

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH AT NEW DELHI**

IN

Appeal No. 72 of 2026

IN THE MATTER OF:

M/s Ruhil Infra Projects Pvt. Ltd

...Appellant

Versus

Commission for Air Quality Management
in National Capital Region And Adjoining
Areas & Ors.

...Respondent(s)

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Filed by

Dated: 07/07/2026
New Delhi

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**COUNTER AFFIDAVIT ON BEHALF OF THE
RESPONDENT NO.1 i.e., COMMISSION FOR AIR QUALITY
MANAGEMENT IN NATIONAL CAPITAL REGION AND
ADJOINING AREAS**

I, Dr. Bhawna Singh aged about 45 years, D/o Shri Basdeo Singh, working as Scientist-E in the Commission for Air Quality Management in National Capital Region and Adjoining Areas, New Delhi (hereinafter referred to as 'Commission') having office at 17th Floor, Jawahar Vyapar Bhawan, STC Building, Tolstoy Marg, New Delhi – 110001, do hereby, solemnly affirm and state on oath as under:

1. That I, in the capacity of Scientist-E in the Commission for Air Quality Management in National Capital Region and

राष्ट्रीय राजधानी क्षेत्र और निकटवर्ती क्षेत्रों में वायु गुणवत्ता प्रबंधन आयोग
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Adjoining Areas, am fully conversant with the facts of the case and competent to swear this affidavit on behalf of Respondent no. 1.

2. That the Appellant has approached this Hon'ble Tribunal seeking relief for quashing and setting-aside of the impugned Closure Direction No. 891/IP dated 22.05.2026 issued by Respondent No. 1 and also seeking relief for staying operation of the impugned closure direction.
3. That the contents of the appellant are admitted to the extent borne out from the records and the answering respondent disputes and denies all the contentions, allegations, claims and averments contrary to anything stated or submitted in this affidavit. Nothing in this appeal may be deemed to have been accepted or admitted by the answering respondent. Further, the answering respondent craves leave of this Hon'ble Tribunal to make additional submissions, if required, during the course of proceedings.
4. That the answering respondent is filing the present affidavit with a view to enabling this Hon'ble Tribunal to appreciate the correct perspective of the matter.
5. Various facts that are required to consider while adjudicating the instant matter are stated below:



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- I. That the impugned Closure Direction No. 891/IP dated 22.05.2026 has been issued by the answering respondent in respect of the unit being operate by the appellant in exercise of the power(s) available under Section 12 (2) (xi) of the CAQM Act,2021.
- II. That in wake of the deteriorating air quality scenario in the National Capital Region and compelling urgency to prevent further deterioration of air quality, the answering respondent has been issuing directions from time to time to abate air pollution in NCR.
- III. That on 09.05.2026, the unit of the Appellant was inspected by the flying squad constituted by the answering respondent to verify the compliance of the directions/order issued by the answering respondent time to time.
- IV. That based on the inspection report submitted by the flying squad, the following were observed:
 - i. *The unit is a hot mix plant.*
 - ii. *As per video graphic evidence, significant visible thick smoke emission was continuously observed which indicate non-compliance with the prescribe emission norms.*
 - iii. *The unit failed to submit the latest stack emission monitoring report.*

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- iv. *A non-complaint DG set of 125 KVA capacity in violation of Direction 76 was found installed at the unit.*

The copy of the inspection report dated 09.05.2026 is annexed herewith and marked as **ANNEXURE R1/1**.

- V. That in light of principle of natural justice, onsite preliminary inspection report was provided to the Appellant on the day of inspection, along with instructions to submit immediate corrective actions for the violations indicated therein and to ensure adherence to all applicable statutes and guidelines. The Appellant was also directed to show cause within 5 days as to why appropriate action should not be taken against the unit/Appellant for the reported violation. However, no response has been received in this regard within the stipulated timeline by the Appellant. The copy of the onsite preliminary inspection report dated 09.05.2026 is annexed herewith and marked as **ANNEXURE R1/2**.
- VI. After detailed deliberation, the Enforcement Task Force decided to order the closure of the unit of the Appellant. The impugned Closure Direction No. 891/IP dated 22.05.2026 was issued whereby, it was categorically directed the appellant to:



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- i. *immediately close down all its industrial operations/activities on receipt of this Direction;*
- ii. *report the Closure of the unit to the answering respondent and HSPCB;*
- iii. *under no circumstances, the appellant shall not to resume operation without prior permission and order of resumption from the answering respondent.*

Furthermore, the appellant was also directed therein to adhere to para-6 of the Closure Direction which stipulates the procedure to be adopted for consideration of resumption of industrial operations/activities, which is required to be followed by the proponent as per existing guidelines which has been also placed on the website of the Commission.

VII. Subsequently, after issuance of the Closure Direction No. 891/IP dated 22.05.2026 issued by the answering respondent, the appellant approached this Hon'ble Tribunal through this instant appeal. The Hon'ble Tribunal on 29.05.2026 heard the submission made by both the parties, issued notice and further recorded that *"it will be open to the appellant to comply with paragraph 6 of the impugned order in order to resume the operation of the industry"*

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VIII. That in compliance to the above said direction, the appellant vide representation dated 15.06.2026 seeks withdrawal/revocation of closure direction and permission for resumption of operation of unit of the appellant. The submissions made by the appellant were duly examined and considered by the answering respondent. Further, in addition to the submission made in aforesaid representation dated 15.06.2026, the project proponent further undertook to submit report from an authorized/accredited laboratory regarding compliance of emission standards within 15 days from the date of resumption of operations permitted by the answering respondent. It has also been submitted by the appellant that Environmental Compensation, if imposed by the HSPCB in respect of the violations mentioned in the Closure Direction, the appellant shall deposit the same in accordance with the directions issued by the competent authority. The copy of the representation dated 15.06.2026 submitted by the appellant is attached herein and marked as **ANNEXURE R1/3**.

IX. It is noteworthy to mention here that the unit of appellant is a Hot Mix plants which is treated as hazardous Industry. Upon examination of the representation dated

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15.06.2026 submitted by the appellant it was found that the fuel used by the appellant unit namely LSHS ("Low Sulphur Fuels") is unapproved fuel for hot mix plant as per the Direction No.65 dated 23.06.2022 (as amended time to time) issued by the answering respondent. That the LSHS fuel is permitted only for the industrial purposes in metal smelting/melting/ refining/heating furnaces and kilns that too with stricter emission standards as stipulated by the answering respondent in its Direction No. 64 dated 02.06.2022 and not for the Hot mix plants as used by the unit of the appellant. The copies of the Direction No.65 dated 23.06.2022 and Direction No. 64 dated 02.06.2022 issued by the answering respondent are attached herein and marked as **ANNEXURE R1/4** and **ANNEXURE R1/5** respectively.

- X. Further, the contention of the Appellant that it possesses a valid Consent to Operate (CTO) and is using the approved fuel, namely Low Sulphur Heavy Stock (LSHS), is denied as being incorrect and misleading. It is submitted that the respondent No. 2 i.e., Haryana State Pollution Control Board (HSPCB) has permitted LSHS as fuel in the CTO granted to the Unit of the appellant.



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Such permission is wholly contrary to the Directions issued by the answering respondent. The Directions issued by the Commission under the applicable statutory framework have overriding effect and are binding on all concerned authorities, including the HSPCB. Consequently, HSPCB could not have authorized the use of LSHS in the CTO in derogation of the Commission's Directions. Any condition incorporated in the CTO permitting the use of LSHS, being inconsistent with and contrary to the binding Directions of the Commission, cannot confer any legal right upon the appellant, nor can it dilute or override the answering respondent's Directions. To that extent, the CTO is liable to be treated as without jurisdiction and legally unsustainable and such permission is liable to be held invalid in law.

- XI. The above position also stands reinforced by the answering respondent's communication dated 10.06.2026, whereby the HSPCB was informed that it had been noticed that, in certain cases, Consents to Operate had been granted to Hot Mix Plants permitting the use of LSHS as fuel. The answering respondent accordingly directed the HSPCB to review all such



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Consents and suitably amend the same so as to bring them in conformity with the Directions issued by the answering respondent.

XII. That another contention raised by the appellant that the unit of appellant have valid NABL-accredited stack emission reports demonstrating compliance with prescribed norms. The inability to produce such reports during the surprise inspection was merely procedural and cannot be treated as substantive non-compliance. It is submitted that after receipt of the representation dated 15.06.2026 from the appellant, the answering respondent sought clarification regarding status of stack emission monitoring provision installed in the Unit of the appellant from the flying squad. Accordingly, the flying squad vide email dated 25.06.2026 clarified that the stack monitoring arrangements/platform has not been provided at the Unit. Photographic evidence substantiating the statement has also been provided. The copy of the email dated 25.06.2026 along with photograph is attached herein and marked as **ANNEXURE R1/7**.

XIII. It is not out of place to state here that as per clause 1.4.1, 1.4.2, 1.4.3, 1.4.4. of the "*Guidelines on Methodologies*

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for Source Emission Monitoring” issued by the CPCB, a working platform is required for stack sampling, the said guideline specify the minimum platform width shall always be 1.2 meters. In the absence of such mandatory sampling infrastructure, valid stack sampling could not have been undertaken in accordance with the prescribed methodology, rendering the authenticity and reliability of the stack emission monitoring reports highly doubtful. Furthermore, it is also stated that under Section 12 of the Environment (Protection) Act, 1986, only those laboratories or institutes recognised by the Central Government as Environmental Laboratories are authorised to perform the functions entrusted under the Act. In the present case, the stack emission monitoring reports relied upon by the Project Proponent have been issued by Spectra Testing Labs Private Limited, which, although NABL accredited, is not recognised as an Environmental Laboratory under Section 12 of the Act. Mere NABL accreditation cannot substitute the statutory recognition contemplated under the Environment (Protection) Act, 1986. Significantly, even the affidavit filed by the Project Proponent states that fresh stack emission monitoring reports from an



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authorised/accredited laboratory would be submitted after resumption of operations. This itself demonstrates that the Project Proponent does not place complete reliance upon the reports presently produced, thereby further diminishing their evidentiary value. The copy of the chapter No.1 of "*Guidelines on Methodologies for Source Emission Monitoring*" issued by the CPCB is attached herein and marked as **ANNEXURE R1/7**.

XIV. Further, it is also submitted that CPCB vide email dated 03.07.2026 verified that the Spectra Testing Labs Private Limited is not recognised as an Environmental Laboratory under Section 12 of the Act. The copy of the email dated 03.07.2026 received from the CPPCB is attached herein and marked as **ANNEXURE R1/8**.

XV. That the inspection report dated 09.05.2026 records that the unit has provided only a water scrubbing arrangement connected to the vent and stack of the Hot Mix Plant. LSHS, being a residual petroleum fuel with relatively high sulphur and particulate content, requires robust air pollution control systems to effectively control emissions. However, the inspection does not indicate the installation of the requisite pollution control equipment prescribed for Hot Mix Plants. Further, as per

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प्रमाणन अवधि: 01/01/2025 से 31/12/2025 तक
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“Development of environmental standards and guidelines for hot mix plant” issued by CPCB clearly stated that *“the hot mix plant should be equipped with appropriate air pollution control devices such as cyclone multi-clones and bag filter/ scrubber and properly maintained so as to ensure optimum efficiency to achieve the standards. Measures such as installation of water sprinklers at points of dust emission within premises should be provided. The internal roads, working platform, loading and unloading areas should be paved or concreted and kept clean all times.”* The copy of the “Development of environmental standards and guidelines for hot mix plant” issued by CPCB is attached herein and marked as **ANNEXURE R1/9**.

XVI. Further, the MoEFCC while issuing emission standards for hot mix plant vide notification dated 18.05.2023 has also mandated that:

- xiii. *The hot mix plant shall be equipped with appropriate air pollution control devices as mentioned below so as to ensure optimum efficiency to achieve the standards, namely:-*
- (a) *Drum Type: Cyclone or multi-clones with wet scrubber;*
 - (b) *Batch Type: Multi-clones with bag filters.”*



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Commission for Air Quality Management in NCR & Adjoining Areas
भारत सरकार / Government of India
17वीं मंजिल, जवाहर व्यापार भवन (एच टी सी. बिल्डिंग), टॉलेटोय मार्ग,
17th Floor, Jawahar Vyapar Bhawan (STC Building) Toltoy Marg,
नई दिल्ली / New Delhi, 110002

The copy of the notification dated 18.05.2023 issued by the MoEF&CC is attached herein and marked as **ANNEXURE R1/10.**

XVII. That keeping in view of the above, after considering the representation made by the appellant, the answering respondent vide letter no. 16014/13/2026/MERD/891/IP/9228-9229 dated 03.07.2026 broadly highlighted the following:

- i. The corrective and preventive measures claimed to have been undertaken by the unit are neither satisfactory nor sufficient to address the violations recorded in the Closure Direction.
- ii. The inspection report and videographic evidence, clearly indicate that the Air Pollution Control Device (APCD) installed at the Hot Mix Plant was inadequate and incapable of effectively controlling emissions, as evidenced by the continuous emission of visible black smoke from the stack, indicating incomplete combustion and ineffective pollution control.
- iii. The unit has also failed to demonstrate that it is equipped with the requisite air pollution control systems, including cyclone/multi-cyclones and

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नई दिल्ली / New Delhi



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bag filters/scrubbers and properly maintained so as to ensure optimum efficiency to achieve the standards as mentioned in the aforesaid guideline.

- iv. The stack emission monitoring reports relied upon by the unit do not constitute reliable or credible evidence of compliance. The unit did not have the mandatory stack sampling platform and sampling ports/facilities as prescribed under the CPCB Guidelines, thereby rendering the sampling methodology and the reported results unreliable. Moreover, the reports have been issued by a laboratory which is not recognised as an Environmental Laboratory under Section 12 of the Environment (Protection) Act, 1986 and therefore, cannot be accepted for establishing compliance with the prescribed emission standards. It is also an admitted position that the unit has not deposited the Environmental Compensation.

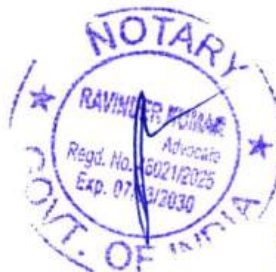
XVIII. In the absence of compliance with aforesaid essential pre-condition as stipulated under clause 6 of the closure direction, including deposition of Environmental Compensation charges, the request for revocation of the



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Closure Direction/ resumption of operation of the unit is premature and not maintainable. Accordingly, the answering respondent found no justification to review the Closure Direction or permit the resumption of operations by the unit at this stage. The copy of the letter no. 16014/13/2026/MERD/891/IP/9228-9229 dated 03.07.2026 issued by the answering respondent is attached herein and marked as **ANNEXURE R1/11**.

6. It is respectfully submitted that the impugned closure direction is founded upon objective material/information/photographs gathered during the inspection conducted by the Flying Squad of the answering respondent on 09.05.2026, which indicates serious deficiencies *inter-alia* significant visible thick smoke emission was continuously observed over a sustained period indicating persistent non-compliance with the prescribed emission norms and the unit failed to submit the latest stack emission monitoring report at the time inspection. These deficiencies are directly related to environmental compliance and air pollution control measures when immediate regulatory intervention was warranted in larger public interest to prevent further deterioration of ambient air quality.



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7. It is submitted that environmental jurisprudence consistently recognizes that regulatory authorities are not required to wait for actual environmental degradation to occur before taking preventive action. The Precautionary Principle, which forms an integral part of environmental law and has repeatedly been affirmed by the Hon'ble Supreme Court, mandates that where there are credible threats of environmental harm, preventive measures must be taken even in the absence of conclusive proof of actual damage. The impugned direction is therefore a preventive and regulatory measure intended to safeguard public health and environmental quality and cannot be construed as punitive in nature.
8. It is not out of place to state here that despite having full knowledge of the deficiencies and violations observed during the inspection, the appellant neither reported any corrective action nor furnished any compliance documentation to the answering respondent prior to issuance of the Closure Direction. Such conduct clearly indicates a lack of due diligence and transparency on the part of the appellant and raises serious doubts regarding the bona fides of its subsequent claims. The belated attempt to furnish information and explanations only after issuance of the Closure Direction



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appears to be an afterthought aimed at overcoming the consequences of the violations already detected during inspection. In these circumstances, the appellant cannot be permitted to derive any advantage from its own omissions, non-disclosures and failure to promptly comply with the regulatory requirements and directions issued by the answering respondent.

9. That in view of the aforementioned facts and circumstances, this Hon'ble Tribunal may kindly be pleased to dismiss the present petition and pass any appropriate order(s) as this Hon'ble Tribunal may deem fit.

Bhawna Singh

डॉ. भावना सिंह / Dr. Bhawna Singh

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17th Floor, Jawahar Vyapar Bhawan (STC Building), Tolstoy Marg,
नई दिल्ली / New Delhi-110001

DEPONENT

VERIFICATION

Verified at New Delhi on this 7th day of July, 2026 that the contents of the above affidavit are true and correct to my knowledge and as per official records maintained in the routine course of business. No part of the above affidavit is false and nothing material has been concealed there from.

IDENTIFIED BY
Vishal Gupta, CA, FCA, M.

ATTESTED
NOTARY PUBLIC
GOVT. OF INDIA

07 JUL 2026

07 JUL 2026



Bhawna Singh
DEPONENT

डॉ. भावना सिंह / Dr. Bhawna Singh

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FORMAT FOR FURNISHING INSPECTION REPORT BY FLYING SQUADS

Team No.: 38

Date of Inspection: 09.05.2026

1.	Name of Unit / Entity	M/s Ruhil Infra Projects Pvt. Ltd.
2.	Name of MD/Director/ Manager / Owner	Name: Phool Kumar (Director)
3.	Full postal address	Khasra no. 20//14/3, 15/1/3, 16/2,17, 24/1/2, 25/1, 22//4/1/1/2, Village Dehkora Tehsil Bahadurgarh
4.	i. Landline Number ii. Mobile Number	9728676361
5.	Email Id	Phoolkunwarruhil0085@gmail.com
6.	If Industry, category as per CPCB pollution index (Red/ Orange/ Green/ White)	Orange
	Name of the Fuel (s) being used	LSHS
	Whether the fuel is approved or not	Approved
7.	Statutory Environmental Clearances/ Permissions	
	(i)* Whether EC accorded by MoEFCC/ SIEAA (if applicable) or not	
	(ii)* Whether CTE accorded by the SPCB/ DPCC or not (for industry)	
	(iii)* Whether CTO accorded by the SPCB / DPCC or not (for industry)	Yes, valid till 31/03/2030
	(iv) Whether any other statutory clearances or permissions warranted (if yes, specify)	
8.	Serious non-conformities / non-compliances observed attracting Closure	
	S. No.	Detail of the non-conformity
		Relevant statutes (Acts / Rules / Regulations/ Directions/ Orders etc.) not complied with
	(i)	Thick smoke was being emitted continuously from the stack. Unit has made water scrubbing
		Air Act

		arrangement into the vent connected to stack and Hot Mix Plant	
	(ii)		
9.	Other non-conformities observed		
	S. No.	Details:	
	(i)		
	(ii)		

**DG set-wise compliance status with respect to the Schedule under Direction
No. 76 dated 29.09.2023**

S. No	DG Set capacity	Mandate as per the Schedule	Status of compliance Compliant/ action initiated for compliance/ non-compliant and no action initiated	Details of firm action initiated for compliance: P.O./agreement etc. in respect of ECD/dual fuel kit, PNG connection, new DG (CPCB-IV) etc.	Whether DG set is being used only for emergency purposes as listed in Direction No. 76 (Yes/No)
1.	125 KVA	CPCB IV/PNG/RECD	Not Complying	NA	No

10. In view of observations at Sl. No. 8 whether recommended for Closure: (Yes/ No): Yes
11. Please attach relevant photographs of violations by the unit, unless it is not feasible.



Water pipe with pores provided inside the vent connecting Hot Mix Plant and stack for scrubbing.





સહિલ
પટેલ

Name: Sahil Patel
Designation: Scientist 'C'
Contact No.: 9818381248
Email: sahil.cpcb@gov.in

Commission for Air Quality Management in NCR and Adjoining Areas
Onsite Preliminary Inspection Findings (Industrial Units)

(I) Preliminary indicative list of violation observed at the time of inspection.

(II) Only appropriate box to be ticked

(III) Name of the unit & address:-

Team No.: 38

Ruhil Infra Pvt. Ltd., DehKoon, Bahadurgarh
Date of Inspection: 09/5/21

S. No.	Mandate	Yes	No
1 (a)	Whether the unit is operating with valid statutory environmental clearance/permissions	Yes	
(b)	Whether approved fuel(s) being used	LSHS	
(c)	Whether equipment(s), industrial plant, operations (s) or process (s) is in accordance with valid CTO	Yes	
(d)	Whether source emission analysis report available (not more than 3 months prior to the date of inspection)		NO
2 (a)	If unit has DG set(s) Indicate Capacity (K W/KVA) for each DG set(s)	125 KVA	
(b)	Whether DG Set(s) complying with Direction No. - 76	NO (Consent)	

→ During inspection visible smoke was observed, scrubbing arrangement has been made in the pipe ~~from~~ flue gas pipe
Remarks, if any (indicating violation not mentioned above or required to be explained further):

Note:

- The list of violations indicated above are preliminary without prejudice to further detailed examination & subsequent punitive actions.
- Immediate corrective actions in respect of above indicated violations & adherence to other statutes / guidelines are to be ensured by the unit and reported along with photographs to concerned SPCB's / DPCC and CAQM.
- You are hereby directed to show cause within 5 (five) days from today as to why appropriate action should not be taken against the unit / project / activity / process for the violations indicated above. If no satisfactory reply is received and/or compliance report along-with relevant evidence is not received to the Commission within the stipulated period, the Commission shall pass necessary directions, if required, including closure of the unit / project / activity / process and stoppage of water and electricity connection, as it deems fit, without providing further notice / opportunity of hearing based on the available records, in the interest of the air quality of the region.
- The reply shall be communicated to the Commission through email or by post or by hand at the following:

A E-mail : caqm.etf-moefcc@gov.in

B Postal Address : Commission for Air Quality Management in NCR and Adjoining Areas, 17th Floor, Jawahar Vyapar Bhawan (STC Building), Tolstoy Marg, New Delhi 110001

Acknowledgement of Receipt by the
Proponent or his representative

Name and Signature of Inspecting Official:

Designation: Suhil Patel
Sc'c)

Sh. Phool Kumar (Director)

M: 9728676361

E-mail: phoolkumar.suhil0085@gmail.com



RUHIL INFRAPROJECTS PRIVATE LIMITED

Village Rohad, Bahadurgarh, Jhajjar, Haryana, India, 124507

Ref. No.

