S.L. No. 1725

BEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA
IN
Original Application No. 19/2025/EZ

IN THE MATTER OF:

Shukadev Mohanty

Applicant(s)

Vs.

Govt. of Odisha & Ors.

Respondent(s)

INDEX

Sl. No.	Particulars	Annexures	Page No.
1.	Reply on behalf of Respondent No. 07 i.e. Central Pollution Control Board.		9-15
2.	CPCB guidelines for setting up of new petrol pumps dated 07.01.2020	Annexure I	11-16
3.	Standard Operating Procedure (SOP) for Petrol Depots.	Annexure II	17-37

Mrinal Kanti Biswas
Regional Director & Scientist E,
CPCB, Kolkata
Filed through

Counsel

Dated:____,2025
Place: Kolkata

NOTARY
SUMITRA BHATTACHARYYA
City Civil Court
Calcutta
Regn. No. 065 of 2022
Expiry Date: 1.4.2027
Govt. of West Bengal

08 APR 2025

BEFORE THE NATIONAL GREEN TRIBUNAL

EASTERN ZONE BENCH, KOLKATA

IN

Original Application No. 19 of 2025

IN THE MATTER OF:

Shukadev Mohanty

...Applicant(s)

Versus

State of Odisha & Ors.

...Respondent(s)

REPLY ON BEHALF OF THE RESPONDENT No. 7 i.e. CENTRAL POLLUTION CONTROL BOARD (CPCB)

PRELIMINARY SUBMISSIONS:

1. That, Hon'ble National Green Tribunal vide order dated 11.02.2025 passed in the instant matter has sought the reply of Central Pollution Control Board (hereinafter called as 'CPCB') in the instant matter. Thereby, the reply is made in succeeding paragraphs.
2. That at the outset, the answering Respondent denies all claims, contentions, allegations and averments against this answering Respondent i.e. CPCB in the above Original Application contrary to anything stated or submitted in this reply. Nothing in the Original Application may be deemed to have been accepted or admitted by the answering Respondent for want of a specific denial, save any averment which has been expressly admitted hereinafter.
3. That, CPCB is a Statutory Board constituted under Section 3 of the Water (Prevention and Control of pollution) Act, 1974. It performs the functions under the Water (Prevention and Control of pollution) Act, 1974 along with the Air (Prevention and Control of pollution) Act, 1981 and the Environment (Protection) Act, 1986.
4. That the instant application has been registered by the petitioner being aggrieved by the proposed site for a 'Compressed Natural Gas (CNG) and Piped Natural Gas (PNG) station' (hereinafter referred to as 'CNG/PNG station') being established in close proximity to his residence at Chandrasekharpur Mouza in the Bhubaneswar Municipal Corporation Area.
5. At the outset, it is humbly submitted that CPCB had issued guidelines for setting up of new petrol pumps on 07.01.2020 in compliance to the

directions of the Hon'ble National Green Tribunal in OA No. 86/2019 Gyanprakash @ Pappu Singh vs UoI & Others. The guidelines prescribe pollution prevention and control measures for petrol pumps, besides siting criteria for setting up of a petrol pump with respect to schools, hospitals (10 beds and above) and residential areas designated as per the local laws. It is submitted that the said guidelines are not applicable to CNG or PNG stations.

It is further submitted that the expert committee which was involved in formulating guidelines for setting up of new petrol pumps had also deliberated on the matter of environmental guidelines for new CNG retail outlets/dispensing stations. The Committee had noted that fugitive methane emissions from CNG stations are minor, compared to the volume of CNG transported across India, and that leakages are important from safety point of view, and these are taken care of under technical and safety guidelines/standards/regulations, prescribed by Petroleum and Natural Gas Regulatory Board (PNGRB), Petroleum and Explosives Safety Organisation (PESO), Oil Industry Safety Directorate (OISD) and other statutory bodies. It is submitted that committee had concluded, that additional environmental guidelines may not be required for new CNG retail outlets/dispensing stations, however, measures prescribed with respect to fire, safety and leakages by various authorities should be strictly adhered to.

PARA-WISE REPLY:

6. With reference to averment made in paragraph no. 1 of Original Application regarding alleged violations during setup of the aforementioned CNG/PNG station, it is respectfully submitted that this answering Respondent reiterates the submission made in paragraph no. 5 of this Reply.
7. That no comments are offered by this answering respondent over the averment made in paragraph no. 2 of Original Application regarding the location of CNG station.
8. That no comments are offered by this answering respondent over the averment made in paragraph no. 3 of Original Application wherein the applicant has defined a 'CNG Station' and referred to the associated safety concerns.
9. That no comments are offered by this answering respondent over the averment made in paragraph no. 4 and 5 of Original Application regarding

setting up of the CNG/PNG station close to residential houses without obtaining requisite permission.

