	Not Appli cable	Not Applicable
39.	Matix Fertilisers And Chemicals Limited Panagarh Industrial P ark, Po- Panagarh Baz ar, Dist- Purba Bardhama n Durgapur, West Bengal-713148	NIL	NIL	Not Appli cable	Not Applicable

40.	M/S Jayshree Chemicals & Fertilizers, Nanda Bose Road, Khardah, Kolkata, West Bengal-700117	NIL	NIL	Not Applicable	Not Applicable
41.	Aarti Ferilizer, Plot No. 801/15to19, 21 & 22, Phase Iii, Gidc Vapi.- 396195, Vapi, Gujarat-396195	NIL	NIL	Not Applicable	Not Applicable
42	Paradeep Phosphates Ltd. At PPL Township, P. O. Paradeep, Dist.- Jagatsinghpur, Odisha-7541145.	NIL	NIL	Not Applicable	Not Applicable