Date

Dated: 15.06.2026

To

The Member Secretary
Commission for Air Quality Management (CAQM)
National Capital Region and Adjoining Areas
17th Floor, Jawahar Vyapar Bhawan (STC Building)
Tolstoy Marg, New Delhi – 110001

Subject: Representation seeking withdrawal/revocation of Closure Direction No. 891/IP dated 22.05.2026 and permission for resumption of operations of M/s Ruhil Infra Projects Pvt. Ltd.

Respected Sir,

I, Manish Ruhil, am the authorized signatory of the unit M/s Ruhil Infra Projects Pvt. Ltd., having its unit situated at Khasra No. 20/14/3, 15/1/3, 16/2/17, 24/1/2, 22/4/1/1/2, Village Dehkora, Bahadurgarh, District Jhajjar, Haryana. Our unit is a law-abiding entity, operating in accordance with all applicable statutory clearances and compliances. We respectfully submit this representation seeking withdrawal/revocation of Closure Direction No. 891/IP dated 22.05.2026 and permission for resumption of operations of our Hot Mix Plant.

1. The Closure Direction was issued pursuant to an inspection conducted on 09.05.2026 wherein the following observations were recorded:
 - i) Visible thick smoke emissions were allegedly observed from the Hot Mix Plant;
 - ii) The unit allegedly failed to submit the latest Stack Emission Monitoring Report; and
 - iii) A non-compliant DG Set of 125 KVA capacity was found installed at the unit.

The Applicant respectfully submits that all observations forming the basis of the Closure Direction have since been fully addressed and remedied.

Copy of the Closure Direction dated 22.05.2026 is annexed herewith as **Annexure A-1**.

2. The unit is operating under a valid Consent to Operate (CTO) issued by the Haryana State Pollution Control Board, valid up to 31.03.2030. The unit has installed Air Pollution Control Devices and operates using approved fuel (LSHS). Further, scrubbing arrangements have also been provided in the flue gas pipe to control emissions. The Applicant remains committed to strict compliance with all environmental laws, CAQM directions, CPCB guidelines and HSPCB requirements.

Copy of the Consent to Operate (CTO) valid until 31.03.2030 is annexed herewith as **Annexure A-2**.

3. One of the observations recorded in the Closure Direction pertains to the installation of a non-compliant DG Set. In this regard, without prejudice to the aforesaid compliance, the Applicant respectfully submits that the DG Set observed during the inspection dated 09.05.2026 was not the Applicant's permanent DG infrastructure. The Applicant owned and operated a compliant DG Set equipped with the requisite emission control arrangements. However, owing to repair and maintenance requirements, the said DG Set had been sent for servicing immediately prior to the inspection. During the intervening period, and solely to avoid disruption of ongoing plant operations and public infrastructure works being executed by the Applicant, a DG Set was arranged on temporary rental basis as an interim arrangement. The rented DG Set was present at the site only for a limited period of 5 days i.e. 07.05.2026 to 11.05.2026 and was never intended to form part of the permanent operational infrastructure of the unit. The same was removed immediately thereafter. The Applicant has now installed a new CPCB 4 DG Set compliant with the applicable environmental norms and regulatory requirements and therefore no violation or non-compliance presently subsists in respect of the DG Set. The rental records pertaining to the temporary rented DG set are annexed herewith as **Annexure A-3**.

The purchase invoice and supporting documents evidencing installation of the compliant DG Set are annexed herewith as **Annexure A-4**.

4. The Closure Direction further records that the unit failed to submit the latest Stack Emission Monitoring Report. The Applicant respectfully submits that valid Stack Emission Monitoring Reports were available and demonstrate that emissions from the Hot Mix Plant have consistently remained within the prescribed limits. The latest Stack Emission Analysis Report No. SE/0526/2985 dated 02.05.2026 through a NABL Accredited Laboratory and Stack Emission Analysis Report No. SE/0226/1025 dated 09.02.2026 clearly establish that emissions from the unit were well within the prescribed standards.

Copies of the said reports are annexed herewith as **Annexure A-5** and **Annexure A-6** respectively.

5. It is respectfully submitted that the circumstances which led to issuance of the Closure Direction no longer exist. The issue relating to the DG Set stands fully new DG set installed as per CPCB 4 guidelines. The scientific Stack Emission Monitoring Reports establish that emissions from the unit are within the prescribed limits. The unit possesses valid environmental approvals and continues to maintain the necessary pollution control infrastructure. There is therefore no continuing environmental non-compliance warranting continuation of the closure order.
6. The Applicant is committed to operating strictly in accordance with all directions issued by the Commission and undertakes to maintain complete environmental compliance at all times.

PRAYER

In view of the above-mentioned compliance, it is humbly requested that our case for the revocation/review of Closure Direction No. 891/IP dated 22.05.2026 be reviewed and revoked, and permission for resumption of operations of the unit may be granted at the earliest, as continued closure is causing substantial financial losses and operational hardship to the unit.

Yours Faithfully,

Ruhil Infra Projects Pvt. Ltd.



For M/s Ruhil Infra Projects Pvt. Ltd

(Authorized Signatory)

CC to :-

1. The Member Secretary, CAQM, Delhi.
2. The Member Secretary, HSPCB, Panchkula.

Affidavit



Indian-Non Judicial Stamp Haryana Government



Date : 15/06/2026

Certificate No. R0O2026F866



Stamp Duty Paid : ₹ 101

C.N No. 153230472



(Rs. Only)

Penalty : ₹ 0

(Rs. Zero Only)

Deponent

Name : Ruhil infra projects pvt ltd

H.No/Floor : 0

Sector/Ward : 0

Landmark : 0

City/Village : Dehkora

District : Jhajjar

State : Haryana

Phone : 98*****53



Purpose : AFFIDAVIT to be submitted at Concerned office

The authenticity of this document can be verified by scanning this QrCode Through smart phone or on the website <https://egrashry.nic.in>

AFFIDAVIT

I, **Manish Ruhil**, S/o Sh. Rajender Singh, aged about 40 years, Director and Authorized Signatory of **M/s Ruhil Infra Projects Pvt. Ltd.**, having its unit situated at Khasra No. 20//14/3, 15/1/3, 16/2/17, 24/1/2, 22//4/1/1/2, Village Dehkora, Bahadurgarh, District Jhajjar, Haryana, do hereby solemnly affirm and declare as under:

1. That I am the Director and Authorized Signatory of M/s Ruhil Infra Projects Pvt. Ltd. and am fully conversant with the facts and circumstances of the present matter and competent to swear this affidavit on behalf of the Company.
2. That I am a citizen of India and resident of Village Rohad, Tehsil Bahadurgarh, District Jhajjar, Haryana.
3. That Closure Direction No. 891/IP dated 22.05.2026, issued under Section 12(2)(xi) of the Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021, has been received by the deponent.
4. That upon receipt of the aforesaid Closure Direction, the Company immediately closed down all operations and activities of the Hot Mix Plant and complied with the directions

issued by the Commission. The electricity connection of the unit was also disconnected pursuant to the Closure Direction.

5. That the unit is operating under a valid Consent to Operate bearing No. HSPCB/Consent/:313122325JHACTO120494332 dated 02.10.2025, issued by the Haryana State Pollution Control Board and valid up to 31.03.2030. A copy of the Consent to Operate is enclosed herewith.
6. That the Company has undertaken corrective and preventive measures in respect of the observations recorded in the Closure Direction, including the following:
 - i) Installation of a new compliant DG Set in place of the DG Set observed during inspection;
 - ii) Periodic monitoring of emissions through NABL-accredited laboratories;

That the Stack Emission Analysis Report No. SE/0526/2985 dated 02.05.2026 and Stack Emission Analysis Report No. SE/0226/1025 dated 09.02.2026 establish that emissions from the unit are within the prescribed permissible limits.

The deponent further undertakes to submit reports from an authorized/accredited laboratory regarding compliance of emission standards, as applicable, within 15 days from the date of resumption of operations permitted by the Commission, to the Haryana State Pollution Control Board and the Commission, failing which the unit shall be liable for closure again in accordance with law.

7. That the issue relating to the DG Set observed during inspection has been fully rectified. The DG Set observed during inspection was a temporary rented DG Set arranged during the period when the Company's regular DG Set was under repair and maintenance. The said temporary arrangement has since been discontinued and a new compliant DG Set has been installed at the unit. Documentary proof thereof is enclosed.
8. That Environmental Compensation, if imposed by the Haryana State Pollution Control Board in respect of the violations mentioned in the Closure Direction, shall be deposited by the Unit in accordance with the directions issued by the competent authority and proof thereof shall be furnished before the concerned authorities.
9. That I shall abide by and strictly follow all extant directions, orders, notifications, guidelines and regulations issued by the Commission for Air Quality Management (CAQM), Ministry of Environment, Forest and Climate Change (MoEF&CC), Central Pollution Control Board (CPCB), Haryana State Pollution Control Board (HSPCB) and all other competent authorities, and shall also comply with such directions as may be issued from time to time in future..
10. That in view of the corrective and preventive measures undertaken and compliance achieved by the unit, it is respectfully requested that the Commission may kindly issue orders permitting resumption of operations of the unit.



Ruhil Infraprojects Pvt. Ltd.

h. Sign.
DEPONENT

VERIFICATION

Verified at Bahadurgarh on this 15th day of June, 2026 that the contents of paragraphs 1 to 10 of the above affidavit are true and correct to the best of my knowledge and belief and nothing material has been concealed therefrom.

Ruhil Infraprojects Pvt. Ltd.

DEPONENT
Auth. Sign.

Mobile No.: 9896210453

Email ID: manishruhill0085@gmail.com

ATTESTED
LALITA RANI
ADVOCATE
NOTARY PUBLIC
ROHTAK

15/6/26



राष्ट्रीय राजधानी क्षेत्र और निकटवर्ती क्षेत्र
वायु गुणवत्ता प्रबंधन आयोग
Commission for Air Quality Management in
National Capital Region and
Adjoining Areas



Quantity
103

Closure Direction No. 891 / IP

F. No. 16014/14/2021/MERD/IP/CLOSURE / 891-8946

22 May, 2026

To,

M/s Ruhil Infra Projects Pvt. Ltd.

Khasra No. 20//14/3, 15/1/3, 16/2/17, 24/1/2, 22//4/1/1/2,

Village – Dehkora, Bahadurgarh, Jhajjar, Haryana

Email: phoolkunwarruhil0085@gmail.com

(Kind Attention: -Sh. Phool Singh, Director)

Mobile: 9728676361

DIRECTION FOR CLOSURE UNDER SECTION 12 (2) (xi) OF THE COMMISSION FOR AIR QUALITY MANAGEMENT IN NATIONAL CAPITAL REGION AND ADJOINING AREAS ACT, 2021.

WHEREAS, the Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021 empowers the Commission to take all such measures and issue directions as it deems necessary or expedient for the purpose of protecting and improving the quality of the air in the National Capital Region and Adjoining Areas;

WHEREAS, the Commission, from time to time, has issued directions in respect of measures to abate air pollution in the National Capital Region including directions for strict compliance of air pollution control laws, rules and regulations in force;

WHEREAS, there is a need for effective control of air pollution in NCR and a compelling urgency to prevent deterioration;

WHEREAS, the said unit was inspected on 09.05.2026 by a Flying Squad constituted by the Commission, to verify the compliance of Directions / Orders issued by the Commission from time to time and relevant rules / regulations;

WHEREAS, it was reported that the unit is a hot mix plant, and as per the video graphic evidence, significant visible thick smoke emissions was continuously observed over a sustained period, indicating persistent non-compliance with the prescribed emission

JKP

..2/-

17 वी मंजिल, जवाहर व्यापार भवन (एस. टी.सी. बिल्डिंग), टॉलस्टॉय मार्ग, नई दिल्ली-110001

दूरभाष : 011-23701213, ई-मेल : caqm.elf-moefcc@gov.in

17th Floor, Jawahar Vyapar Bhawan (STC Building), Tolstoy Marg, New Delhi-110001

Tel:011-23701213, E-mail: caqm.elf-moefcc@gov.in

norms. Further, the unit failed to submit the latest stack emission monitoring report. Additionally, a non-compliant DG set of 125 KVA capacity, in violation of Direction No. 76 was found installed at the unit.

WHEREAS, the report of the flying squad has been examined in the Commission w.r.t. the severity of violations/non-compliances to the direction(s) of the Commission;

WHEREAS, an onsite preliminary inspection report was provided to the project proponent on the day of inspection, along with instructions to submit immediate corrective actions for the violations indicated therein and to ensure adherence to all applicable statutes and guidelines. The proponent was also directed to show cause within 5 days as to why appropriate action should not be taken against the unit/project proponent for the reported violation. However, no response has been received by the CAQM in this regard within the stipulated timeline.

WHEREAS, in wake of concerns on Air Quality in the NCR, immediate preventive & corrective actions are essential in such cases to prevent deterioration of air quality in the larger public interest and therefore the Enforcement Task Force decided to order closure of the unit, till further orders and take legal action;

NOW, THEREFORE, in view of the above and in exercise of the powers of the Commission by the Enforcement Task Force, under Section 12(2)(xi) of the Act, read with explanation, the following directions are issued to the said unit for strict compliance:

1. The unit shall immediately close down all its industrial operations / activities on receipt of this Direction;
2. The unit shall immediately thereafter report the closure of the unit to the Commission and Haryana State Pollution Control Board (HSPCB);
3. The unit, under no circumstances, shall resume operations without prior permission and an order of resumption from the Commission;
4. The UHBVNL shall, on receipt of this closure direction shall immediately initiate action towards temporary disconnection of electrical power supply to the site / unit and report the same to the HSPCB, project proponent and the Commission, at the earliest but not later than 3 days after the issue of this Direction.

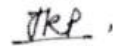
.....3/-

17 वी मंजिल, जवाहर व्यापार भवन (एस. टी.सी. बिल्डिंग), टॉलस्टॉय मार्ग, नई दिल्ली-110001
दूरभाष : 011-23701213, ई-मेल : caqm.ett-moefcc@gov.in
17th Floor, Jawahar Vyapar Bhawan (STC Building), Tolstoy Marg, New Delhi-110001
Tel:011-23701213, E-mail: caqm.ett-moefcc@gov.in

5. In case of failure in compliance with the above directions, the Commission will be constrained to initiate appropriate action, in accordance with provisions under the Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021 and other relevant laws.
6. For consideration of resumption of operations in the unit, the following needs to be complied with:
- (i) After taking due corrective and preventive measures, in respect of the non-compliances / violations as noted in the closure direction, the project proponent shall report the same to the Regional Officer Jhajjar, of the Haryana State Pollution Control Board, also under advise to the headquarter office of the HSPCB.
 - (ii) The Regional Officer, HSPCB shall thereafter verify the corrective and preventive measures initiated by the unit / project proponent and submit a report in this context to the HSPCB headquarter office with a copy to CAQM along with a recommendation for levying of EC charges, as per extant guidelines duly taking cognizance of Standard Schedule for EC charges issued by the Commission vide order dated 01.01.2025 & 05.06.2025.
 - (iii) The HSPCB shall review the report of the Regional Officer in this context to ascertain effectiveness of actions initiated for compliance, levy appropriate EC charges on the project / unit for all categories of violations as noted in this direction and realise the same, from the proponent. A recommendation towards resumption of activities at the site / industrial unit etc. may be made to the Commission by the HQ office of the HSPCB.
 - (iv) The Project Proponent shall thereafter also report compliance of all the requisites as above to the Commission, in the form of an affidavit. The indicative procedure and guidelines for processing of the cases for resumption, including the format for the affidavit may be accessed from the Commission's website www.caqm.nic.in >> Closures/Resumptions >> GUIDELINES FOR RESUMPTION OF OPERATIONS IN CLOSED UNITS.

..4/-

- (v) In exercise of powers of the Commission under Section 14 of the Act, the Member Secretary, HSPCB shall also initiate action for prosecution under section 14 of the Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021 against the said unit.



(Tarun Kumar Pithode)
Member-Secretary

Copy for information and ensuring immediate compliance to:

1. The Member Secretary, HSPCB
2. The Managing Director, UHBVNL, for immediate disconnection of power supply to the unit
3. The Deputy Collector, Jhajjar- to ensure closure of operations in the unit.

Copy to:-

Sh. Sahil Patel, Sec. 'C', CPCB

Copy for information to:-

Chairman, CPCB



(Gyanendra Yadav)
Under Secretary



HARYANA STATE POLLUTION CONTROL BOARD



**HSPCB SCF No. 42 & 43, Shopping Centre, Sector-6, Huda,
Bahadurgarh Ph. 01276-243077 (O) Email:-
hspcbrobdh@gmail.com
E-mail: hspcb@hry.nic.in**

No. HSPCB/Consent/ : 313122325JHACTO120494332

Dated:02/10/2025

To.

M/s :RUHIL INFRAPROJECTS PRIVATE LIMITED

Khasra no. 20//14/3, 15/1/3, 16/2,17, 24/1/2, 25/1, 22//4/1/1/2, Village Dehkora
Tehsil Bahadurgarh

Subject: Grant of consent to operate to M/s RUHIL INFRAPROJECTS PRIVATE LIMITED .

Please refer to your application no. 120494332 received on dated 2025-09-16 in regional office Bahadurgarh. With reference to your above application for consent to operate, M/s RUHIL INFRAPROJECTS PRIVATE LIMITED is here by granted consent as per following specification/Terms and conditions.

Consent Under	BOTH
Period of consent	02/10/2025 - 31/03/2030
Industry Type	Hot mix plants
Category	ORANGE
Investment(In Lakh)	263.0
Total Land Area(Sq. meter)	10319.0
Total Builtup Area(Sq. meter)	6000.0
Quantity of effluent	
1. Trade	0.0 KL/Day
2. Domestic	1.5 KL/Day
Number of outlets	1.0
Mode of discharge	
1. Domestic	SEPTIC TANK
2. Trade	NA
Domestic Effluent Parameters	
1. NA	
Trade Effluent Parameters	
1. NA	
Number of stacks	2
Height of stack	
1. S T A C K ATTACHED TO BATCH TYPE HOT MIX PLANT	25.0 METERS

2. S T A C K ATTACHED TO DG SET OF 125 KVA	3.0 METERS
Emission parameters	
1. SPM	150 mg/m ³
2. NOX	50 mg/m ³
3. SOX	50 mg/m ³
Product Details	
1. Mfg of DBM, BC, PC, Seal Coat (Hot mix Concrete)	530.0 Metric Tonnes/day
Capacity of boiler	
1. NA	Ton/hr
Type of Furnace	
1. NA	
Type of Fuel	
1. Diesel	0.100 KL/day
2. LSHS	1.0 KL/day
3. Electricity	Kilowatt/day
Raw Material Details	
Lime Stone	1.0 Metric Tonnes/Day
Bitumen	22.0 Metric Tonnes/Day
Cement	2.0 Metric Tonnes/Day
Emulsion	5.0 Metric Tonnes/Day
Stone Aggregate	500.0 Metric Tonnes/Day

*Regional Officer, Bahadurgarh
Haryana State Pollution Control Board.*

Terms and conditions

1. The applicants shall maintain good house keeping both within factory and in the premises. All hose pipelines valves, storage tanks etc. shall be leak proof. In plant allowable pollutants levels, if specified by State Board should be met strictly.
2. The applicant/company shall comply with and carry out directive/orders issued by the Board in this consent order at all subsequent times without negligence of his /its part. The applicant/company shall be liable for such legal action against him as per provision of the law/act in case of violation of any order/directives. Issued at any time and or non compliance of the terms and conditions of his consent order.
3. The applicant shall make an application for grant of consent at least 90 days before the date of expiry of this consent.
4. Necessary fee as prescribed for obtaining renewal consent shall be paid by the applicant alongwith the consent application.
5. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above required variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity

of being heard vary all or such condition and there upon the applicant shall be bound to comply with the conditions so varied.

6. The industry shall provide adequate arrangement for fighting the accidental leakages, discharge of any pollutants gas/liquids from the vessels, mechanical equipment etc. which are likely to cause environment pollution.
7. The industry shall comply noise pollution (Regulation and control) Rules, 2000.
8. The industry shall comply all the direction/Rules/Instructions as may be issued by the MOEF/CPCB/HSPCB from time to time.
9. The industry shall ensure that various characteristics of the effluents remain within the tolerance limits as specified in EPA Standard and as amended from time to time and at no time the concentration of any characteristics should exceed these limits for discharge.
10. The industry would immediately submit the revised application to the Board in the event of any change in the raw material in process, mode of treatment/discharge of effluent. In case of change of process at any stage during the consent period, the industry shall submit fresh consent application alongwith the consent to operate fee, if found due, which may be on any account and that shall be paid by the industry and the industry would immediately submit the consent application to the Board in the event of any change during the year in the raw material, quantity, quality of the effluent, mode of discharge, treatment facilities etc.
11. The officer/official of the Board shall reserve the right to access for the inspection of the industry in connection with the various process and the treatment facilities. The consent to operate is subject to review by the Board at any time.
12. Permissible limits for any pollutants mentioned in the consent to operate order should not exceed the concentration permitted in the effluent by the Board.
13. The industry shall pay the balance fee, in case it is found due from the industry at any time later on.
14. If the industry fails to adhere to any of the conditions of this consent to operate order, the consent to operate so granted shall automatically lapse.
15. If the industry is closed temporarily at its own, they shall inform the Board and obtain permission before restart of the unit.
16. The industry shall comply all the Directions/ Rules/Instructions issued from time to time by the Board.
17. Industry should adopt water conservation measures to ensure minimum consumption of water in their process. Ground water based proposals of new industries should get clearance from Central Ground Water Authority (CGWA)/ Haryana Water Resources (Conservation, Regulation and Management) Authority (HWRA) for scientific development of precious resource.
18. The industrial/non industrial sector projects shall develop green belt (as applicable) in its premises including periphery, entry and exit, as per notifications/conditions of EC/directions of MOEF/CPCB/SPCB/NGT/ any court of law. In case of stone crushers, hot mix plants, mineral grinding units, screening plants and brick kilns etc., the unit shall develop adequate green belt and erect barrier/barricade/boundary wall as applicable, as per notifications/directions of MOEF/CPCB/SPCB/NGT/ any court of law.
19. The unit shall develop paved or hard surfaced approach road to the site of unit (including the storage site, if it is at different place) from the nearest public road for transportation of raw material/final product.

Specific Conditions :

1. That the unit shall apply for renewal of consent to operate 90 days earlier, before the expiry of previous consent to operate obtained from the Board. 2. That unit will operate its pollution control devices properly and effectively to keep the parameters within limit. 3. That the unit will not expand its production activity from the existing and will not increase any pollution load under Water Act, 1974, Air Act, 1981 without prior approval of the Board. 4. That if the sampling report under Water Act, 1974 and Air Act, 1981 will be found exceeding in parameters at any stage and found increase in pollution load at any stage consent to operate granted will be revoked. 5. That unit will submit the sampling report under Water and Air Act, as applicable within 90 days. 6. The unit will obtain Authorization under HOWM Rules, 2016 for scientific disposal of the Hazardous waste generated. 7. The unit will do agreement with GEPIL/RECYCLER for safe collection, transportation & disposal of Hazardous Waste generated i.e. used oil, used containers of various chemicals & solvents, waste cloth & used oil from Gen set etc. 8. The unit will comply with Direction No. 76 of CAQM for DG sets for installation of RECD kit and use of Dual fuel in operation of DG sets. 9. Unit will obtain NOC/permission from CGWA/HWRA for groundwater abstraction. 10. The CTO granted is prejudice to be action taken for any violation, if found at later stage.

SHAILENDER ARORA

Digitally signed by SHAILENDER ARORA
Date: 2025.10.02 19:49:38 +05'30'

Regional Officer, Bahadurgarh
Haryana State Pollution Control Board.

HARYANA STATE

VISHVKARMA GENERATOR SERVICES

All Kinds of Generator Sale, Purchase, Repairing & Hiring 5KVA | 1250KVA

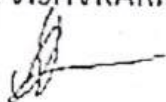
Ref. No.

Date..06/5/2026

REPAIR ESTIMATE

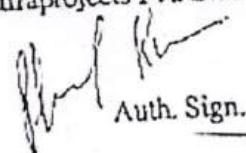
I have checked a DG set capacity 125KVA on 06-05-2026 at your site M/S RUHIL INFRAPROJECTS PVT LTD , village Dehkora, Bahadurgarh and Engine is completely sized the tentative expenses of service is approx 33000/- (Parts will be in your scope in repair of dg set Engine . The tentative of repairing time for completion of repair is approx 5 to 8 days. The Pickup and delivering of the DG set will be charged on own cost. From factory to work place, No guaranty and warranty will be given after once the engine is checked and operated by the user at the site.

FOR VISHVKARMA GENERATOR SERVICES



AUTH. SIGNATURE

Ruhil Infraprojects Pvt. Ltd.



Auth. Sign.

Delhi Rohtak Road, Opp. Sadar Police Station, Bahadurgarh-124507
Mob.: +91-9811573893, 9416390329, 9416534126, 9355116363

kirloskar
care

24 X 7 KOEL CARE Helpdesk : 8806334433/18002333344



DELIVERY CHALLAN																	
DELIVERY CHALLAN DETAILS																	
Service Dealer Name		SAAN Royal Power Solutions Private Limited						TAX INVOICE				ORIGINAL FOR RECIPIENT					
Address		Mauja Rohtak, Nordan Bye pass Near Srishli Hundai, Rohtak, HARYANA, 124001						(Under Rule 46)									
Contact Number								Delivery Challan No: DC420432102700249				Customer PO No & Date					
COMMISSIONERATE		06ABNCS5672H1ZV						Delivery Challan Date: 22-05-2026				Payment Terms					
GSTN		U46593PB2024PTC061708										Transaction Type					
CIN												: 828					
MSME Category																	
Udyam Aadhar Number																	
CUSTOMER INFO																	
Bill to Customer									Ship to Customer								
Name		RUHIL INFRAPROJECTS PVT LTD						Name		RUHIL INFRAPROJECTS PVT LTD							
Address		Village-Rohad Nagar, Bahadurgarh, Jhajjar, Haryana, HARYANA, 124103						Address		Village-Rohad Nagar, Bahadurgarh, Jhajjar, Haryana, HARYANA, 124103							
State		HARYANA						Customer Id		400495403							
State Code		06						Email Id		noemailid@na.com							
GSTIN		06AAICR4789G1ZX						State		HARYANA							
KOEL Asset & Service Information :									State Code: 06								
Instance ID-									GSTIN: 06AAICR4789G1ZX								
Engine Model-									App Code-								
									Serial No-								
Sr No.	Part No.	Description of Goods/Service	HSN/SAC	Qty	Unit	Rate(Per Item)	Total	Freight	Taxable Value	CGST		SGST		IGST		UTGST/KFC	
										Rate (%)	Amt (INR)	Rate (%)	Amt (INR)	Rate (%)	Amt (INR)	Rate (%)	Amt (INR)
1	F6. 007.26.0.00	CYL HEAD GASKET 1.25 MM THK	84841010	6	No.	1033.05	6012.35	0.00	6012.35	9	541.11	9	541.11				
Total:							6012.35	0.00	6012.35		541.11		541.11				
Total Invoice Value							6012.35	0.00	6012.35		541.11		541.11				
Total Invoice Value (In Words)							7094.57								0.00		0.00
Amount To be Paid Subject to Reverse Charge							Rupees Seven Thousand Ninety Four and paise Fifty Seven Only.										
Declaration:																	
Comments:																	
Terms & Conditions :																	
							Authorized KOEL CARE Service Dealer										
							(Authorised Representative) SAAN Royal Power Solutions Private Limited							(Customer Signature)			

Always Use KOEL CARE Genuine Spare Parts for Optimum performance of Engine KOEL CARE Helpdesk Email ID:- KOEL.Helpdesk@kirloskar.com

IRN : fab9c0cf5efa3a5f75f99a3d995244d056aa91751f99ed89b-59c947c5b70436a
 Ack No. : 172620292924899
 Ack Date : 23-May-26



MODERN ENGINEERS from 1-Apr-24 3692, MORI GATE ,DELHI GSTIN/UIN: 07AAGPJ3925K1ZL State Name : Delhi, Code : 07 Contact : 9818109400 E-Mail : modernengineers3692@yahoo.com Buyer (Bill to) RUHIL INFRAPROJECTS PRIVATE LIMITED VILLAGE ROHAD, ROHAD, BAHADURGARH, Jhajjar, Haryana, 124507 GSTIN/UIN : 06AAICR4789G1ZX State Name : Haryana, Code : 06	Invoice No.	e-Way Bill No.	Dated
	79	731636379423	23-May-26
	Delivery Note	Mode/Terms of Payment	
	Reference No. & Date.	Other References	
	Buyer's Order No.	Dated	
	Dispatch Doc No.	Delivery Note Date	
	Dispatched through	Destination	
Terms of Delivery			

SI No.	Description of Goods	HSN/SAC	GST Rate	Quantity	Rate	per	Disc. %	Amount
1	CYLINDER LINER ASSY K F6.154.10.0.00	84099941	18 %	6 NOS	4,162.00	NOS	25.42 %	18,624.12
2	RING SL 90 F6.005.71.0.00 K	84099113	18 %	6 NOS	1,805.00	NOS	25.42 %	8,077.01
3	CR BEARING SL90 B.055.4.00.003 K	84833000	18 %	1 NOS	4,652.00	NOS	25.42 %	3,469.46
4	PACKING KIT	84835090	18 %	1 NOS	1,200.00	NOS	25.42 %	894.96
5	TIMING SEAL	84841010	18 %	1 NOS	540.00	NOS	25.42 %	402.73
6	VALVE SEAL JCB	40161000	18 %	12 NOS	60.00	NOS	25.42 %	536.98
7	PISTON GOETZE	84099112	18 %	6 NOS	2,542.37	NOS		15,254.22
								47,259.48
Less : IGST ROUND OFF								8,506.70 (-)0.18
Total				33 NOS				₹ 55,766.00

Amount Chargeable (in words)

E. & O.E

Indian Rupees Fifty Five Thousand Seven Hundred Sixty Six Only

HSN/SAC	Taxable Value	IGST		Total Tax Amount
		Rate	Amount	
84099941	18,624.12	18%	3,352.34	3,352.34
84099113	8,077.01	18%	1,453.86	1,453.86
84833000	3,469.46	18%	624.50	624.50
84835090	894.96	18%	161.09	161.09
84841010	402.73	18%	72.49	72.49
40161000	536.98	18%	96.66	96.66
84099112	15,254.22	18%	2,745.76	2,745.76
Total	47,259.48		8,506.70	8,506.70

Tax Amount (in words) : Indian Rupees Eight Thousand Five Hundred Six and Seventy paise Only

Company's PAN : AAGPJ3925K

Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

Company's Bank Details

Bank Name : YES BANK

A/c No. : 033763700002309

Branch & IFS Code : KASHMERE GATE & YESB0000337

for MODERN ENGINEERS from 1-Apr-24

For MODERN ENGINEERS

Authorised Signatory

This is a Computer Generated Invoice

Proprietor

Vishwakarma Generator Service

Opp. Sadar Police Station, Delhi-Rohtak Road
Bahadurgarh-124507 (Haryana)
01276-230173, 9416390329, 9416534126

Cummins

Date 07/5/26

Ref. No. 069

M/s. R4Lil Infraproject Pvt. Ltd.
Delhara Will Bahadurgarh
Kind. Attn. HR 63D - 1866

Subject : 125 KVA DG Set on monthly rent Basic.

Dear Sir,

As per our discussion on subject matter please note the terms and conditions

(A) Rates on Agreement

- (1) For one month.....KVA D.G. Set @.....per month
(2) For one day.....5.....KVA D.G. Set @.....1,800/-.....per day
(3) For Party 7 Hours.....KVA D.G. Set @.....per Hr.

(B) We will provide maintenance and supervision whether required.

By Party :-

- ✓ 1. HSD, Lub Oil & the consumable items will be on your account.
- ✓ 2. You will provide safe guard and shed and Cable.
- ✓ 3. Monthly payment in advance will be given every month on first day of installation.
- ✓ 4. In case our Generator is to be disconnected before the expiry date of agreement 50% payment for the balance period will have to be given by you.
- ✓ 5. The price indicated is for a running duration of 300 hours OR one month whichever is earlier. For additional running hours payment will be made on pro rate basis.
- ✓ 6. All disputes will be settled in Bahadurgarh Hr.) Jurisdiction only.

Thanking you,

Your faithfully,

For VISHWAKARMA GENERATOR SERVICES

Ruhil Infraprojects Pvt. Ltd.

Prop.

Auth. Sign.

For Vishwakarma Generator Service

Proprietor

Customer's Signature

GSTIN: 06ANGPK8154L1ZM



VISHWAKARMA GENERATOR SERVICE

Spl.: All Types of Tractor & Generator Sale Purchase For Commission Basis

(Available 5 KVA to 1250 KVA Generator for Rental Basis)

Delhi-Rohtak Road, Pillar No. 829-30, Bahadurgarh-124507

M: 9416390329, 9355116363

E-Mail: vishwakarmagenerator@gmail.com

Details of Receiver (Billed to)

Name Rytil Infra Projects PVT LTDAddress Kharas No 20/14/3, 15/1/3Vill. Dehkora Tel. BahadurgarhState HARYANA State code 06GSTIN/Unique ID 06AAICR478961ZX

Transport Detail:

Date 22/05/26

521

Transport Name

Place of Supply

Vehicle No

Sr. No.	Description of Goods	HSN Code	Days/Months	Rate	Amount
1	125 KVA DSI Gen Set. for hire basis. Per day Rent 1800/- 7/5/26 To 11/5/26 5 days GSTIN 06AAICR478961ZX	997319	5	1800/-	9000/-

Total Invoice Value (In Words) Ten thousand
Six hundred twenty only.
Amount of Tax subject to Reverse Charges

Note:

1. Good once sold will not be taken back.
2. Our responsibility ceases the moment goods are dispatched to the carrier
3. All Dispatched are subject to Bahadurgarh Jurisdiction only

TOTAL	9000/-
Discount	
Taxable Amt.	
CGST @ 9%	810/-
SGST @ 9%	810/-
IGST @	
Freight	
GROSS TOTAL	10620/-

Account No.: 166411100001033

Banker's Name: UNION BANK OF INDIA

IFSC/RTGS CODE: UBIN0904775

ORIGINAL: WHITE
DUPLICATE: PINK
TRIPLICATE: YELLOW

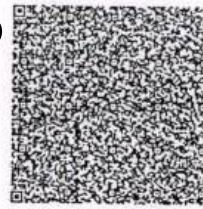
For VISHWAKARMA GENERATOR SERVICE

Auth. Signature



CSH Power Himoina Private Limited
GSTIN: 05AACCC8447Q1Z4
(Formerly Known As C&S Himoina Pvt Ltd)
12 A, Sector-9, Integrated Industrial Estate Pantnagar
Udham Singh Nagar 05-UK 263153
India
State Code: 05-UK

85



Annexure - P-4

Page-1

(Original for Recipient)

Regd. Office : 222, Okhla Phase III
New Delhi 07-DL 110020
India
CIN : U31103DL2006PTC149585
PAN / TAN : AACCC8447Q / DELC09035F
Telephone No. : 011-33849258

43

www.cshpower.co.in

Bill To RUHIL INFRA PROJECTS PVT. LTD. RUHIL INFRA PROJECT PVT. LTD. Village ROHAD, BAHADURGARH JHAJJAR 06-HR 124507 India	Ship To RUHIL INFRA PROJECT PVT. LTD. Village ROHAD, BAHADURGARH JHAJJAR 06-HR 124507 India	Sales Order No. : SO/2627/CSH10601 Project No. : Delivery Id : Cust PO No : PO Date :	GST Invoice Num : SI2627/CSH00530 Invoice Date : 31-May-2026 Destination : JHAJJAR,06-HR,124507,IN Bank Name : Account in Name of : Account No. : IFSC Code :	LR No. : LR Date : E-Waybill No. : Mode Of Transport : Transporter Name : Vehicle No. : No. Of Package : Weight :
Contact No.: 972 867 6361 PAN: AAICR4789G; GSTIN: 06AAICR4789G1ZX State Code: 06-HR	Contact No.: 972 867 6361 State Code: 06-HR			

S.No.	Item/Description of Goods	HSN/SAC	Qty.	Unit	Unit Rate	Total (INR)	Freight & Other Chg.	Taxable Value (INR)	IGST	
									Rate	Amt (INR)
1	CSHALPCBIV-0180SFTPMCP SDG-180KVA-AL ENGINE MODEL-CPCB-IV-H6G4DE180 WITH 180KVA- SF-TP-ALT. MODEL-S3L1D-G-MCP	85021200	1	Ea	1,439,000.00	1,439,000.00	11,000.00	1,450,000.00	18%	261,000.00
Sub Total										
Tax Collected at Source:			1			1,439,000.00	11,000.00	1,450,000.00		261,000.00

Total Invoice Value (in figures)	1,711,000.00
Total Invoice Value (in Words)	INR One Million Seven Hundred Eleven Thousand Rupees Only

Terms & Conditions Remarks Standard warranty. Terms of Delivery: 100% ADVANCE Terms of Payment: 100% ADVANCE	DECLARATION: 1. Certified that the particulars given above are true and correct and the amount indicated represents the price actually charged. There is no additional consideration flowing directly or indirectly from the buyer. (All our transactions are subject to Delhi jurisdiction only). 2. Notwithstanding anything to the contrary contained elsewhere, the title in the goods shall pass to purchaser immediately on delivery of goods from Works/CSH Power Himoina Private Limited warehouse to the Carrier/transport for transporter for delivery to purchaser. 3. Disputes, if any, arising out of this to be settled in Court of Law in Delhi only.	For CSH Power Himoina Private Limited Authorized Signatory
IRN NO. 604688ca36ffc33dd65aa0681637e2424cd7a7d5e8ac02aab622e5a1a2100ec2		

GATE OUTWARD
CSH POWER HIMOINSA (P) LTD.
Entry No. 536 Date 3-6-26
Time Out 18:00 Sign. D. J. INK



SPECTRA TESTING LABS (OPC) PRIVATE LIMITED

The Result You Can Trust

(An ISO 9001:2015, 14001:2015 OHSAS 45001:2018 Certified & NABL Accredited Laboratory)
PLOT NO. 2/2, SURYA VIHAR PART-2, AGWANPUR, SECTOR-91, FARIDABAD, HARYANA-121003
GSTIN : 06ABLCS3615G1ZC | CIN : U71200HR2023OPC113725

E-mail: care.spectra@gmail.com | Website: www.spectratestinglabs.com | Ph: 9560653541, 9310207829



TEST REPORT

Name & Address of Customer		Test Report Number	SE/0526/2985
Issued to	M/s RUHIL INFRAPROJECTS PVT. LTD. KHASRA NO:- 20/14/3, 15/1/3, 16/2, 17, 24/1/2, 25/1, 22/4/1/12, VILLAGE DEHKORA TEHSIL BAHADURGARH	Date of Report	02.05.2026
		Job Order Number	SAL/SE/290426/2985
		Sample Received on	29.04.2026
		Analysis Done on	29.04.2026 to 02.05.2026
		ULR Number	TC-1712126000001743F
Sample Description	STACK EMISSION	Sampling Done by	SAL lab representative

STACK EMISSION ANALYSIS REPORT

Sampling Details:	
Date of sampling	24.04.2026
Source of Emission	Stack Emission
Stack attached to	HOT MIXING PLANT
Capacity	120 TPH
Sampling Protocol	IS: 11255
Type of Fuel Used	L.S.H.S
Normal operating schedule	As per requirement
Stack height from Ground Level (mtr)	25.0
Diameter (mm)	600.0
Sampling Duration (Minutes)	60
Parameters Monitored	PM, NOx, CO, SOx
Purpose of monitoring	for self Assessment
Stack Temperature °C	124
Ambient Air Temperature °C	38
Average Stack Velocity (m/s)	9.8
APCS	Dust Collector + Wet Scrubber

RESULTS

S. No.	Parameters	Unit	Result	Limits	Test Method
1.	Particulate Matter (PM)	[mg/Nm ³]	42.5	80	IS: 11255(part-1):1985 (RA:2019)
2.	Oxide of Nitrogen (NOx)	[mg/Nm ³]	31.9	Not Specified	IS: 11255(part-7):2005 (RA:2022)
3.	Sulphur Dioxide	[mg/Nm ³]	13.2	Not Specified	IS: 11255(part-2):1985 (RA:2019)
4.	Carbon Monoxide (CO)	%	0.69	1	IS:13270 : 1992 (RA 2024)

End of Report

Chandra Dev

(Sr. Chemist)

Chandra Dev
Analyst

Ambika Rawat

(Quality Manager)

Ambika Rawat
AUTHORISED SIGNATORY

NOTE:

1. The Results given above are related to the tested sample, as received & mentioned parameters. The Customer Asked For the above tests only.
2. Responsibility of the Laboratory is Limited to the Invoiced Amount only.
3. This test report will not be generated again, either wholly or in part, without Prior Written Permission of the Laboratory.
4. This test report will not be used for any Publicity/legal Purpose.
5. The test samples will be disposed off after two weeks from the date of issue of test report, unless until specified by the customer.
6. This is Computer Generated Report does not Require Physical Delivery

*Format No. SAL/7.8-0.1 Issue no. 01 Issue Date 14.08.2025 Rev. No. 00.



SPECTRA TESTING LABS (OPC) PRIVATE LIMITED

(An ISO 9001:2015, 14001:2015 OHSAS 45001:2018 Certified & NABL Accredited Laboratory)
PLOT NO. 2/2, SURYA VIHAR PART-2, AGWANPUR, SECTOR-91, FARIDABAD, HARYANA-121003
GSTIN : 06ABLC3615G1ZC | CIN : U71200HR2023OPC113725
E-mail: care.spectra@gmail.com | Website: www.spectratestinglabs.com | Ph: 9560653541, 9310207829



TEST REPORT

Name & Address of Customer		Test Report Number	SE/0226/1025
Issued to	M/s RUHIL INFRAPROJECTS PVT. LTD. KHASRA NO:- 20/14/3, 15/1/3, 16/2, 17, 24/1/2, 25/1, 22/4/1/12, VILLAGE DEHKORA TEHSIL BAHADURGARH	Date of Report	09.02.2026
		Job Order Number	SAL/SE/050226/1025
		Sample Received on	05.02.2026
		Analysis Done on	05.02.2026 to 09.02.2026
		ULR Number	TC-1712126000001025F
Sample Description	STACK EMISSION	Sampling Done by	SAL lab representative

STACK EMISSION ANALYSIS REPORT	
Sampling Details:	
Date of sampling	05.02.2026
Source of Emission	Stack Emission
Stack attached to	HOT MIXING PLANT
Capacity	120 TPH
Sampling Protocol	IS: 11255
Type of Fuel Used	L.S.H.S
Normal operating schedule	As per requirement
Stack height from Ground Level (mtr)	25.0
Diameter (mm)	600.0
Sampling Duration (Minutes)	60
Parameters Monitored	PM, NOx, CO, SOx
Purpose of monitoring	for self Assessment
Stack Temperature °C	113
Ambient Air Temperature °C	24
Average Stack Velocity (m/s)	8.5
APCS	Dust Collector + Wet Scrubber

RESULTS					
S. No.	Parameters	Unit	Result	Limits	Test Method
1.	Particulate Matter (PM)	[mg/Nm ³]	41.8	80	IS: 11255(part-1):1985 (RA:2019)
2.	Oxide of Nitrogen (NOx)	[mg/Nm ³]	29.5	Not Specified	IS: 11255(part-7):2005 (RA:2022)
3.	Sulphur Dioxide	[mg/Nm ³]	12.9	Not Specified	IS: 11255(part-2):1985 (RA:2019)
4.	Carbon Monoxide (CO)	%	0.65	1	IS:13270 : 1992 (RA 2024)

End of Report

Chandra Dev

(Sr. Chemist)

Analyst

Ambika Rawat

(Quality Manager)

AUTHORISED SIGNATORY

NOTE:

- The Results given above are related to the tested sample, as received & mentioned parameters. The Customer Asked For the above tests only.
- Responsibility of the Laboratory is Limited to the Invoiced Amount only.
- This test report will not be generated again, either wholly or in part, without Prior Written Permission of the Laboratory.
- This test report will not be used for any Publicity/legal Purpose.
- The test samples will be disposed off after two weeks from the date of issue of test report, unless until specified by the customer.
- This is Computer Generated Report does not Require Physical Delivery

*Format No. SAL/7.8-0.1 Issue no. 01 Issue Date 14.08.2025 Rev. No. 00.

**COMMISSION FOR AIR QUALITY MANAGEMENT
IN NATIONAL CAPITAL REGION AND ADJOINING AREAS
17th Floor, Jawahar Vyapar Bhawan (STC Building)
Tolstoy Marg, New Delhi-110001**

F. No. A-110018/01/2021-CAQM/8218-40

Dated: 23rd June, 2022

Subject: Standard list of approved fuels for various applications across NCR.

WHEREAS, emissions due to use of polluting fuels for various industrial, vehicular, domestic and miscellaneous purposes contribute significantly to the degradation of air quality in the NCR and adjoining areas and accordingly a consistent need has been felt to switch over to lesser polluting and cleaner fuel in the NCR;

2. WHEREAS, the Central Govt., State Govts. in the NCR and the Govt. of the NCT of Delhi have been continually making efforts to move towards use of cleaner fuels across various sectors contributing to the overall air quality in the region;

3. WHEREAS, the Govt. of NCT of Delhi and the State Govts. of Haryana and Rajasthan have an approved fuel list for various applications in their respective states, including the districts in the NCR, the State of Uttar Pradesh presently does not have an approved fuel list of its own;

4. WHEREAS, a perusal of such approved fuel lists as above indicates that there are still some heavily polluting fuels featuring in the approved fuel lists like coal, HSD, Naptha, LDO etc., the lists are not comprehensive, non-uniform and vary significantly from state to state;

5. WHEREAS, the matter related to use of clean fuels for industrial applications has already been deliberated extensively in the Commission from time to time and shifting of industries to PNG / cleaner fuels has been a priority area for the Commission and to this effect, statutory directions for permissible fuels for industrial applications in the NCR have already been issued in terms of Direction Nos. 53, 62, 63 and 64 dated 04.02.2022, 17.03.2022, 18.05.2022 and 02.06.2022 respectively;

2 and

6. WHEREAS, the concerns of air pollution are uniform across NCR and particularly from the standpoint of a common airshed approach for the entire NCR and adjoining areas, it is desirable to have a unified list of approved fuels for various applications across all sectors in the entire territorial jurisdiction of the NCR towards aiming for uniform and better emission standards and an overall improved air quality in the region;

7. WHEREAS, in pursuance of the Order of Hon'ble Supreme Court of India dated 16.12.2021 (Civil) No 1135 in the matter of Aditya Dubey (minor) and Anr v/s UOI & Ors, directed the Commission to with a view to "find permanent solution to the air pollution menace occurring every year in Delhi and NCR, suggestions may be invited from the general public as well as the experts in the field, an Expert Group was constituted by the Commission to examine and deliberate upon all such suggestions and proposals;

8. WHEREAS, the Expert Group in their report in the subject matter have also strongly recommended phasing out usage of heavily polluting fossil fuels like coal, diesel oil, light diesel oil (LDO), Pyrolysis oil, Naptha etc. across NCR and to this end, have recommended a "Common" approved fuel list for NCR, incorporating cleaner fuels, to the extent possible;

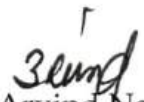
9. WHEREAS, the proposed standard / common fuel list for NCR was also deliberated upon as an agenda item in the recently held meeting of the full Commission on 25.05.2022 and considering the need to optimally balance the imperatives of sustainability of operations as also the emissions from use of various types/ categories of fuels that have a direct bearing on the air quality, the Commission approved the standard fuel list for uniform adoption of clean fuels across the entire NCR, barring some exceptions;

10. NOW, THEREFORE, in exercise of its powers under Section 12 of the Act, the Commission hereby directs for adoption of a standard list of fuels in NCR as annexed;

2and

11. The aforesaid standard list of approved fuels shall come in force w.e.f. 01.10.2022 (for areas where PNG infrastructure and supply is already available) and w.e.f. 01.01.2023 (for other areas where the PNG supply is still not available). In effect, the approved fuel list shall be completely in force in the entire NCR w.e.f. 01.01.2023.

12. Strict compliance of the above noted directions of the Commission be ensured by all concerned.


(Arvind Nautiyal)
Member-Secretary
Tel No.: 011-23701197
Email: arvind.nautiyal@gov.in

To,

1. The Chief Secretary, Govt. of Haryana.
2. The Chief Secretary, Govt. of Rajasthan.
3. The Chief Secretary, Govt. of Uttar Pradesh.
4. The Chief Secretary, Govt. of NCT of Delhi.
5. Member Secretary, Haryana State Pollution Control Board.
6. Member Secretary, Rajasthan State Pollution Control Board.
7. Member Secretary, Uttar Pradesh State Pollution Control Board.
8. Member Secretary, Delhi Pollution Control Committee.

Copy to:

The Chairperson and all Members, CAQM.


(Arvind Nautiyal)
Member-Secretary

Standard list of approved fuels for entire NCR

- **Petrol** (BS VI with 10 ppm Sulphur) as per Notification of Government of India as amended from time to time- **Vehicular fuel**
- **Diesel** (BS VI with 10 ppm Sulphur) as per Notification of Government of India as amended from time to time- **Vehicular fuel**
- **Hydrogen/Methane**- Vehicular and Industrial purposes.
- **Natural Gas (CNG/ PNG/ LNG)** – **Vehicular, Industrial and Domestic Purposes**
- **Liquified Petroleum Gas (LPG)** /Propane/Butane – **Vehicular, Industrial and Domestic Purposes**
- **Electricity** - **Vehicular, Industrial, Commercial and Domestic Purposes.**
- **Aviation turbine fuel**
- **Biofuels** (Bio-alcohols, Bio-diesel, Bio-gas, CBG, Bio-CNG)- **for industrial/vehicular/Domestic purposes as applicable.**
- **Refuse Derived Fuel (RDF)** for Power plants, Cement plants, Waste to Energy plants.
- **Firewood/ Biomass briquettes for religious purposes.**
- **Wood/Bamboo Charcoal** for Tandoors and Grills of Hotels/Restaurants/Banquet Halls (with emission channelization/control system) and Open eateries/ Dhabas.
- **Wood charcoal** for cloth ironing.
- **Electricity/ CNG/ Firewood and Biomass briquettes** for Crematoria.



Annexure to Direction No. 65**Fuels permissible only beyond the jurisdiction of GNCTD**

- **Biomass/Agriculture refuse and Pellets/ briquettes** - for Industrial Boilers, Power plants, Biofuel projects, Cement industry, Waste to Energy plants etc.
- **Biomass Pellets/ briquettes** - for Tandoors and Grills of Hotels/ Restaurants/ Banquet Halls (along with mandatory emission channelization/ control system) and for Open eateries/ Dhabas.
- **Metallurgical coke** - For industrial purposes in standalone Cupola based Foundries.
- **"Low Sulphur Fuels" namely LSHS, Very Low Sulphur fuel oil & Ultra-Low Sulphur fuel Oil** - for industrial purposes in metal smelting/melting/ refining / heating furnaces and kilns.

NOTE:

1. Coal with low Sulphur shall be permitted as fuel only in Thermal Power Plants in the NCR.
2. Specific requirement of any other fuel(s), other than in the lists above, by a class/category of industries / other entities, owing to technical, technological and / or process requirements shall be considered by CAQM on merits.
3. Any other clean fuel notified by the Govt. of India, from time to time, shall be included in the list appropriately.
4. All other fuels will be deemed as "unapproved" in as far as the NCR is concerned.





F. No. A110018/01/2021/CAQM

Dated: 3rd April' 2023

Addendum to Direction No: 65

Subject: Standard list of approved fuels for various applications across NCR - reg.

Pursuant to the approval of the Commission at the meeting held on 10.03.2023 and in partial modification of the Commission's Direction No. 65 dated 23.06.2022, 'Annexure to Direction No.-65' is hereby updated and may now be read as **annexed** with this addendum.

Enclosure: As above

(Arvind Nautiyal)
Member - Secretary

To

1. Member Secretary, UP State Pollution Control Board.
2. Member Secretary, Haryana State Pollution Control Board.
3. Member Secretary, Rajasthan State Pollution Control Board.
4. Member Secretary, Delhi Pollution Control Committee.

Copy to:

1. Chief Secretary, Government of Haryana, Haryana.
2. Chief Secretary, Government of Uttar Pradesh, Uttar Pradesh.
3. Chief Secretary, Government of Rajasthan, Rajasthan.
4. Chief Secretary, Government of NCT of Delhi, New Delhi.
5. Chairman, UP State Pollution Control Board.
6. Chairman, Haryana State Pollution Control Board.
7. Chairman, Rajasthan State Pollution Control Board.
8. Chairman, Delhi Pollution Control Committee.
9. Chairman, CPCB, New Delhi.
10. Addl. Secretary, Ministry of Environment, Forest and Climate Change, New Delhi.

(R.K. Agrawal)
Director

As revised on 03.04.2023

(Revisions highlighted in bold letters)

Standard list of approved fuels for entire NCR

- Petrol (BS VI with 10 ppm Sulphur) as per Notification of Government of India as amended from time to time – Vehicular fuel
- Diesel (BS VI with 10 ppm Sulphur) as per Notification of Government of India as amended from time to time – Vehicular fuel and **fuel for Power Generating Set.**
- Hydrogen/Methane – Vehicular and Industrial purposes
- Natural Gas (CNG/PNG/LNG) – Vehicular, Industrial and Domestic Purposes
- Liquefied Petroleum Gas (LPG) /Propane/Butane – Vehicular, Industrial and Domestic Purposes
- Electricity – Vehicular, Industrial, Commercial and Domestic Purposes.
- Aviation turbine fuel
- Biofuels (Bio-alcohols, Bio-diesel, Bio-gas, CBG, Bio-CNG)- for industrial/vehicular/Domestic purposes as applicable.
- Refuse Derived Fuel (RDF) for Power plants, Cement plants, Waste to Energy plants.
- Firewood / Biomass briquettes for religious purposes.
- Wood/Bamboo Charcoal for Tandoors and Grills of Hotels/Restaurants/ Banquet Halls (with emission channelization/control system) and Open eateries/Dhabas
- Wood charcoal for cloth ironing.
- Electricity/CNG/Firewood and Biomass briquettes for Crematoria.



Fuels permissible only beyond the jurisdiction of GNCTD

- **Pellets/briquettes made out of biomass/Agriculture refuse, rice-husk, waste wood, saw dust and chips generating during wood processing wastes/ saw dust** – for Industrial Boilers, Power plants, Biofuel projects, Cement industry, Waste to Energy plants etc.
- **Wood Charcoal – for lead recycling (secondary process) units**
- Biomass Pellets/briquettes – for Tandoors and Grills of Hotels/Restaurants/Banquet Halls (along with mandatory emission channelization/ control system) and for Open eateries/Dhabas.
- Metallurgical coke – For industrial purposes in standalone Cupola based Foundries.
- “Low Sulphur Fuels” namely LSHS, Very Low Sulphur fuel oil & Ultra-Low Sulphur fuel Oil – for industrial purposes in metal smelting/melting/refining/heating furnaces and **in Tunnel/Refractory** kilns.

NOTE:

1. Coal with low Sulphur shall be permitted as fuel only in Thermal Power Plants (**TPPs**) including **Captive TPPs** in the NCR.
2. **“Wood, wood logs/ blocks etc.” shall not be permitted as approved fuels.**
3. Specific requirement of any other fuels(s), other than in the lists above, by a class/category of industries/other entities, owing to technical, technological and/or process requirement shall be considered by CAQM on merits.
4. Any other clean fuel notified by the Govt. of India, from time to time, shall be included in the list appropriately.
5. All others fuels will be deemed as “unapproved” in as far as the NCR is concerned.

2nd

**COMMISSION FOR AIR QUALITY MANAGEMENT
IN NATIONAL CAPITAL REGION AND ADJOINING AREAS**
17th Floor, Jawahar Vyapar Bhawan (STC Building)
Tolstoy Marg, New Delhi-110001

F. No. A-110018/01/2021-CAQM | 8045-8071

Dated: 2nd June, 2022

Subject: Permissible fuels for industrial applications in NCR.

WHEREAS, emissions from industries using polluting fuels like coal and Diesel oils etc. have adverse impact on air quality in the National Capital Region and Adjoining Areas and shifting of Industries to PNG/cleaner fuels has also been a priority for the Commission for Air Quality Management in NCR and adjoining areas;

2. WHEREAS, to this effect, the Commission, through statutory Directions No. 53, 62 and 63 dated 04.02.2022, 17.03.2022 and 18.05.2022 respectively issued to the State Governments of Haryana, Uttar Pradesh and Rajasthan and the GNCTD, *inter-alia*, in respect of industries in NCR directed that:

- (i) These shall completely switch over to PNG or biomass fuels, latest by 30.09.2022 (for industries in areas in NCR where PNG infrastructure / supply is available) and by 31.12.2022 (for industries in areas in NCR where PNG infrastructure / supply is not available), failing which such industries shall be closed down and not permitted to schedule their operations.
- (ii) The industries using biomass fuels shall adhere to the stipulated emission standards.
- (iii) Use of biomass fuels as an alternative option, in addition to PNG or other cleaner fuels, shall be permitted even in new / under commissioning industries in the NCR;
- (iv) Industries in the jurisdiction of GNCTD shall necessarily be run only on PNG or electricity.

3. WHEREAS, the Commission has further received submissions / representations from the following categories of industries citing that their

applications and technical process requirements call for much higher operating temperatures and / or calorific value of fuels as compared to those achieved through bio-mass fuels:

- (i) Standalone cupola-based foundries which mandatorily require a carbon feed stock, in addition to the fuel, have represented for permitting use of metallurgical coke, both as fuel and feedstock in cupola-based furnaces;
- (ii) Furnaces/Kilns involved in metal melting/smelting/ heating/refining processes have represented that the desired temperature/ Specific heat and calorific value would not be achieved through use of bio-mass fuels;

4. WHEREAS, the technical, technological and process requirements in the above two categories of industries and the respective emission characteristics of the proposed fuels have been examined and analysed in the Commission;

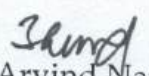
5. WHEREAS, the matter was also deliberated upon as a specific agenda item in the recently held meeting of the full Commission on 25.05.2022 and considering the need to optimally balance the imperatives of sustainability of industries as also the emissions from such industrial operations that have a direct bearing on the air quality, the Commission approved the proposal to also permit the aforementioned fuels as alternatives to PNG/Bio-mass fuels for industrial applications only in regions beyond the jurisdiction of GNCTD.

6. NOW, THEREFORE, in furtherance of Direction Nos. 53, 62 & 63, the Commission in exercise of its powers under Section 12 of the Act, considering the levels of emissions generally observed / achieved in respect of existing industries using such fuels viz. metallurgical coke and the family of low sulphur heavy stock fuels and based on extant related national/ international standards, hereby permit use of metallurgical coke in standalone cupola based furnaces and family of low sulphur heavy stock fuels in furnaces for metal heating / smelting / refining purposes respectively, only for regions in the NCR beyond the jurisdiction of GNCTD, subject

DIRECTION NO. 64

to the stricter emission norms and standards as under, to be complied with through technological upgrades and use of appropriate pollution control devices / systems:

Parameter	Permissible Standards	
	Metallurgical coke (For Standalone Cupola Foundries)	Low Sulphur Fuels namely LSHS, Very Low Sulphur & Ultra-Low Sulphur fuel Oil (For metal smelting/melting/ refining / heating furnaces and kilns)
PM (mg/Nm ³)	80 (Aim for achieving a level of 50 mg/Nm ³)	
SO ₂ (mg/Nm ³)	50	
NO _x (mg/Nm ³)	50	
CO	1% max	


(Arvind Nautiyal)

Member-Secretary

Tel No.: 011-23701197

Email: arvind.nautiyal@gov.in

To,

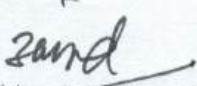
1. The ACS/Pr. Secretary, Industries Department, Govt of Haryana.
2. The ACS/Pr. Secretary, Industries Department, Govt of Rajasthan.
3. The ACS/Pr. Secretary, Industries Department, Government of Uttar Pradesh.
4. The ACS/Pr. Secretary, Industries Department, Government of NCT of Delhi.
5. Member Secretary, Haryana State Pollution Control Board.
6. Member Secretary, Rajasthan State Pollution Control Board.
7. Member Secretary, Uttar Pradesh State Pollution Control Board.
8. Member Secretary, Delhi Pollution Control Committee.

Copy to:

1. The Chief Secretary, Govt. of Haryana
2. The Chief Secretary, Govt. of Rajasthan
3. The Chief Secretary, Govt. of Uttar Pradesh
4. The Chief Secretary, Govt. of NCT of Delhi.

Copy also to:

The Chairperson and all Members, CAQM.


(Arvind Nautiyal)
Member-Secretary

Pls discuss

Ritesh Prasad Gurung

Scientist E

Commission for Air Quality Management in NCR and Adjoining Areas

===== Forwarded message =====

From: Sahil Patel <sahil.cpcb@gov.in>

To: "Ritesh Gurung" <rpgurung.cpcb@nic.in>

Date: Thu, 25 Jun 2026 15:41:59 +0530

Subject: Re:Details of Inspection

===== Forwarded message =====

Sir,

Please find herewith images of stack provided at M/s Ruhil infra.
From this image, it is evident that stack monitoring arrangements
(platform) has not been provided.



सादर/ Warm Regards

साहिल पटेल/ Sahil Patel

वैज्ञानिक 'ग'/ Scientist 'C'

अपशिष्ट प्रबंधन - II प्रभाग/ WM-II Division
CENTRAL POLLUTION CONTROL
BOARD

Ministry of Environment, Forest & Climate
Change,

Government of India

Parivesh Bhawan', C.B.D.-cum-Office
Complex

East Arjun Nagar, Delhi-110032

From: Ritesh Gurung <rpgurung.cpcb@nic.in>

To: "Sahil Patel" <sahil.cpcb@gov.in>

Cc: "Bhawna Singh" <bhawna.singh@gov.in>, "Gyanendra Kr.
Yadav" <gyanendra.30@gov.in>

Dear Sahil,

This has reference to your inspection of M/s Ruhil Infra Project Pvt. Ltd conducted on 09.05.2026. It is requested to clarify the status of stack emission monitoring provision installed in the Unit.

Regards

Ritesh Prasad Gurung
Scientist E
Commission for Air Quality Management in NCR and Adjoining Areas

3 Attachment(s)

Ruhil infra (1).jpeg

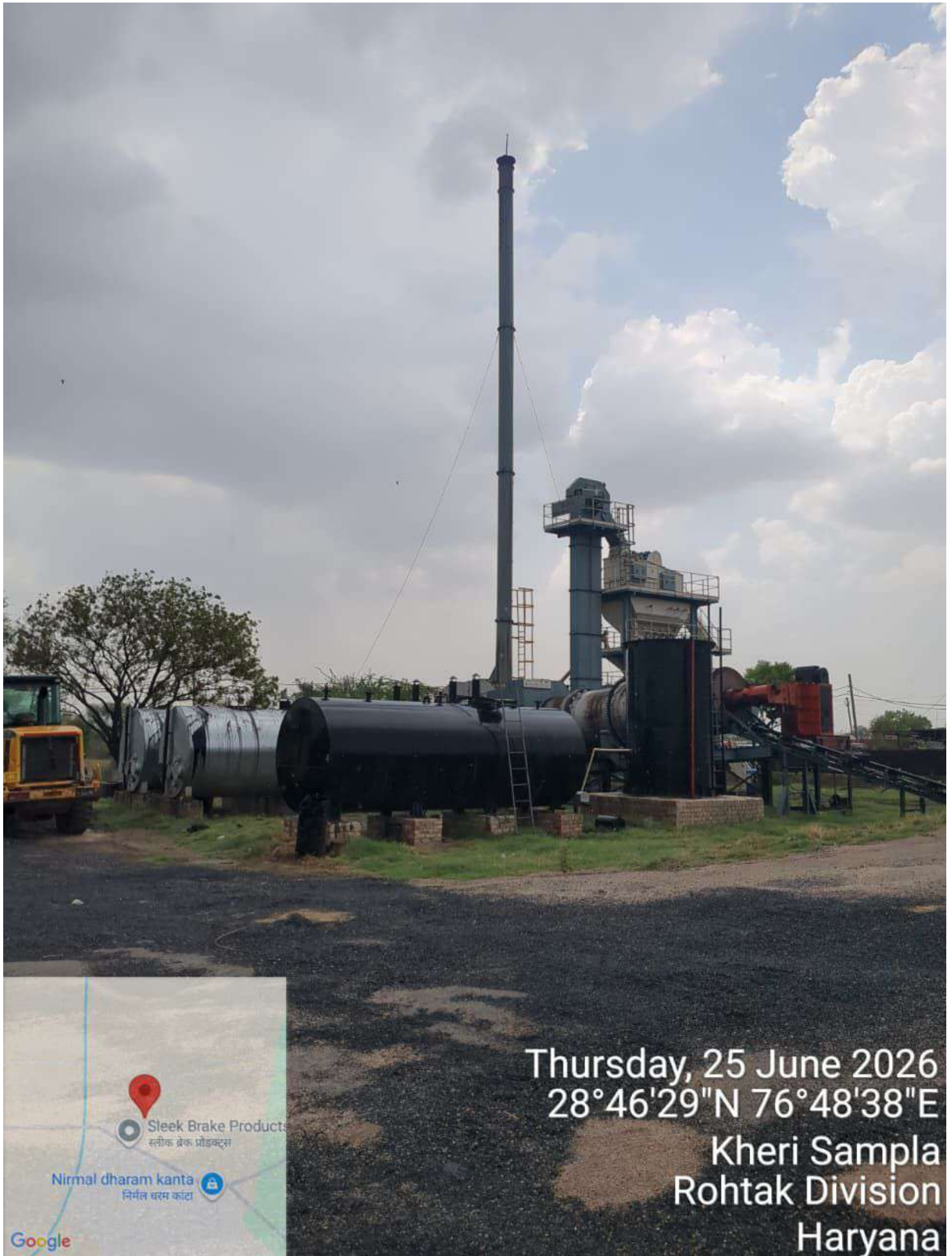
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65.3 KB

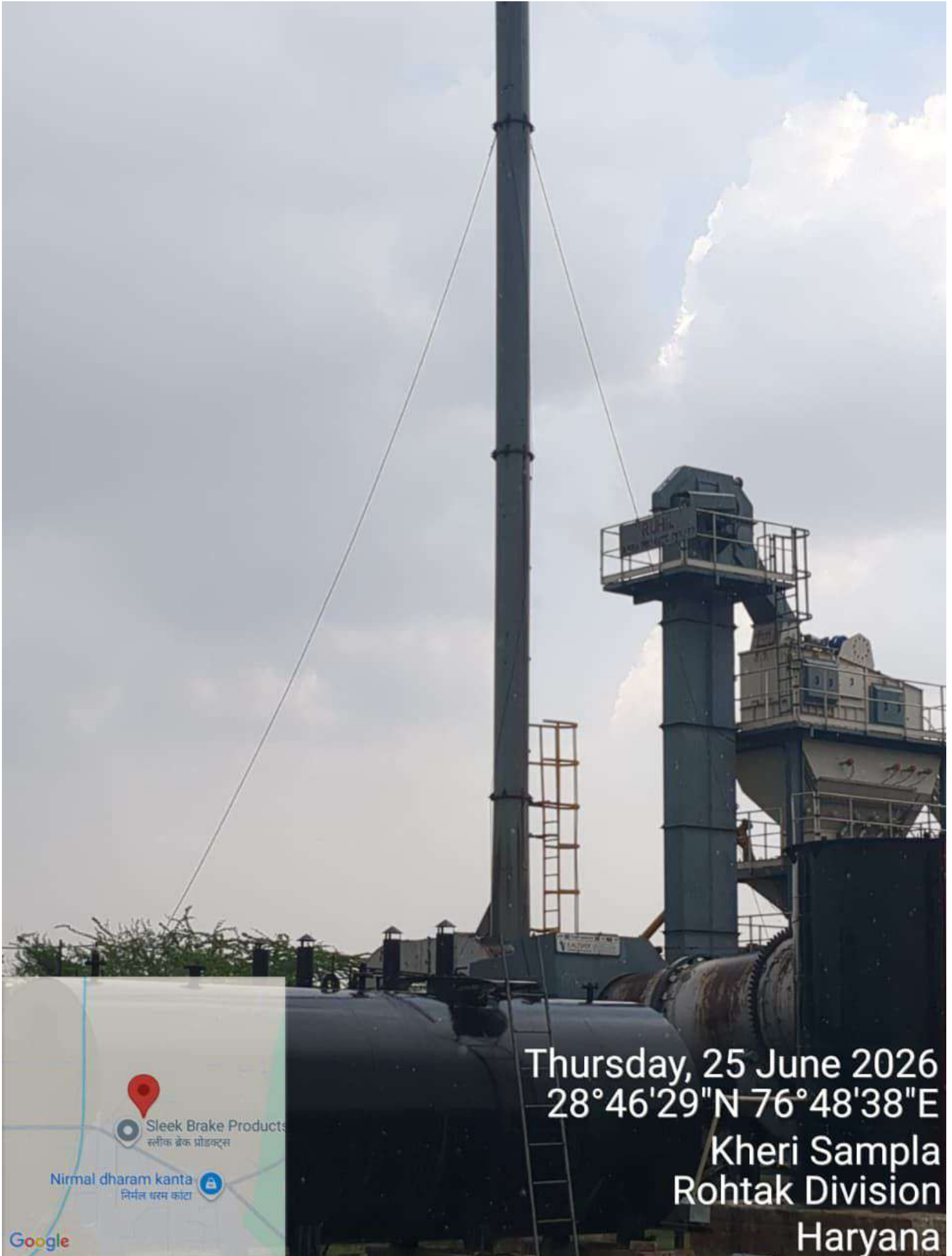
Ruhil infra (3).jpeg

67.2 KB





Thursday, 25 June 2026
28°46'29"N 76°48'38"E
Kheri Sampla
Rohtak Division
Haryana



Guidelines on Methodologies for Source Emission Monitoring



**Central Pollution Control Board
Ministry of Environment and Forests**

Website: www.cpcb.nic.in

Laboratory Analytical Techniques
Series: LATS / 80 / 2013-2014

GUIDELINES ON METHODOLOGIES FOR SOURCE EMISSION MONITORING



Central Pollution Control Board

(Ministry of Environment & Forests)

Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032

Website: www.cpcb.nic.in

CPCB, 200 Copies, 2012

Prepared & Published by P R Division, Central Pollution Control Board on behalf of
Sh. J. S. Kamyotra, Member Secretary, CPCB

Printing Supervision:- Shri G. Ganesh, Ms Anamika Sagar and Shri Satish Kumar

Printed at :- Aravali Printer & Publishers Pvt. Ltd.



मीरा महर्षि

अध्यक्ष

MIRA MEHRISHI

Chairman

केन्द्रीय प्रदूषण नियंत्रण बोर्ड

(भारत सरकार का संगठन)

पर्यावरण एवं वन मंत्रालय

Central Pollution Control Board

(A Govt. of India Organisation)

Ministry of Environment & Forests

Phone : 22304948/22307233

FOREWORD

To harmonize the methodologies adopted by the State Pollution Control Boards/ Pollution Control Committees, Central Pollution Control Board has taken up the task to collate and compile the techno-feasible and internationally compatible source emission monitoring methodologies for all the criteria pollutants (PM, SO₂, NO_x) and including special parameters like HCl, HF. This exercise has been an ongoing activity of CPCB catering to the continuous need of standard development and harmonizing protocols for emission measurements being done by regulatory authorities. The first effort was made by CPCB in 1985 with the publication of Emission Regulation (Part III) - a document on Isokinetic sampling of Particulate Matter. The present document is an updated version based on enhanced need with the inclusion of new parameters in emission regulation.

The effort of Shri Abhijit Pathak, 'B', air Laboratory in compilation and collation of information is appreciated. The exercise was possible under the encouraging supervision of Dr. D. Saha, Scientist 'D' and the guidance of Shri J.S. Kamyotra, Member Secretary, CPCB.

I trust and believe that the SPCBs / PCCs, industries and other stakeholders will find this document useful for improving their technical competence to adjudge industrial compliance status.

August, 2012

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CHAPTER - 1

Method-1 (Part- I)

Stack Monitoring – Material and Methodology for Isokinetic Sampling

1.0 SOURCE EMISSION MONITORING

This section deals with the method of source emission monitoring. It also gives the minimum requirement of a stack monitoring equipment.

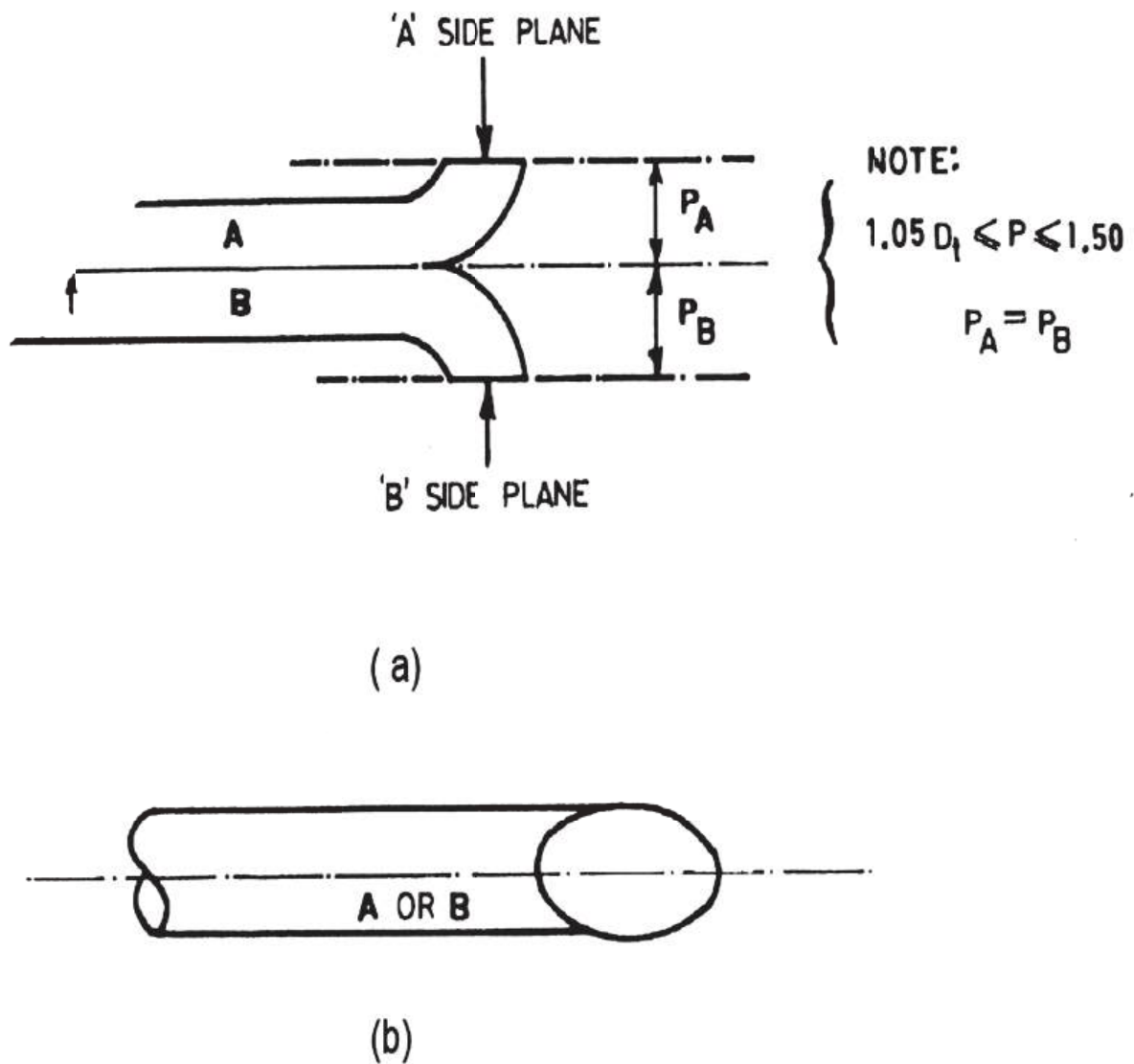
1.1 Specifications of Stack Monitoring Equipment

Table 1.1: Specifications of Stack Monitoring Equipment

S.N.	Item/Equipment	Specifications / Applicable ranges
General Requirements		
1	Stack Velocity Range: Stack Temperature: Range Particulate Sampling: Filter Paper (Thimble): Gaseous sampling:	0 to 30 m /sec <i>For low velocity range differential pressure determination should be done by differential manometer</i> 0 to 600 °C) At 10 to 60 lpm Collection of particulates down to 0.3 micron At 1 to 2 LPM collection on a set of impingers containing selective reagents.
2	Pitot tube	i. Pitot tube shall be modified “S- type” fabricated from SS 304 or equivalent grade. The construction feature should be as per United States Environmental Protection Agency (EPA) regulation, Method 2, Given in Figures 1.1 and 1.2 (A) ii. The construction feature shall be such that the coefficient of the pitot tube is above 0.95.
3	Sampling probe	Sampling probe shall be fabricated from SS 304 tube of suitable diameter (not less than 15 mm Internal diameter (ID). The SS probe should have inner glass liner to facilitate sampling for metals, acids (HCl) and PCDDs and PCDFs. Length of pitot tube and the sampling probe may correspond to user requirement.

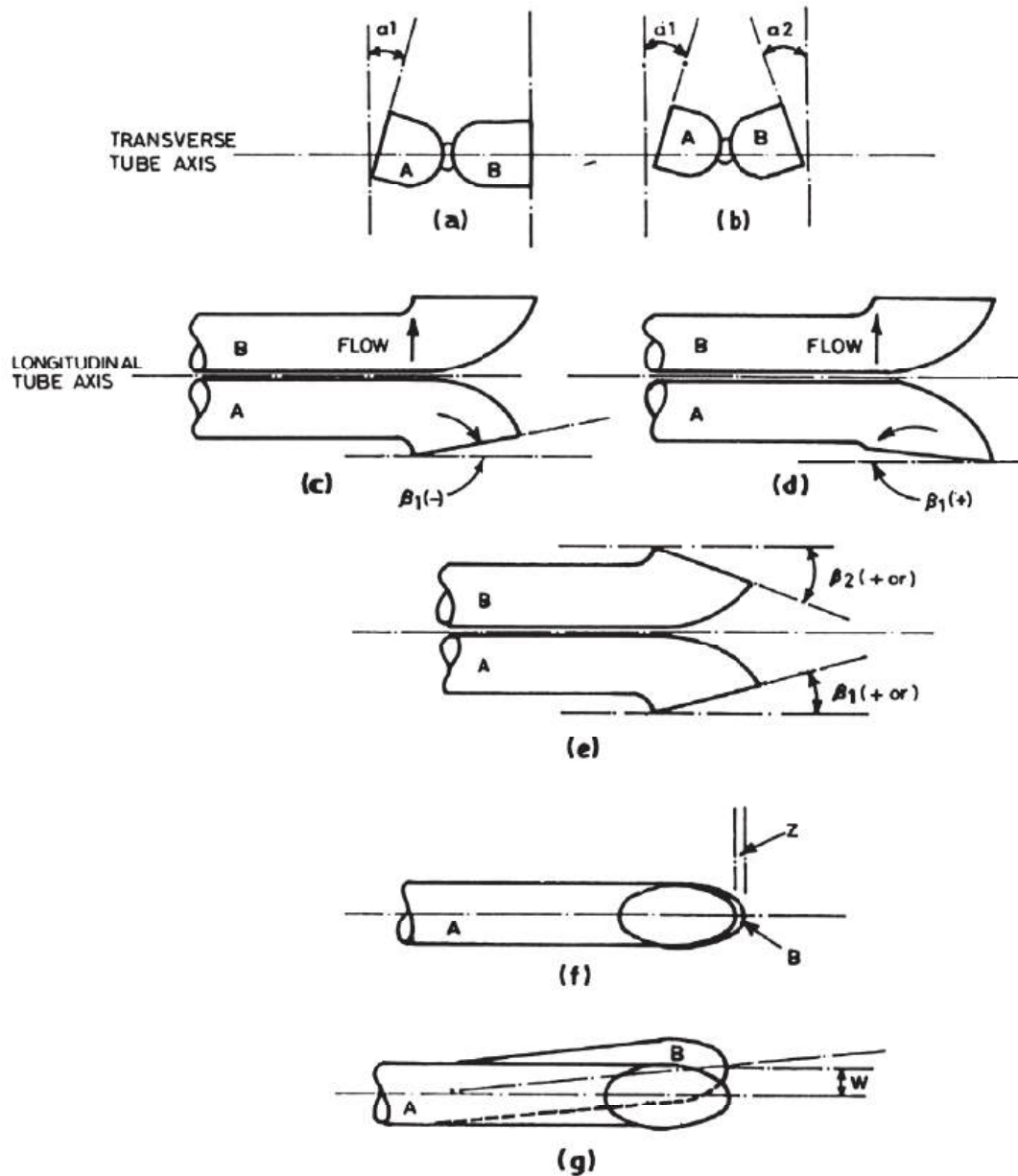
S.N.	Item/Equipment	Specifications / Applicable ranges
General Requirements		
4	Nozzles	Nozzles shall be fabricated with SS 304 or equivalent material with internal diameters suitable to cover the full range of stack velocities. The leading edge of the nozzle should be sharp and tapered. The minimum internal diameter of the nozzle shall not be less than 4 mm. Glass nozzles are recommended for Hx and halogens, metals and PCDDs/PCDFs sampling
5	Heated filter box	Heated filter box upto 200 °C with filter holder made of glass is recommended
6	Sample transfer line	Heated sample transfer line (upto 200°C) made of nonreactive, non corrosive material is recommended to eliminate artifacts due to condensation
7	Thermocouple	Thermocouple sensor shall be provided with digital dial gauge capable of measuring temperature from 0 to 600 °C covered with stainless steel or mild steel casing with acid resistant treatment.
8	Mounting flange	A pair of male/female flanges fabricated with mild steel with proper hole for mounting thermocouple sensor, sampling tube and pitot tube.
9	Panel box sides	Panel box shall be fabricated with aluminium/mild steel/ fiber glass sheets with oven-baked stove–enamel finish. It should have suitable arrangement for housing stop- watch, manometer, rotameter, dry gas meter etc.
10	Back panel	Back panel shall be hinged door panel of mild steel to contain cold box with 8-10 impingers.
11	Inclined - cum – Vertical Manometer	Inclined- cum – vertical manometer shall be fabricated with solid acrylic sheets. It shall be provided with Inlet and outlet for filling in gauge fluid and spirit level for leveling. Velocity range of the manometer shall be 0 to 30 m/sec.
12	Rotameters	0 to 60 lpm for particulate monitoring and 0 to 3 lpm for gaseous monitoring

S.N.	Item/Equipment	Specifications / Applicable ranges
General Requirements		
13	Stop-watch	0 to 60 minutes, one second readout with hold facility.
14	Impinger	Four number 100 ml and four to six number 225 ml capacity. Facility should be there for keeping ice at the bottom of impinge box. Electrical cooling is desirable
15	Connectors	Push and close type quick connector to ensure better leak proofness
16	Vacuum pump	Vacuum pump shall be of rotary design, with a capacity of 0 to 120 lpm gas flow with single phase motor, 220 V. The pump shall also have a moisture trap and air inlet valve. It shall be mounted inside pump housing and shall be portable
17	Dry gas meter	The sampling train shall have a dry gas meter. The capacity of the meter should be adequate to record upto 60 lpm of airflow and a minimum readout of 0.001 cubic meters.
18	Pump housing	Mild steel case with oven- baked stove enamel finish and ON/OFF switch with indicator lights.
19	Tools	A Kit containing the essential tools for connecting various components shall be provided with the equipment.
20	Isokineticity	The kit shall be capable to perform continuous monitoring of isokinetic condition throughout the sampling period
21	Temperature metering point	at Temperature measuring device at metering point shall be provided (0-50 °C)
22	Vacuum measurement	Digital/analog vacuum pressure drop measurement device in mm Hg should be provided in stack kit.
23	Train leakages	The sampling train shall be tested for leakage by plugging the inlet. The rotameter shall not give a reading beyond 5 lpm when the flow has been set at 100 lpm. The dry gas meter shall also give a reading of less than 5 percent of the airflow.



Properly constructed Type S pitot tube shown in: a) Top view; face opening planes parallel to longitudinal axis; b) side view; both legs of equal length and central lines coincident, when viewed from both sides. Baselines coefficient values of 0.84 may be assigned to pitot tubes constructed this way.

FIGURE 1.1 "S – TYPE" pitot tube construction



Types of face opening misalignment that can result from field use or improper construction of type S pitot tubes. These will not effect the baseline of $C_p(s)$ so long as a_1 and $a_2 < 10^\circ$, β_1 and $\beta_2 < 5^\circ$, $z < 0.32$ cm (1/8 in.) and $w < 0.08$ cm (1/32 in.)

FIGURE 1.2 (A) 'S - TYPE' pitot tube construction

1.2 Method of Testing

1.2.1 Molecular weight determination

Dry and wet molecular weights

Equation 1 is used to calculate the dry molecular weight of flue gas. This equation may be modified with terms if other gaseous constituents that will influence the molecular weight if present. Equation 2 is used to calculate the molecular weight of the sample is used to calculate the molecular weight of the gas on a wet basis.

Calibrated multiple combustion gas analyzer may be used to know the percentile composition of flue. Orset analysis may also serve the same purpose.

$$M_d = 0.44 (\%CO_2) + 0.32 (\% O_2) + 0.28(\% N_2 + \% CO) + \dots \quad \text{Eq - 1}$$

$$M_s = M_d (1 - B_{wo}) + 18 B_{wo} \quad \dots \quad \text{Eq - 2}$$

Where,

0.44 – molecular weight of carbon dioxide divided by 100, kg/kg-mole

0.32 – molecular weight of oxygen divided by 100, kg/kg –mole

0.28 – molecular weight of nitrogen and carbon monoxide divided by 100, kg kg-mole

B_{wo} – proportion by volume of water vapour in stack gas.

18 - molecular weight of water, Kg / Kg -mole

Note: % N_2 is calculated by difference. In the majority of cases the following equation may be used:

$$\% N_2 = 100 - (\% CO_2 \text{ avg} + \% O_2 \text{ avg} + \% CO \text{ avg.})$$

Where,

M_d = molecular weight of stack gas on dry basis, kg / kg –mole.

M_s = molecular weight of stack gas on wet basis, kg / kg –mole

$\% CO_2$ = Percent CO_2 by volume, dry basis

$\% O_2$ = Percent oxygen by volume, dry basis

$\% N_2$ = percent nitrogen by volume, dry basis

1.2.2 Static pressure determination

For the static pressure determination requires first to disconnect the positive end of the pitot tube then take the reading of velocity pressure. Use the following formula for the calculation. For measurement of static gas pressure pitot tube should be rotated by 90° from the position of actual ΔP measurement. This would provide better accuracy.

P_s may be calculated as

$$P_s = P_{bar} \pm (\Delta P_s / 13.6)$$

Where:

P_{bar} = Barometric pressure in mm mercury column

P_s = Stack gas velocity pressure, mm water column

P_s = Static pressure mm Hg column.

Density of Hg = 13.6

1.2.3 Stack gas velocity determination

For velocity determination connect pitot tube to the stack as given in Fig 1.2 (B). The dynamic and a static pressure are measured by using the manometer. The temperature inside the duct is also measured. The velocity of gas in the duct and the air quantity are determined using the following formula.

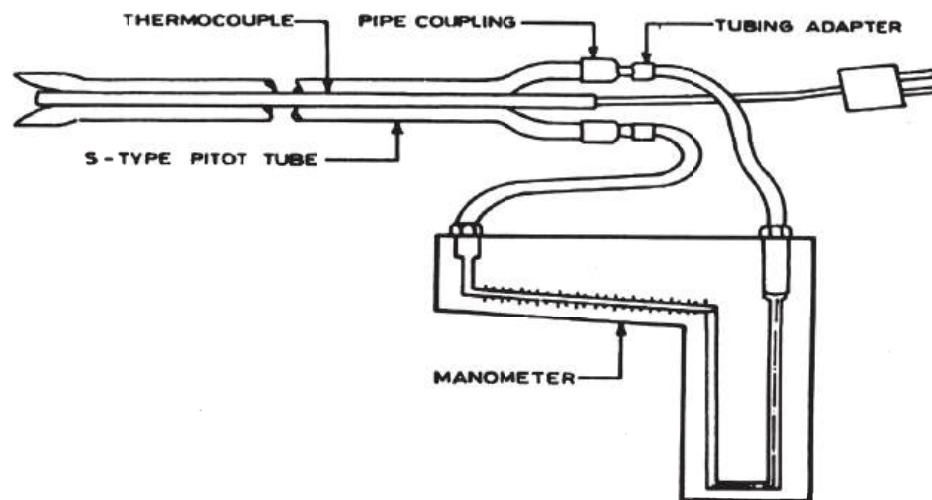


FIGURE 1.2 (B) “S – TYPE” pitot tube and inclined manometer assembly

1.2.3.1 Preliminary determination

Preliminary determination requires for the parameters like Temperature (Stack & ambient temperature °C), velocity pressure Head ΔP , Barometric pressure, Static pressure as mentioned in the above paragraph.

$$U_s = K_p \times C_p \times (\Delta P)^{1/2} [T_s / (P_s \times M_s)]^{1/2}$$

Where

U_s = Stack gas velocity, m/s

K_p = Constant, 33.5

C_p = S- type pitot tube coefficient.

T_s = absolute stack gas temperature, °K

P = Stack gas velocity pressure, mm water column

P_s = Absolute stack gas pressure, mm Hg

M_s = Molecular weight of stack gas on wet basis, Kg / Kg –mole

1.2.3.2 Stack gas volumetric flow Rate

The following equation is used to calculate the stack gas volumetric flow rate, Q_s (m^3 hr).

$$Q_s = 3600 (U_s) \times A_s (1 - B_{wo}) \times (T_{ref} / T_s) \times (P_s / P_{ref})$$

A_s = Area of the stack (duct), m^2

B_{wo} = Proportion by volume of water vapour in stack gas.

T_{ref} = 298 °K

P_{ref} = 760 mm of Hg

T_s = Absolute stack gas temperature, °K

P_s = Absolute stack gas pressure

1.2.4 Moisture determination

The moisture content may be determined either by condenser method or by wet / dry bulb method temperature and then referring to a suitable psychrometric chart. Latter should be limited to non-acid gas streams with moisture content of less than 15 percent and dew point less than 52° C. The condenser method works well for most gas streams and also relative easy to perform.

1.2.4.1 Condenser method

The condenser method, in principle, involves extracting a sample of the stack gases through a filter for removal of the particulate matter, then through a condenser, accumulating the condensate formed in process. The object of the test is to collect and measure the volume of all the condensate formed at the condensing temperature from a measured amount of gas.

Apparatus – The apparatus necessary for determination of moisture content by the condensate method is given below.

S.No	Apparatus	Description
1	Particulate Sampling Apparatus	Consisting of a probe of stainless steel or pyrex glass sufficiently heated to prevent condensation and equipped with a filter to remove particulate matter.
2	Condenser	It is equipped with temperature gauge. This may be substituted with two condenser bottles in an ice bucket each with 30 ml capacity or equivalent. The condenser /condenser bottles are filled with chilled water.
3	Dry Gas Meter	To measure within 5 percent of the total sample volume
4	Gauges	Two thermometers (range 0 – 100 °C), two calibrated vacuum gauges or U- tube manometers (range 0 – 500 mm mercury).
5	Gas Pump	Leak free diaphragm type or equivalent, for sucking gas through sampling apparatus
6	Fittings	Tubing (rubber, neoprene, etc.), rubber stoppers and flow control (needle- valve and shut –off ball valve).

Procedure – Except in unusual circumstances, the water vapour is uniformly dispersed in the gas stream and therefore sampling for moisture determination need not be isokinetic and is not sensitive to position in the duct. The sampling nozzles may be positioned down –stream to minimize the build up of pressure drop across the thimble due to particulates catch. Sample the gas at a rate of about 500 ml/ sec. Run the test until enough condensate has been collected to enable an accurate measurement. Measure the temperature and pressure

of condenser close to the meter, as an insignificant pressure loss in the line between them is expected. The meter pressure may be substituted for condensate pressure also in order to calculate the moisture content. Measure the volume of condensate collected in a graduated measuring cylinder.

Calculations

Calculate the volume of water vapour collected using the following equation:

$$V_v = \frac{(V_c \times 22.4)}{1000 \times 18} \times \frac{T_m}{273} \times \frac{760}{P_{\text{bar}} - P_m}$$

V_v = Equivalent vapour of condensate under sampling condition, m^3

V_c = Volume of condensate in condensor, ml

T_m = Temperature at metering condition, $^{\circ}\text{K}$

P_m = Suction at meter, mm mercury column

P_{bar} = Barometer pressure, mm mercury column

Calculate the moisture content of the gases using the following equation:

$$B_{\text{wo}} = \frac{V_v}{V_v + V_m}$$

$$M = \frac{V_v}{V_v + V_m} \times 100$$

Where

M = Moisture in the flue gases, percent

V_v = Equivalent vapour volume of condensate under sampling condition.

V_m = Volume of gas sampled (m^3)

1.2.4.2 Wet / dry bulb method

The equilibrium temperature attained by water, which is vapourizing adiabatically into gas of composition and constant dry bulb or actual temperature, is termed as wet bulb temperature. The amount of depression of the wet bulb temperature below the dry

bulb temperature is a function of the degree of saturation of the humidity of the gas. Therefore, the moisture content of the gas can be determined from the wet and dry bulb temperature.

Calculations – the moisture content may be determined from the test data using a psychrometric chart. The percentage water vapour by volume is found directly. Inputs are the dry bulb temperature and wet bulb temperature.

1.3 Selection of Sampling Site and Minimum Number of Traverse Points

Select the sampling site at any cross section of the stack or duct that is at least eight stack or duct diameters downstream and two diameters upstream from any flow disturbance such as bend, expansion, contraction, visible flame, or stack exit (see inlet, Figure 1.3). For rectangular cross section, the larger dimension shall be used to represent the stack diameter.

1.3.1 When the above sampling site criteria can be met, determine the minimum number of traverse points required, from Table 1.3. The minimum required number of traverse points is a direct function of stack or duct diameter.

1.3.2 When a sampling site such as described in 1.3 is not accessible, choose a convenient sampling location and use Table 1. 3 and Figure 1.3 to determine the minimum required number of traverse location to the nearest upstream and downstream disturbance. First, measure the distance from the chosen sampling location to the nearest upstream and downstream disturbance.

1.3.3 Then, from Figure 1.3 determine the corresponding sample points multiples for both distances and select the greater of these. Multiply it by the number obtained from Table 1.3. The result of this calculation is the minimum number of traverse points required. This number may have to be increased such that for circular stacks the number is a multiple of 4 and for rectangular stack the number follows the criteria given in 1.3.4.

1.3.3 Cross- section layout and location of traverse points For circular stack divide the cross section into equal parts by two right- angle diameters. Locate half the traverse points symmetrically along each diameter according to Figure 1.4 and Table 1.4.

1.3.4 For rectangular areas as there are traverse points as many equal rectangular areas traverse points such that the ratio of the elements/ area is between one and two. Locate the traverse points at the centroid of each area according to Figure 1.4.

1.3.5 Under no condition shall sampling points be selected within 3 cm of the stack wall.

Table 1.3 : Minimum required number of traverse points for sampling sites which meet specified criteria

Inside diameter of stock of duct (m)	Number of points
$I.D. \leq 0.3$	4
$0.3 \leq I.D. \leq 0.6$	8
$0.6 \leq I.D. \leq 1.2$	12
$1.2 \leq I.D. \leq 2.4$	20
$2.4 \leq I.D. \leq 5$	32

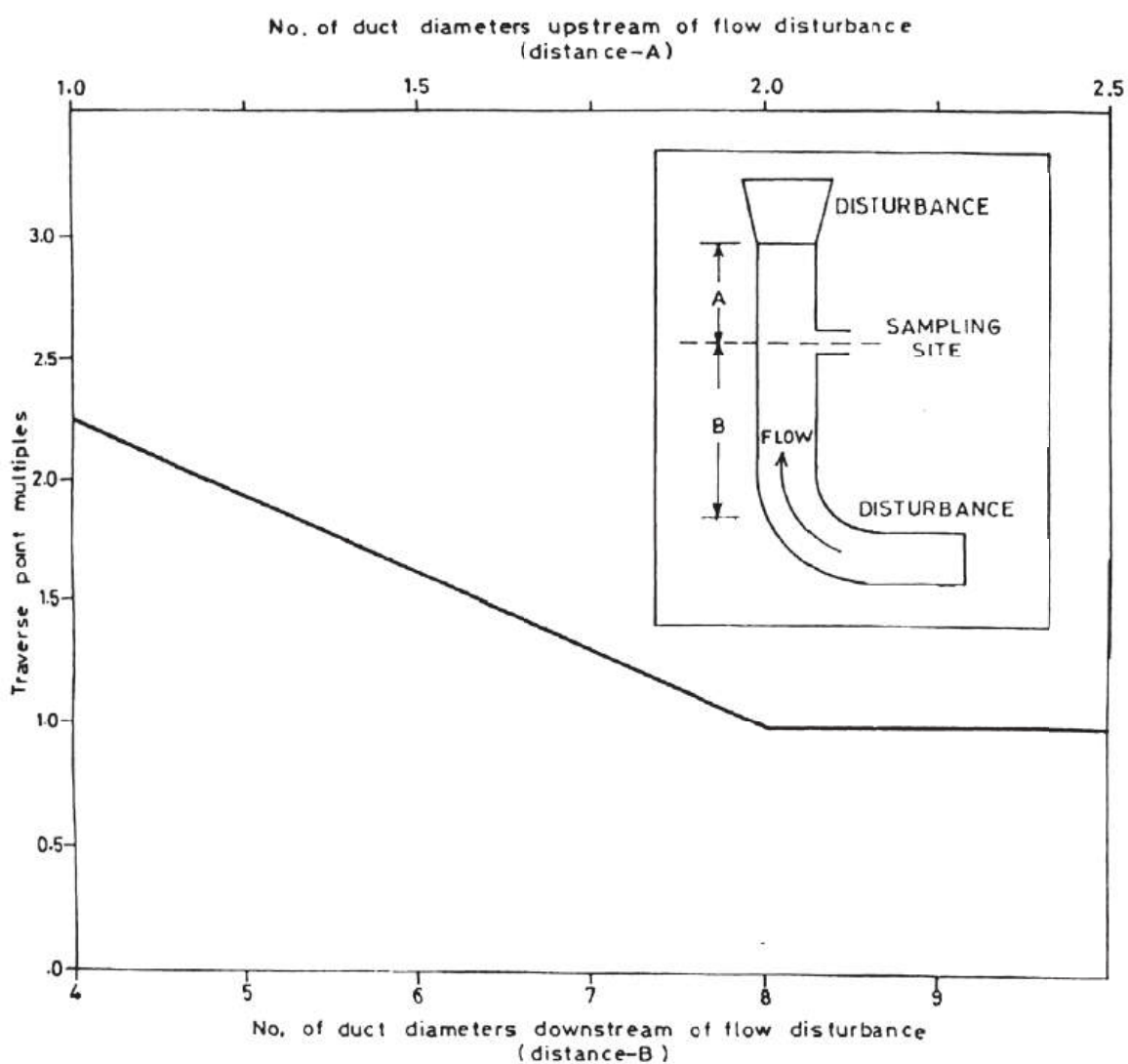
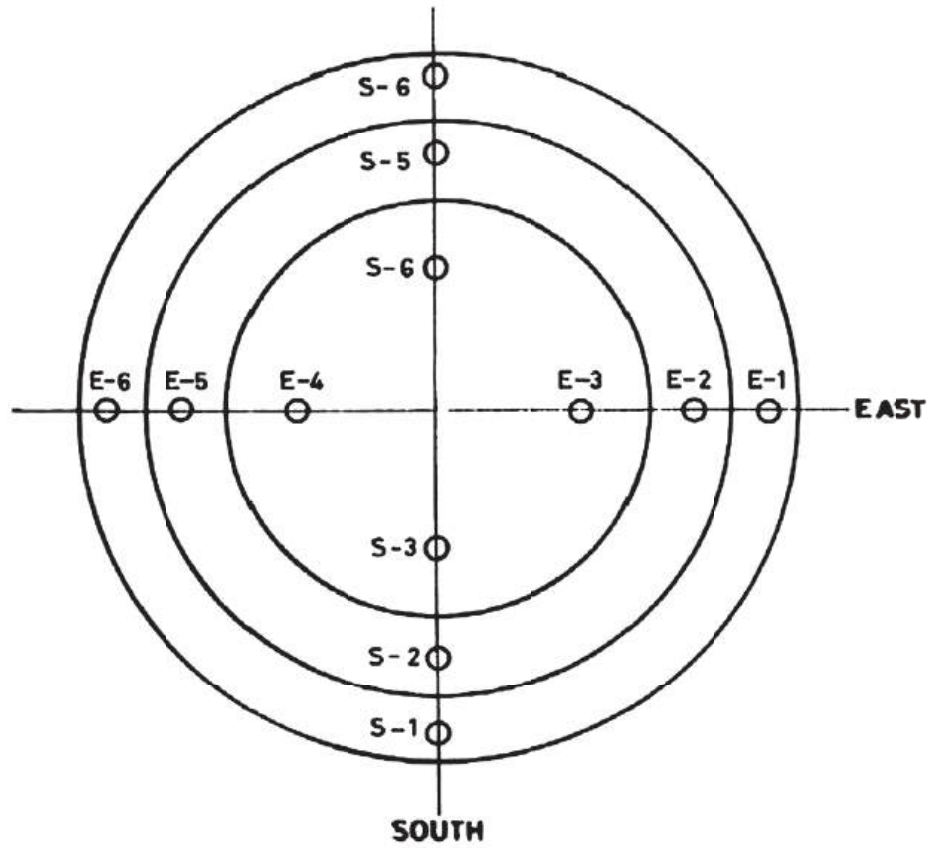


FIGURE 1.3 Travers point multiples to determine minimum number of traverse points requirement when $a < 2$ dia or $b < 8$ dia



A	A-1 ○	A-2 ○	A-3 ○	A-4 ○
B	B-1 ○	B-2 ○	B-3 ○	B-4 ○
C	C-1 ○	C-2 ○	C-3 ○	C-4 ○

FIGURE 1.4 Location of traverse points on circular and rectangular cross section divided into twelve equal areas

TABLE-1.4 Location of traverse points on diameters of cross section of circular stacks

TRAVERSE POINT NUMBER ON A DIAMETER	PERCENT OF STACK DIAMETER FROM INSIDE WALL TO TRAVERSE POINT											
	Number of traverse points on a diameter											
	2	4	6	8	10	12	14	16	18	20	22	24
1	14.6	6.7	4.4	3.3	2.5	2.1	1.8	1.6	1.4	1.3	1.1	1.1
2	85.4	25.0	14.7	10.5	8.2	6.7	5.7	4.9	4.4	3.9	3.5	3.2
3		75.0	29.5	19.4	14.6	11.8	9.9	8.5	7.5	6.7	6.0	5.5
4		93.3	70.5	32.3	22.6	17.7	14.6	12.5	10.9	9.7	8.7	7.9
5			85.3	67.7	34.2	25.0	20.1	16.9	14.6	12.9	11.6	10.5
6			95.6	80.6	65.8	35.5	26.9	22.0	18.8	16.5	14.6	13.2
7				89.5	77.4	64.5	36.6	28.3	23.6	20.4	18.0	16.1
8				96.7	85.4	75.0	63.4	37.5	29.6	25.0	21.8	19.4
9					91.8	82.3	73.1	62.5	38.2	30.6	26.1	23.0
10					97.5	88.2	79.9	71.7	61.8	38.8	31.5	27.2
11						93.3	85.4	78.0	70.4	61.2	39.3	32.3
12						97.9	90.1	83.1	76.4	69.4	60.7	39.8
13							94.3	87.5	81.2	75.0	68.5	60.2
14							98.2	91.5	85.4	79.6	73.9	67.7
15								95.1	89.1	83.5	78.2	72.8
16								98.4	92.5	87.1	82.0	77.0
17									95.6	90.3	85.4	80.6
18									98.6	93.3	88.4	83.9
19										96.1	91.3	86.8
20										98.7	94.0	89.5
21											96.5	92.1
22											98.9	94.5
23												96.8
24												98.9

1.4 Location of Sampling Port

To ensure laminar flow, sampling ports shall be located atleast 8 times chimney diameter downstream and 2 times upstream from any flow disturbance. For a rectangular cross section the equivalent diameter (De) shall be calculated by using following equation to determine up stream, downstream distances.

$$De = (2 L \times W) / (L+W)$$

Where, L = Length in m, W= width in m.

Sometimes it may so happen for existing chimneys that sufficient physical chimney height is not available for desired sampling locations. In such cases additional traverse points shall be taken as explained at section 1.3.

1.4.1 Number of sampling ports

The pitot tubes commercially available in the country generally do not exceed 2 meter in length. Any points on the horizontal cross- section of a stack (chimney) along any diameter can be measured for flow by the pitot tube, if the point is approachable. Inserted pitot tube through the sampling port (hole) for stacks with diameter less than 2m. Minimum two (mutually orthogonal) sampling ports are required in a circular chimney, so that full stack cross-sectional area can be covered for measurements. For stacks having diameter between 2 and 4 meters, two mutually orthogonal sampling ports are to be increased to four by providing additional sampling ports at diametrically opposite position, to the first two sampling ports (Fig 1.5)

1.4.2 Dimensions of sampling port

Port Type: Pitot tube, temperature and sampling probe are to be inserted together into the sampling port for monitoring purposes. Sampling port should be a standard flanged pipe of 0.10 m inside diameter (ID) with 0.15 m bolt circle diameter. An easily removable blind flange should be provided to close the port when not in use. Port Installation: Flanged pipe used as port should be installed with the interior stack wall. Port should extend outward from the exterior stack wall not less than 50 mm and not more than 200 mm only when additional length is required for gate valve installation. Ports should be installed at a height between 0.90 and 1.2 m above the floor of the working platform. Port Loading: The port installation should be capable of supporting the following loads:

Vertical shear of 91 Kg

Horizontal Shear of 23 Kg and

Radial tension of 23 Kg (along stack diameter)

1.4.3 Features of platform for stack sampling

Size and extent of platform for sampling: If two ports are required at 90 degree the work platform should serve that half of the stack circumference between the ports and extend at least 1.2 meters beyond each port. If four ports are required at 90 degree, the work platform should serve the entire circumference of the stack. Minimum platform width shall always be 1.2 meters regardless of diameter of stack and number of sampling ports. A typical platform for sampling is shown in Figure1.6.

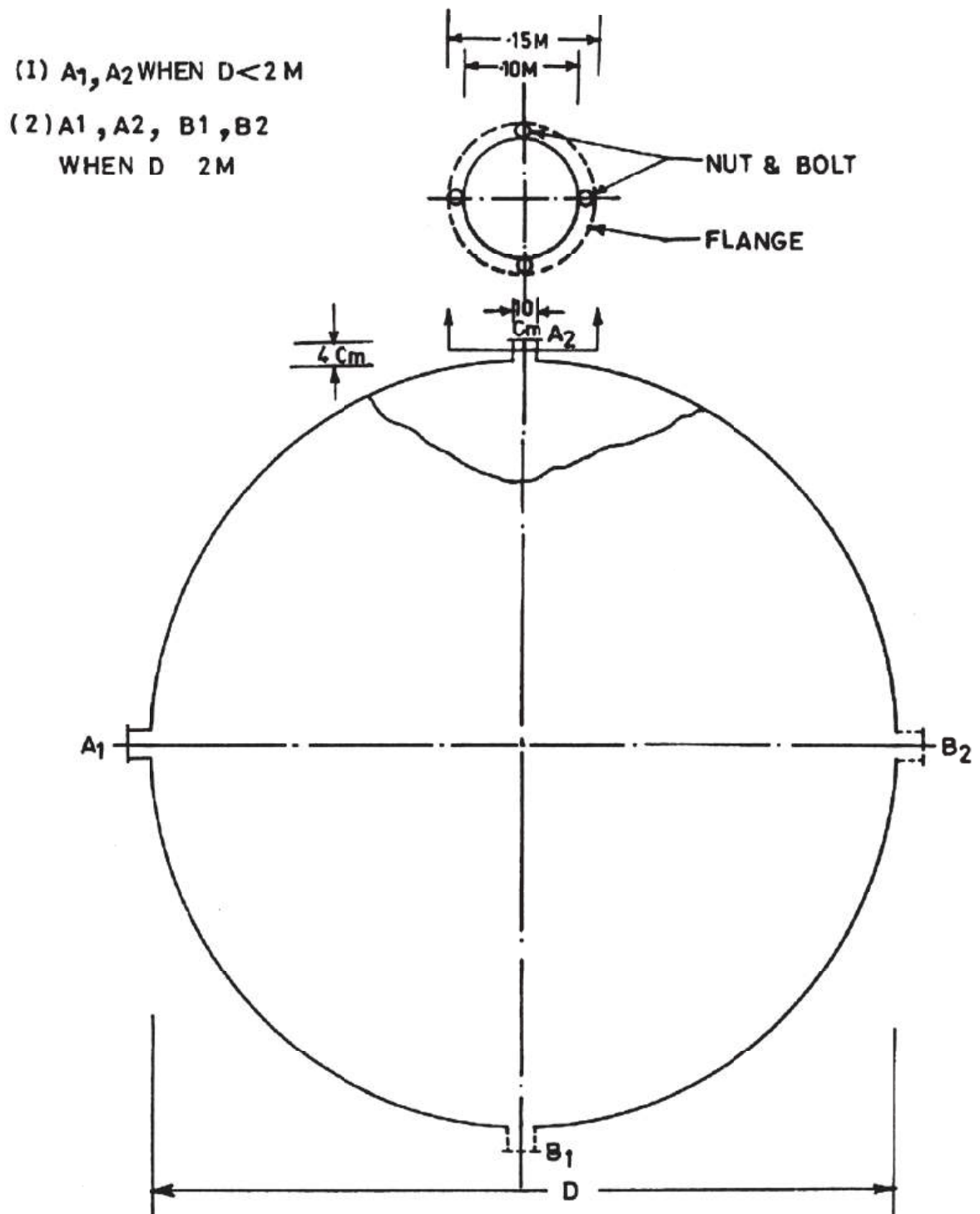


FIGURE 1.5 Position of sampling ports in a circular chimney

1.4.4 Platform access

Safe and easy access to the work platform should be provided via caged ladder, stairway, or other suitable means.

Guardrails, Ladder wells and Stairwells: A safe guardrail should be provided on the platform. Angular rail is preferable than round rail member. No ladder well, stairwell, or other such openings should be located within 1 meter of any port. Ladderwells should be covered at the platform. Any stairwell leading directly to the platform should be equipped with a safety bar at the opening.

1.4.5 Platform loading

The work platform should be able to support at least three men (Average 80 Kg each) and 91 Kg of test equipment (stack monitoring kit, etc.). If the stack exists through a building roof, the roof may suffice as the work platform, provided the minimum test sites required are complied with.

1.4.6 Clearance zone

A three- dimensional, obstruction free clearance zone should be provided around each port. The zone should extend 0.6 m above, below, to either side of the port. The zone should extend outward from the exterior wall of the stack to a distance of at least 3 meters. The clearance zone is illustrated in Figure 1.6.

1.4.7 Power Supply

Power supply shall be as follows:

- A. Platform- one 220 volts, 15 amp, single phase AC circuit with a grounded, two receptacle weatherproof outlets.
- B. Stack base- one 220 volts, 15 amp, single phase AC circuit with a grounded, two receptacle weatherproof outlet.

1.4.8 Vehicle access and parking

Except for situations in which sampling operation must be conducted from a rooftop or similar structure, stack sampling is sometimes coordinated and controlled from a monitoring van, which is usually parked near the base of the stack for the duration of the sampling period. Vehicle access and parking space must be provided, since various equipment transport lines will be strung from the monitoring van to the stack platform and will remain in position during the sampling.

1.4.9 Additional requirements

In addition to above aspects, the sampling platform, guardrails etc. should also be regularly painted and checked for corrosion. There should be no leakage around the sampling

port (specially needed for stacks emitting corrosive chemicals). If anticorrosive lining is done inside the chimney, the same should be extended to the projected portion of the sampling port, monolithically. Improper lining at the port reduces chimney life considerably. Sampling port should be air tight and moist air should not be allowed to enter the chimney

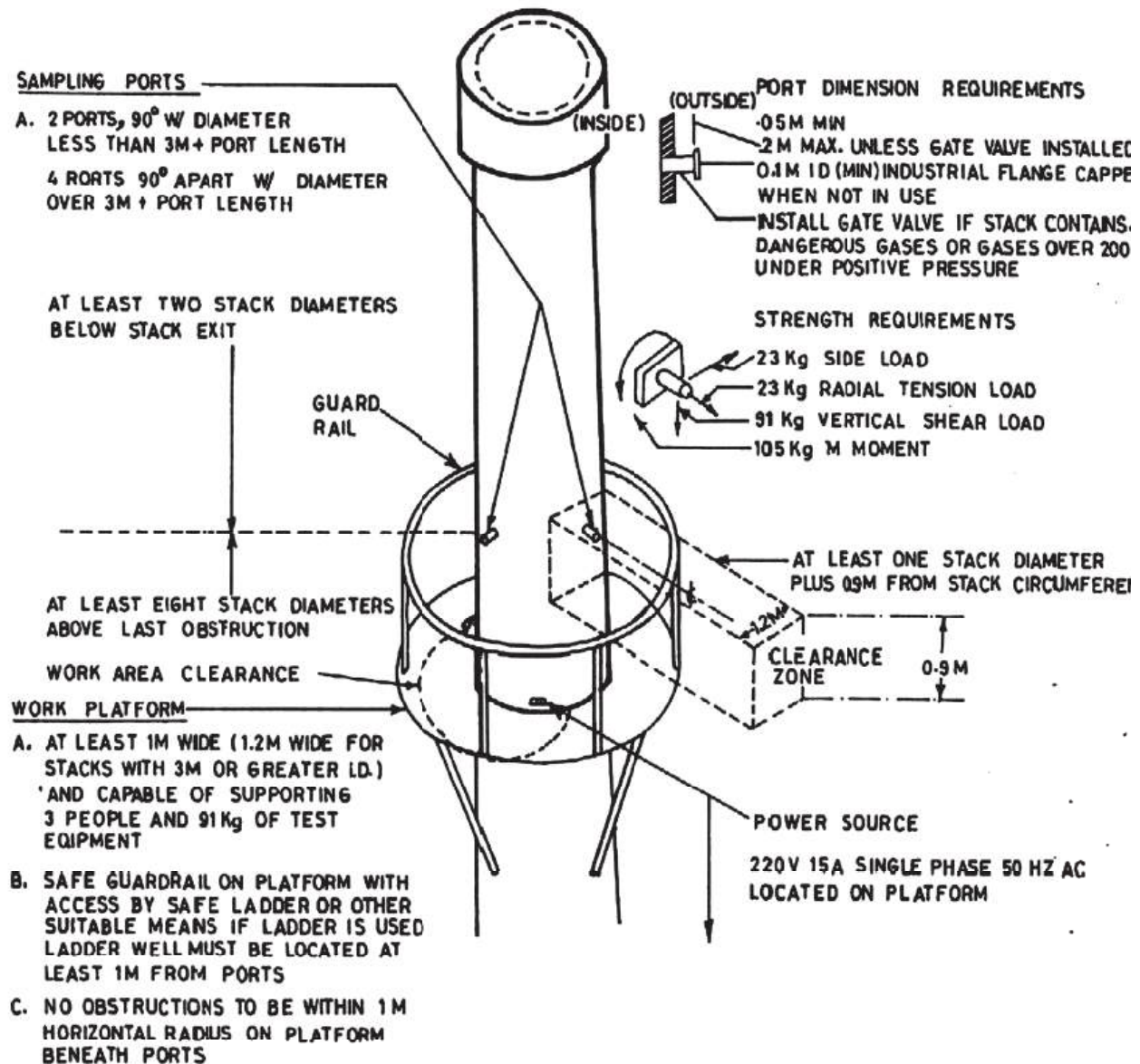


FIGURE 1.6 Typical sampling provision

2.0 REFERENCES

1. Comprehensive Industry Document Series: COINDS/ 20/ 1984 - 85, Central Pollution Control Board

Method – 1**(Part- II)****Determination of particulate matter emissions from stationary sources****1.0 PRINCIPLE**

Determination of particulate concentration consists of isokinetic sampling of a measured amount of gas from the flue gases and separating the particles from the gas and hence determining the particulate concentration. To ensure representative sample, the kinetic energy of the gas stream in the stack should be equal to kinetic energy of the gas stream through the sampling nozzle.

2.0 APPLICABILITY

This method is applicable for determination of particulate matter (PM) emissions from stationary sources. This is for sampling of particulate matter in a moving gas stream in a duct or a stack. These procedures utilize particulate filtering systems, which are located within the stack. If properly used, these systems are satisfactory for determining the mass concentration of particulate matter in the gas stream at stack condition. The use of collection systems located outside the stack for collecting samples at other than in-stack condition is an alternative.

3.0 INTERFERENCES

It has been observed that, if sampling velocity is greater than the isokinetic rate, the sampling will have a lower mass concentration of particulate material than the main stream because of greater percentage of fine particles. However, if the sampling velocity is less than the isokinetic rate, the particulate sample has a higher mass concentration than actually present, with lower concentration of fine particles.

4.0 SAMPLING

Sampling at other than isokinetic velocities induces errors for two reasons. First, sampling at greater or less than isokinetic rates tend to cause respectively a larger or a smaller volume to be withdrawn from the flue gases than accounted for by the cross section area of the probe. Secondly, particles greater than 3.5 micron in size have sufficient inertia so that particle motion may deviate significantly from the gas flow streamline pattern.

4.1 The Sampling Consists of Several Distinct Steps. Refer 1.2 of Stack monitoring – Material and Methodology for Isokinetic Sampling (Method1)**5.0 PROCEDURE FOR PARTICULATE MATTER DETERMINATION****5.1 Selection of Location of Sampling**

Sample for particulate concentration shall be done at the same traverse points where velocity measurements were carried out.

5.2 Calculation of Proper Sampling rate

The meter for measuring the gas sample measures the gas at conditions of temperature, pressure and moisture content which are different than those in the flue. Therefore, calculate the sampling rate at the gas meter for each sampling points before starting the test and record on the log the required rate (Table-2).

Calculate the sampling rate at the gas meter as follows:

$$V_v = R_s \times \frac{T_m}{T_s} \times \frac{P_{bar} - P_s}{P_{bar} - P_m} \times \frac{V_m}{V_m + V_v}$$

Where

R_m = flow rate through meter, m^3/s

R_s = Sampling rate at nozzle, LPM

T_m = Absolute temperature in metering conditions, $^{\circ}K$

T_s = Absolute stack gas temperature, $^{\circ}K$

P_s = Absolute stack gas pressure, mm mercury column

P_{bar} = Barometer pressure, mm mercury column

P_m = $(P_{m1} - P_{m0}) / 2$ Suction at meter, mm mercury column

V_m = Volume of gas sampled at meter conditions, m^3

V_v = equivalent vapour volume of condensate at meter conditions, m^3

Note: Take initial reading of vacuum gauge (P_{m0}) in mm Hg at the starting of sampling and final vacuum pressure (P_{m1}) in mm Hg just before putting off the pump, when sampling is complete. Calculate average difference in suction pressure, referred as P_m

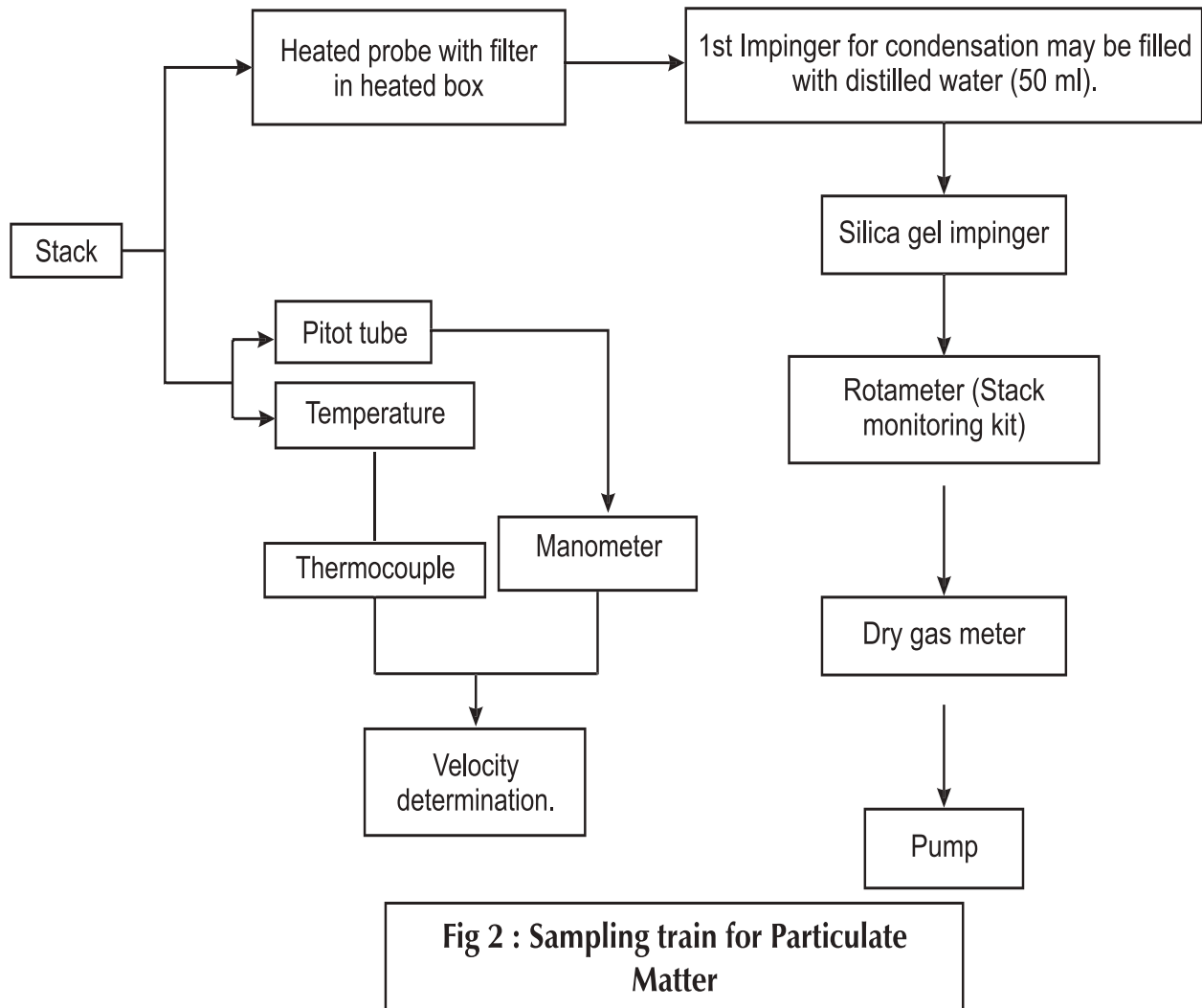
5.3 Select the nozzle size, which provide a meter-sampling rate between 40 to 60 lit / min. Charts relating sampling rate with stack and meter condition may be prepared for the range of condition expected. Duration of Sampling- Deem the run to be of sufficient length if one of the following criteria has been obtained:

- A minimum of 1 m^3 of dry gas has been withdrawn for sampling.
- The mass of particulate matter amounts to atleast 20 percent of the mass of the filtering medium in the sampler.

Experience and intelligent judgment should be applied in determining the sampling time. Too short a time, may give unreliable result and too long a time may cause the resistance of the sampling train to exceed the pump's limits.

5.4 Preparation of the Sampling Train

- After proper nozzle and filtering medium have been selected assemble the sampling train as shown in **Figure 2**
- Mark the sampling probe (including nozzle and filter holder) with the same traverse points used for conducting the velocity traverse.
- Place a clean, pre-weighted thimble/filter in the filter holder and tighten securely.
- Start the test after sampling rates have been calculated and train assembled & checked for leakages. When the equipment is ready in all respects, record the initial dry gas meter reading and push the sampling probe carefully into the duct to the point nearest to the back wall. This will allow the probe to cool in hot stack as it comes out, shortening the time required for cooling after the sample is taken. It is advisable to allow the nozzle and filter holder to preheat so that moisture present in the gases does not condense in the filter initial part of the sampling.
- When starting the test, the nozzle should be facing in the upstream direction, start operating the suction source, open the control valve and start the stop watch. Note the time and record it in the log sheet. Adjust the flow rate with the help of rotameter and control valve until the desired flow rate for isokinetic condition is obtained. As the test proceeds, dust collected in the thimble/ filter increases the amount of suction required to maintain proper meter rate. Valve should be adjusted accordingly. This suction should not exceed 150 mm of mercury for paper thimble / filter. In case it exceeds this value before the completion of sampling, replace the same with a new thimble and restart sampling. During the test, if the mercury suction pressure at the meter drops suddenly it indicates that a leak has developed in the equipment or that thimble/filter has cracked. Record the initial gas meter reading and pressure and temperature in the sampling train as well as condensor temperature at half – minute's interval during the test.
- When sampling at one point has been completed, move the sampling probe to the next point as quickly as possible. At the completion of test, close the control valve, turn the direction of the probe so that the sampling nozzle is facing down- stream and record the final gas volume and time. Remove the sampler carefully from the flue and plug the nozzle to prevent the loss of sample.



6.0 SAMPLE RECOVERY

After the sampler has cooled, brush down the dust on the inside of the nozzle carefully into the thimble using a small brush. Then, remove the thimble and place it in a dust tight container for transportation to the weighing room. In case the filter holder is kept outside during the sampling, the dust from the sampling probe before the filter holder should be brushed down into the filter.

Determine the mass of dust collected in the thimble by difference in weighing, that is, by weighing the thimble before and after the run. Dry the thimble in an oven for about 2 hours at 120 °C prior to sampling. After sampling, cool it and dry again for weighing the thimble along with dust maintaining the same condition as prior to sampling.

7.0 CALCULATIONS

Calculate the volume of gas sampled using the following equation: Volume of dry gas through the sampling train (25 °C 760 mm Hg)

$$V_{\text{std}} = V_m Y \frac{P_{\text{bar}} - P_m}{760 \text{ mm Hg}} \times \frac{273 + 25^\circ\text{C}}{T_m + 273}$$

Where

T_m = Temperature of gas at dry meter condition, $^\circ\text{C}$

V_m = Volume of gas sampled at dry gas meter conditions, m^3

$(P_{\text{bar}} - P_m)$ = Actual pressure in sampling train, mm mercury column.

P_m = Suction at meter, mm mercury column

P_{bar} = Barometric pressure in sampling train, mm mercury column.

Y = Calibration factor of dry gas meter.

7.1 Dust Concentration

Calculate the dust concentration using the following equation:

$$E_M = \frac{(W_2 - W_m) \text{ gm} \times 1000}{V_{\text{std}}}$$

Dust Concentration in mg / Nm^3 ,

(25°C , 760 mm Hg, dry basis)

Where

V_{std} = Volume of dry gas through the meter

(25°C , 760 mm Hg), Nm^3

W_1 = Initial weight of filter paper

W_2 = Final weight of filter paper

O_2 correction is only carried out, if O_2 corrections $> 11\%$. For $\text{O}_2 < 11\%$. No correction is allowed.

It's require to correct the value for the 11% O_2 by following formula

$$E_s = \frac{21 - O_s}{21 - O_m} \times E_M$$

Similarly in case of CO_2 (12%) correction

$$E_s = E_m \frac{12}{\% \text{CO}_2 \text{ observed}}$$

No correction for $\text{CO}_2 > 12\%$

E_s = calculated emission concentration at the standard percentage oxygen concentration

E_M = measured emission concentration

O_s = standard oxygen concentration

O_M = measured oxygen concentration

7.3 Emission Rate

Calculate the dust emission rate as follows:

$$\text{Dust Emission Rate} = \frac{E_M \times Q_s}{10^6}$$

Where

Q_s = flue gas flow rate (25 °C, 760 Hg mm Hg), Nm^3 / hr .

All stack emission test results shall be given in dry basis as in 7.1 above, i.e. at zero percent moisture.

Note : Report the concentration as corrected at 11% O_2

Table - 2
Field Data Sheet

Name & Address

Date & time of sampling

Ambient temperature °C

Barometric Pressure (mm mercury column)

Moisture in the flue gas (%) flue gas composition (CO₂ %, O₂ %, N₂)

Filter No and weight (Initial as well as Final)

Travers Point	ΔP (mm)	Ts (°K)	Ps	Us (m/s)	Qs (m ³ /hr)	Rs (LPM)	P _m		Rm (LPM)	Time (min)	DGM (M ³)		V _{std} (Nm ³)
							P _{m0}	P _{m1}			Initial	Final	

ΔP = Stack Gas Velocity Pressure, (mm water column), Ts = Stack temperature (°K)

Ps = Static pressure (mm water column), Us = Velocity of stack gas (m/s),

Qs = Volumetric Flow rate / discharge, Rs = Flow at nozzle (LPM),

Pm = Vacuum Pressure Drop (mm mercury column),

Rm = Determination of sampling rate at gas meter. (LPM),

Vstd = Determination of volume of gas sampled

Other required information:

- o Feed rate of hazardous waste
- o The nature, composition and quantity of the material being incinerated during monitoring
- o Installed and operating capacity of the incinerator
- o No of sampling ports
- o Internal diameter of the stack
- o Nozzle size selected for sampling
- o Pitot tube constant
- o ID fan capacity
- o Pollution control equipment installed and its status
- o House keeping

Signature of sample collector

Verified by Approved by

**Occupier/
Representative of
the incinerator facility**

8.0 REFERENCES

1. Comprehensive Industry Document Series, COINDS/ 20/ 1984 – 85, Central Pollution Control Board
2. EPA Method 5 and Method 17.

CAQM ETF Cell <caqm.etf-moefcc@gov.in >

Mon, 06 Jul 2026 12:41:43 PM +0530

To "Vishal Tripathi"<vishal.tripathi019@gov.in>

==== Forwarded message =====

From: CAQM ETF Cell <caqm.etf-moefcc@gov.in>

To: "vishaltripathi019"<vishaltripathi019@gov.in>

Date: Mon, 06 Jul 2026 12:29:23 +0530

Subject: Fwd: Re:Fwd: Seeking Clarification regarding recognition of lab

==== Forwarded message =====

==== Forwarded message =====

From: CAQM ETF Cell <caqm.etf-moefcc@gov.in>

To: "vishaltripathi019"<vishaltripathi019@gov.in>

Date: Mon, 06 Jul 2026 12:27:08 +0530

Subject: Fwd: Re:Fwd: Seeking Clarification regarding recognition of lab

==== Forwarded message =====

==== Forwarded message =====

From: YOGITA KHARAYAT <yogita.cpcb@nic.in>

To: "CPCB AQM Div"<aqm.cpcb@gov.in>, "caqmetf-moefcc"<caqm.etf-moefcc@gov.in>, "Ritesh Gurung"<rpgurung.cpcb@nic.in>, "Sahil Patel"<sahil.cpcb@gov.in>

Cc: "NAMITA MISHRA"<namita.cpcb@nic.in>, "CPCB AQM Div"<aqm.cpcb@gov.in>

Date: Fri, 03 Jul 2026 12:34:13 +0530

Subject: Re:Fwd: Seeking Clarification regarding recognition of lab

==== Forwarded message =====

Sir,

This is reference to your mail regarding the status of lab's recognition. This is to inform you that the Said lab is not recognised under the EP Ac, 1986.

Thanks & regards

Dr Yogita Kharayat

Scientist D

CPCB, Delhi

From: CPCB AQM Div <aqm.cpcb@gov.in>
To: "YOGITA KHARAYAT" <yogita.cpcb@nic.in>
Cc: "NAMITA MISHRA" <namita.cpcb@nic.in>
Date: Fri, 03 Jul 2026 12:17:34 +0530
Subject: Fwd: Seeking Clarification regarding recognition of lab

137

95

Regards,
PA to Head-AQM,
Central Pollution Control Board
Ministry of Environment, Forest and Climate Change

===== Forwarded message =====
From: CAQM ETF Cell <caqm.etf-moefcc@gov.in>
To: "namitacpcb" <namita.cpcb@nic.in>
Cc: "CPCB AQM Div" <aqm.cpcb@gov.in>, "Ritesh Gurung" <rpgurung.cpcb@nic.in>, "Sahil Patel" <sahil.cpcb@gov.in>
Date: Fri, 03 Jul 2026 11:39:49 +0530
Subject: Seeking Clarification regarding recognition of lab
===== Forwarded message =====

Madam/Sir,

It is requested to kindly clarify whether " **Spectra Testing Labs (OPC) Private Limited, Plot no. 2/2, Surya Vihar, Part -2, Agwanpur, Sector-91, Faridabad**" is recognized lab under EP Act or not.

This is related to a case challenged before Hon'ble NGT and proponent has submitted a stack emission test report from aforesaid laboratory.

Therefore, the matter may be accorded top priority.

Regards,

ETF Cell, CAQM

CENTRAL POLLUTION CONTROL BOARD

Delhi-110032

Email: pcissidivision7@gmail.com; Tel: 011 22305923**Development of Environmental Standards and Guidelines for Hot Mix Plants****1. Introduction**

Hot Mix Plants are used for mixing of stone aggregates with bitumen for the construction of roads. A hot mix plant usually comprises of aggregate bins, feeder, weighting system, drying drum, bitumen and fuel storage tanks, air pollution control devices, hot mix storage silo, and loading facility. These plants are installed near construction site and highways, and operate for such time till the construction work continues. Hence, many hot mix plants are not of permanent nature. Due to the impermanent nature of these plants, it is not possible to know the precise numbers/location of the Units. However, efforts have been made to collect information about the hot mix plants from State Pollution Control Boards/Pollution Control Committees and some highways construction companies. As per the information so collected, there are 577 numbers of hot mix plants in the country.

There are no specific standards for hot mix plants at present at national level. Hence, the Central Pollution Control Board (CPCB) conducted a scientific study through the National Productivity Council (NPC) to formulate the environmental standards and guidelines.

2. Methodology

Data/information was generated from literature survey, questionnaire responses, preliminary field study and detailed studies including stack emission monitoring. Based on data, profile of the sector and compilation of best practices were made. Standards are proposed based on gravity of environmental concerns, availability of treatment technologies and cost aspect. For prevention and control of pollution, guidelines are also proposed for this sector.

3. Classification

Hot Mix Plants can be classified based on technology adopted in the plant such as batch hot mix plant or drum hot mix plant. The drum type of plants operates either on parallel flow or counter flow of material and hot gases. The hot mix plants can also be classified on the basis of scale of operation viz. small, medium and large. Based on mobility, the plants can be of permanent type of hot mix plants. This type of hot mix plants are stationed at one place and generally have high capacity. Skid mounted or portable hot mix plants, are usually small capacity plants. The criteria classification is given in Table 1.

Table 1: Classification of hot mix plants

S.No.	Criteria	Classification
1	Technology	Batch hot mix plants

		Drum hot mix plants: Parallel flow drum hot mix plants; and Counter flow drum hot mix plants
2	Mobility	Permanent type hot mix plants Skid mounted or Portable hot mix plants
3	Scale of operation	Small (≤ 60 tph) Medium (≤ 100 tph) Large (> 100 tph)

4. Production Process

The main process in the hot mix plants involves preparation of a mixture of stone aggregates and liquid asphalt/bitumen (a product of crude oil distillation). The mixture of stone aggregates is first prepared in desired proportion and heated for drying. The dried mix is brought in contact with hot asphalt/bitumen liquid spray. This process facilitates the coating of the aggregates with a sticky layer of asphalt. The temperature of the mix is maintained about 155 °C. The mix so prepared contains approximately 95% aggregates and 5% asphalt. However, the temperature of mix and ratio of stone aggregates and coarse sand to the bitumen quantity depend on the individual mix requirements suitable to be used for different types of layers and quality of road construction. The hot mix produced by plant is loaded directly in trucks while it is hot and transported to the site of construction and applied in hot condition. Hence, the hot mix plants have to be set up near the construction site.

The plant operation is monitored from the control cabin. The level of automation and electronic control varies from plant to plant. Small plants are operated through simple control mechanism. A fully computerized process control can monitor burner operation, fuel consumption, air, flow and finished mix.

5. Environmental Problems

Preparation of bitumen mix in hot mix plants generates emissions containing particulate matter as well as gaseous pollutants. The primary emission sources in plants are burning of fuel for preparation of bitumen mix, which emit particulate matter (PM) and gaseous pollutants like SO₂, NO_x, CO, CO₂, VOCs etc. Other emission sources found at hot mix plants include handling of aggregates, movement of vehicles and heating of bitumen that emit fugitive emissions. Emissions also result from vehicular traffic on paved or unpaved roads, aggregate storage and handling operations and vehicle exhaust.

6. Pollution Control Measures

The hot mix plants generally have wet scrubber, dual cyclone, multi-cyclone and bag filters as air pollution control measures. These measures are used as single or combination of more than one measures. Stacks heights provided in hot mix plants were observed as 6 to 18 m.

7. Emission Monitoring

Based on the information collected from preliminary field visits and questionnaire survey, 15 Nos. of hot mix plant with different type and size were selected to carry out emission monitoring as shown in Table 2. . Of these, 9 plants are batch type hot mix plants and the remaining 6 are drum type hot mix plants. It can be noticed that all the batch type plants are large Units. The drum type hot mix plants are small as well as medium but not of large scale. The results of stack monitoring are given in Table 2.

Table 2: Stack monitoring results

Table 2: Stack monitoring results						
S. No.	Code of the Unit	Production capacity (tph)	Control measures	Stack emission monitoring results		
				PM (mg/Nm ³)	SO ₂ (mg/Nm ³)	NO ₂ (mg/Nm ³)
<i>Batch type hot mix plants</i>						
1	HMP -4	128	Dual cyclone & bag filter	124	116	93
2	HMP -5	128	Dual cyclone & Bag filter	102	122	767
3	HMP -6	128	Dual cyclone & filter	112	137	83
4	HMP -7	128	Dual cyclone & Bag filter	182	257	143
5	HMP -9	200	Bag filter	99	214	118
6	HMP-11	160	Bag filter	131	151	83
7	HMP -12	100	Bag filter	126	225	209
8	HMP -13	160	Dual cyclone & Bag filter	130	157	87
9	HMP -14	160	Bag house	143	139	89
<i>Drum type hot mix plants</i>						
10	HMP -1	60	Multicyclone & scrubber	306	217	129
11	HMP -2	90	Multicyclone & scrubber	238	158	215
12	HMP -3	90	Multicyclone & scrubber	409	205	133
13	HMP -8	35	Multicyclone & scrubber	317	208	119
14	HMP -10	60	Multicyclone & scrubber	84	115	79
15	HMP -15	90	Multicyclone & scrubber	266	191	108

8. Formulation of Proposed Standards

The environmental standards and guidelines are intended to ensure abatement and control of pollution. The main environmental parameters are particulate matter (PM), SO₂ and NO_x. Water pollution is not a issue for the hot mix plants.

It can be noticed from Table 2 that PM concentration for batch type of hot mix plants is in the range of 99-182 mg/Nm³ with average of 128 mg/Nm³. The PM concentration is less than 150 mg/Nm³ in all batch type plant except one Unit (HMP-7). The batch hot mix plants have adopted bag filters or dual cyclone and bag filters that are capable of reducing the PM level in stack emissions. The Unit (HMP-7) can minimize the PM level by proper maintenance of control measures and possible for this Unit too to achieve PM level of 150 mg/Nm³ and this limit is proposed as standard for batch hot mix plants.

PM concentration for drum type hot mix plants was found as low as 84 mg/Nm³ in one plant (HMP-10) and as high as 409 mg/Nm³ in other plant (HMP-3). Barring these extreme values, the average of the remaining values is 282 mg/Nm³. It is to be noted that drum type hot mix plants are mostly in small/medium scale Units and provided multiclone with scrubber. In view of this, it could be inferred that with proper operation and maintenance of control measures, it is possible to achieve PM concentration of 300 mg/Nm³ by all the drum type hot mix plants. This value is proposed as standard for drum type hot mix plants.

SO₂ concentration is varying from 116 to 257 mg/Nm³ in batch type hot mix plants and from 115 to 217 mg/Nm³ in drum type hot mix plants. The NO_x values were observed as 77-209 mg/Nm³ in batch type hot mix plants and 79-129 mg/Nm³ in drum hot mix plants. It can be noticed that emission level of SO₂ and NO_x are low. However, considering the recent directions from the Hon'ble Supreme Court on different polluting Units, standard of SO₂ is proposed as 250 mg/Nm³ for both types of hot mix plants. Limit for NO_x is proposed as 200 mg/Nm³ for both type of Units. A summary of the proposed standards is given in Table 3.

Table 3: Summary of standards for hot mix plants

S.No.	Type of hot mix plant	Particulate matter (PM), mg/Nm ³	SO ₂ , mg/Nm ³	NO _x ,
1.	Batch type hot mix plant	150	250	200
2.	Drum type hot mix plant	300	250	200

9. Proposed Guidelines

- (a) The hot mix plants should be set as per the siting criteria given in Table 4.

Table 4: Siting criteria for hot mix plants

S. No.	Entity	Minimum distance from the entity (m)
1	Approved habitation, tourist places,	1 to 2 depending local condition

	schools, hospitals, sports centres etc.	
2	Sensitive areas, national monuments and bird sanctuaries	2 to 5 depending upon buffer zone and available green belt

- (b) In case of existing hot mix plants not meeting above siting criteria, the Unit should provide minimum 6 m high compound wall of GI sheets along plot periphery.
- (c) The emission monitoring results shown that batch hot mix plants are less polluting and hence, the new hot mix plants based on batch process should be encouraged.
- (d) Stack height should provide sufficient dispersion of the emissions to keep ambient emission levels within acceptable limits. Generally, the height of a stack varies with the design of hot mix plant and supplier. In general, the effective stake height should vary between 10 to 25 m as may be prescribed by SPCBs/PCCs.
- (e) It was found that no waste water was generated from the process. A practice of recycling of scrubbing water should be followed.
- (g) The hot mix plant should be equipped with appropriate air pollution control devices such as cyclone multi-clones and bag filter/ scrubber and properly maintained so as to ensure optimum efficiency to achieve the standards.
- (h) Measures such as installation of water sprinklers at points of dust emission within premises should be provided. The internal roads, working platform, loading and unloading areas should be paved or concreted and kept clean all times.
- (i) Any process rejects or left over of hot mix should be recycled in the process.

(xiii) हॉट मिक्स संयंत्र नीचे उल्लिखित उपयुक्त वायु प्रदूषण नियंत्रण उपकरणों से युक्त होने चाहिए ताकि मानकों को प्राप्त करने के लिए इष्टतम दक्षता सुनिश्चित की जा सके :

क. ड्रम के प्रकार: वेट स्क़बर सहित साइक्लोन/मल्टी-क्लोन

ख. बैच के प्रकार: बैग फिल्टर्स सहित मल्टी-क्लोन

[फा. सं. क्यू-15017/14/2018-सीपीडब्ल्यू]

नरेश पाल गंगवार, अपर सचिव

टिप्पणी : मूल नियम, भारत के राजपत्र, असाधारण, भाग II, खंड 3, उपखंड (i) में तारीख 19 नवंबर, 1986 द्वारा प्रकाशित किए गए थे और अधिसूचना संख्या सा.का.नि. 373(अ), 16 मई, 2023 द्वारा अंतिम बार संशोधित किए गए।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 18th May, 2023

G.S.R. 376(E).—Whereas, certain draft rules, namely the Environment (Protection) Amendment Rules, 2022 were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i) as required under sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, *vide* notification of the Government of India, Ministry of Environment, Forest and Climate Change, number G.S.R. 805 (E), dated the 04th November, 2022, inviting objections or suggestions from any person likely to be affected thereby within a period of sixty days from the date on which copies of the Gazette containing the said notification were made available to the public;

And whereas, copies of the Gazette containing the aforesaid notification were made available to the public on the 07th November, 2022;

Now, therefore, in exercise of the powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely: -

1. Short title and commencement.—(1) These rules may be called the Environment (Protection) Second Amendment Rules, 2023.

(2) They shall come into force on expiry of period of six months from the date of publication of this notification in the Official Gazette.

2. In the Environment (Protection) Rules, 1986, in Schedule-I, after serial number 115 and the entries relating thereto, the following serial number and entries shall be inserted, namely: -

Sl. No.	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
“116	Hot Mix Plant	Particulate Matter Concentration (mg/Nm ³) in stack emission	
		Batch type Hot Mix Plant	150
		Drum type Hot Mix Plant	300

Notes:

- The minimum stack height for Hot Mix Plant shall be calculated as: Stack height (H_s) = $14(Q)^{0.3}$, where, Q is the SO₂ emission rate in kg/hr.
- Only approved fuel as specified by State Pollution Control Boards or Pollution Control Committees shall be used.

- (iii) Dust emission from material handling shall be contained with water sprinkling or by covering the points of dust emission.
- (iv) The internal roads, working platform, loading and unloading areas in premises should be paved and kept clean all times.
- (v) Provisions of the Noise Pollution (Regulation and Control) Rules, 2000 shall be followed and workers shall be provided with personal protective equipments.
- (vi) The green belt shall be developed along the periphery.
- (vii) Use of Recycled Asphalt Pavement (RSP) shall be allowed in the aggregates.
- (viii) Any process rejects or left over of the hot mix shall be recycled in the process.
- (ix) The site shall be reinstated at the end of operation phase i.e. after dismantling the plant.
- (x) State Pollution Control Boards or Pollution Control Committees may decide the size and capacity to permit hot mix plants based on available technology and prevailing environmental conditions.
- (xi) The Hot Mix Plant shall be installed from the following siting criteria, namely:-
 - (a) 1 km from boundary of cities and towns;
 - (b) 0.5 km from habitation;
 - (c) 0.2 km from National or State Highways (from Centre Line);
 - (d) 0.5 km from Schools or Colleges and temples;
 - (e) 1 km from Hospital, court and tourist spot.
- (xii) In case existing hot mix plants are not able to meet above siting criteria at para (xi) above, the unit may be allowed with the condition that minimum 6 metre high compound wall of GI sheets along plot periphery shall be installed.
- (xiii) The hot mix plant shall be equipped with appropriate air pollution control devices as mentioned below so as to ensure optimum efficiency to achieve the standards, namely:-
 - (a) Drum Type: Cyclone or multi-clones with wet scrubber;
 - (b) Batch Type: Multi-clones with bag filters.

[F. No. Q-15017/14/2018–CPW]

NARESH PAL GANGWAR, Addl. Secy.

Note : The principle rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), *vide* number S.O. 844 (E) dated the 19th November 1986 and last amended, *vide* notification number G.S.R. 373(E) dated the 16th May 2023.



राष्ट्रीय राजधानी क्षेत्र और निकटवर्ती क्षेत्र
वायु गुणवत्ता प्रबंधन आयोग
Commission for Air Quality Management in
National Capital Region and
Adjoining Areas



F. No. 16014/ 13/ 2026/ MERD / 891 / IP/9228-9229

3rd July, 2026

To,

M/s Ruhil Infra Projects Pvt. Ltd.,
Khasra No. 20/14/3, 15/1/3, 16/2/17, 24/1/2, 22/4/1/1/2,
Village- Dehkora, Bhadurgarh,
Jhajjar, Haryana.

Subject: Review of Closure Direction No. 891/ IP, dated 22.05.2026

Apropos subject closure Direction No.891/IP dated 22.05.2026, M/s Ruhil Infra Project Pvt. Ltd., Khasra No. 20/14/3, 15/1/3, 16/2/17, 24/1/2, 22/4/1/1/2, village-Dehkora, Bhadurgarh, Jhajjar, Haryana was directed to close down all operations in their Unit, based on the inspection report dated 09.05.2026 submitted by flying Squad constituted by the Commission, wherein, it was reported that the unit is having a hot mix plant and as per the video graphic evidence significant visible thick smoke emission was continuously observed over a sustained period indicating persistent non-compliance with the prescribed emission norms. Further, the unit failed to submit the latest stack emission monitoring report at the time inspection. Additional, a non-compliant DG Set of 125 KVA capacity was found installed at the Unit premise, in violation of Direction No. 76.

2. Subsequently M/s Ruhil Infra Project Pvt. Ltd had filed an Appeal No. 72/2026 before Hon'ble National Green Tribunal challenging the aforesaid Closure Direction No.891/IP dated 22.05.2026. During the course of hearing before Hon'ble Tribunal on 29.05.2026 it was directed that *"In the meanwhile, it will be open to the appellant to comply with paragraph 6 of the impugned order in order to resume the operation of the industry."*

3. In compliance to the above said direction, the representation dated 15.06.2026 seeking withdrawal/revocation of closure direction and

permission for resumption of operation of M/s Ruhil Infra Project Pvt. Ltd. received from the project proponent. The submissions made by the project proponent include:

- i. The unit has a valid CTO issued by the HSPCB valid upto 31.03.2030 and has installed APCD and operates using approved fuel (LSHS). Further, scrubbing arrangements have also been provided in the flue gas pipe to control emission.
 - ii. The unit owned and operated a complaint DG Set equipped with the requisite emission control arrangements. However, owing to repair and maintenance requirements, the said DG Set had been sent for servicing immediately prior to the inspection. During the intervening period and solely to avoid disruption of ongoing plant operations, a DG Set was arranged on temporary rental basis. The project proponent now installed a new CPCB-IV DG Set, compliant with the applicable environmental norms.
 - iii. The project proponent also submitted that valid stack Emission Monitoring Report were available and the emissions from the Hot Mix Plant have consistently remained within the prescribed limits.
4. In addition to the representation dated 15.06.2026, the project proponent also submitted the affidavit dated 15.06.2026; wherein, it has been submitted that the project proponent had received the closure Direction No.891/IP dated 22.05.2026 and immediately closed down all operations and activities of the hot Mix Plant and electricity connection of the unit was also disconnected. Further, in addition to the submission made in aforesaid representation dated 15.06.2026, the project proponent further undertakes to submit reports from an authorized/accredited laboratory regarding compliance of emission standards within 15 days from the date of resumption of operations permitted by the Commission. It has also been submitted by the project proponent that Environmental Compensation, if imposed by the HSPCB in respect of the violations mentioned in the Closure Direction, the project proponent shall deposit the same in accordance with the directions issued by the competent authority.



5. Upon examination the submissions made by the project proponent and the material available on record, following has emerged:

A. The Hot Mix plants are treated as hazardous Industries. The fuel used by the project proponent unit i.e., "Low Sulphur Fuels" namely LSHS is unapproved fuel for hot mix plant as per the Direction No.65 dated 23.06.2022 (as amended time to time) issued by the Commission, LSHS fuel is permitted only for the industrial purposes in metal smelting/melting/ refining/heating furnaces and kilns that too with stricter emission standards as stipulated by the Commission in its Direction No. 64 dated 02.06.2022 and not for the Hot mix plants as used by the unit of the project proponent.

B. It is pertinent to state here that Haryana State Pollution Control Board (HSPCB) has permitted LSHS as fuel in the CTO granted to the Unit. Such permission is wholly contrary to the Directions issued by the Commission. The Directions issued by the Commission under the applicable statutory framework have overriding effect and are binding on all concerned authorities, including the HSPCB. Consequently, HSPCB could not have authorized the use of LSHS in the CTO in derogation of the Commission's Directions. Any condition incorporated in the CTO permitting the use of LSHS, being inconsistent with and contrary to the binding Directions of the Commission, cannot confer any legal right upon the Project Proponent, nor can it dilute or override the Commission's Directions. To that extent, the CTO is liable to be treated as without jurisdiction and legally unsustainable and such permission is liable to be held invalid in law.

C. The above position also stands reinforced by the Commission's communication dated 10.06.2026, whereby the HSPCB was informed that it had been noticed that, in certain cases, Consents to Operate had been granted to Hot Mix Plants permitting the use of LSHS as fuel. The Commission accordingly directed the HSPCB to review all such Consents and suitably amend the same so as to bring them in conformity with the Directions issued by the Commission.

D. With regard to the provision for monitoring of source emission/ stack emission, the flying squad vide email dated 25.06.2026 clarified

that the stack monitoring arrangements/platform has not been provided at the Unit. Photographic evidence substantiating the statement has also been provided. It is significant to mention here that as per clause 1.4.1, 1.4.2, 1.4.3, 1.4.4. of the "Guidelines on Methodologies for Source Emission Monitoring" issued by the CPCB, a working platform is required for stack sampling, the said guideline specify the minimum platform width shall always be 1.2 meters. In the absence of such mandatory sampling infrastructure, valid stack sampling could not have been undertaken in accordance with the prescribed methodology, rendering the authenticity and reliability of the stack emission monitoring reports highly doubtful.

E. It is further pertinent to note that under Section 12 of the Environment (Protection) Act, 1986, only those laboratories or institutes recognised by the Central Government as Environmental Laboratories are authorised to perform the functions entrusted under the Act. In the present case, the stack emission monitoring reports relied upon by the Project Proponent have been issued by Spectra Testing Labs Private Limited, which, although NABL accredited, is not recognised as an Environmental Laboratory under Section 12 of the Act. Mere NABL accreditation cannot substitute the statutory recognition contemplated under the Environment (Protection) Act, 1986. Significantly, even the affidavit filed by the Project Proponent states that fresh stack emission monitoring reports from an authorised/accredited laboratory would be submitted after resumption of operations. This itself demonstrates that the Project Proponent does not place complete reliance upon the reports presently produced, thereby further diminishing their evidentiary value.

F. The inspection report dated 09.05.2026 records that the unit has provided only a water scrubbing arrangement connected to the vent and stack of the Hot Mix Plant. LSHS, being a residual petroleum fuel with relatively high sulphur and particulate content, requires robust air pollution control systems to effectively control emissions. However, the inspection does not indicate the installation of the requisite pollution control equipment prescribed for Hot Mix Plants.

G. Further as per "Development of environmental standards and guidelines for hot mix plant" issued by CPCB clearly stated that *"the hot mix plant should be equipped with appropriate air pollution control devices such as cyclone multi-clones and bag filter/ scrubber and properly maintained so as to ensure optimum efficiency to achieve the standards. Measures such as installation of water sprinklers at points of dust emission within premises should be provided. The internal roads, working platform, loading and unloading areas should be paved or concreted and kept clean all times."*

H. Further, the MoEFCC while issuing emission standards for hot mix plant vide notification dated 18.05.2023 has also mandated that:

(xiii) *The hot mix plant shall be equipped with appropriate air pollution control devices as mentioned below so as to ensure optimum efficiency to achieve the standards, namely:-*

(a) Drum Type: Cyclone or multi-clones with wet scrubber;

(b) Batch Type: Multi-clones with bag filters."

6. In view of the foregoing, it is pertinent to note that Clause 6 of the Closure Direction, read with the Guidelines issued by the Commission for resumption of operations of closed units, mandates that the unit shall undertake appropriate corrective and preventive measures to address the violations/non-compliances recorded in the Closure Direction. Such measures are required to be duly verified by the HSPCB. Further, appropriate Environmental Compensation is required to be deposited by the unit as a mandatory pre-condition.

7. In light of the above, the Commission is of the considered view that the corrective and preventive measures claimed to have been undertaken by the unit are neither satisfactory nor sufficient to address the violations recorded in the Closure Direction. The inspection report and videographic evidence, clearly indicate that the Air Pollution Control Device (APCD) installed at the Hot Mix Plant was inadequate and incapable of effectively controlling emissions, as evidenced by the continuous emission of visible black smoke from the stack, indicating incomplete combustion and ineffective pollution control. The unit has also failed to demonstrate that it is equipped with the requisite air pollution control systems, including cyclone/multi-cyclones and

bag filters/scrubbers and properly maintained so as to ensure optimum efficiency to achieve the standards as mentioned in the aforesaid guideline.

8. Further, the stack emission monitoring reports relied upon by the unit do not constitute reliable or credible evidence of compliance. The unit did not have the mandatory stack sampling platform and sampling ports/facilities as prescribed under the CPCB Guidelines, thereby rendering the sampling methodology and the reported results unreliable. Moreover, the reports have been issued by a laboratory which is not recognised as an Environmental Laboratory under Section 12 of the Environment (Protection) Act, 1986 and therefore, cannot be accepted for establishing compliance with the prescribed emission standards. It is also an admitted position that the unit has not deposited the Environmental Compensation.

9. In the absence of compliance with aforesaid essential pre-condition, the request for revocation of the Closure Direction/ resumption of operation of the unit is premature and not maintainable. Accordingly, the Commission finds no justification to review the Closure Direction or permit the resumption of operations by the unit at this stage.

10. This issues with the approval of Competent Authority.


03/7/26
(Gyanendra Yadav)
Under Secretary

Copy to:

Member Secretary, HSPCB: with direction to submit action taken report in respect of this office letter dated 10.06.2026 (copy enclosed).