10. That no comments are offered by this answering respondent over the averment made in paragraph no. 6 of Original Application regarding alleged location of the CNG/PNG station.
11. That with reference to averment made in paragraph no. 7 of Original Application regarding concerns raised about pollution and health hazards associated with the establishment of the CNG/PNG station, it is respectfully submitted that this answering Respondent reiterates the submissions made in paragraph no. 5 of this Reply.
12. That with reference to averments made in paragraphs no. 8 and 9 of Original Application regarding close proximity of the CNG/PNG station to residential areas and violation of CPCB siting criteria for fuel stations, it is submitted that this answering Respondent reiterates the submission made in paragraph no. 5 of this Reply.
13. That with reference to averment made in paragraph no. 10 of Original Application regarding grant of Authorisation by the 'Petroleum and Natural Gas Regulatory Board' and the same being in violation of CPCB guidelines, it is submitted that this answering Respondent reiterates the submission made in paragraph no. 5 of this Reply.
14. That with reference to averments made in paragraphs no. 11 - 13 of Original Application regarding direction issued by the Hon'ble Tribunal (Principal Bench) in the matter of O.A. No. 86 of 2019 and CPCB guidelines, it is submitted that the issue of setting up of large number of petrol pumps without any environmental concern was considered by the Hon'ble National Green Tribunal in OA No. 86/2019 Gyanprakash @ Pappu Singh vs UoI & Others and the Hon'ble NGT directed the Ministry of Petroleum and Natural Gas and CPCB to review the matter and issue appropriate guidelines. Accordingly, the guidelines for setting up of new petrol pumps were framed under the guidance of the Expert Committee and submitted to the Hon'ble NGT in the report filed by CPCB and were subsequently circulated on January 07, 2020 to State Pollution Control Boards and Pollution Control Committees (hereinafter referred to as SPCBs/PCCs) including Odisha State Pollution Control Board (hereinafter referred to as OSPCB) for ensuring implementation by the concerned stakeholders. The guidelines also prescribe the requirement of installation of Vapor Recovery system in new retail outlets.

SUMITRA BHATTACHARYYA City Civil Court Calcutta Regn. No. 885 of 2022 Expiry Date 1.4.2023

It is further humbly submitted that, as per CPCB guidelines, new petrol pumps/ Retail Outlets (hereinafter referred to as ROs) shall not be located within a radial distance of 50m (from fill point/ dispensing unit/ vent pipe whichever is nearest) from schools, hospitals (10 beds and above) and residential areas designated as per the local laws. It is also mandated that, in case of constraints in complying with 50m distance criteria, the petrol pump/RO shall implement additional safety measures as prescribed by Petroleum Explosive Safety Organization (hereinafter referred to as PESO). The guidelines further insist at least 30m distance criteria between new petrol pump/ RO (from fill point/ dispensing unit/ vent pipe whichever is nearest) and schools/ hospitals (10 beds and above)/ residential areas designated as per local laws. Copy of the CPCB guidelines for setting up of new petrol pumps dated 07.01.2020 is annexed herein as **Annexure-I**.

15. It is submitted that in the averments made in paragraph no. 14 of Original Application, the excerpts from the judgement passed by the Hon'ble National Green Tribunal (Eastern Zone) in the matter of O.A. No. 154 of 2022 are reproduced in this para wherein CPCB was directed to prepare Standard Operating Procedure (SOP) for Petrol Depots. In this regard it is humbly submitted that in compliance of aforesaid direction from Hon'ble NGT, CPCB has prepared the requisite SOP and circulated it to all State Pollution Control Boards / Pollution Control Committees vide letter dated 30.01.2025. Copy of the said letter is given at **Annexure-II**.
16. That with reference to averment made in paragraph no. 15 and 20 of Original Application, it is submitted that CPCB has issued a Standard Operating Procedure (SOP) for Petrol Depots. It is also respectfully submitted that in the aforementioned SOP for Petrol Depots, CPCB has mentioned a buffer safety zone of 250 to 300 metres between the periphery of petrol depot and any area of human inhabitation around it, because a committee (MB Lal Committee) which was constituted by the Ministry of Petroleum and Natural Gas (MoPNG) to probe a fire incident at a Petroleum Oil Lubricants Terminal had recommended the buffer safety zone of 250 to 300 metres and the pertinent recommendations were accepted by the Ministry of Petroleum and Natural Gas.

NOTARY
SUMITRA BHATTACHARYYA
City Civil Court
Calcutta

It is respectfully submitted that Petroleum and Natural Gas Regulatory Board (PNGRB) has notified the following two regulations:

i. Technical Standards and Specifications including Safety Standards for dispensing of Automotive Fuels Regulations, 2018 vide notification dated 16.11. 2018, that are applicable to all existing and new Retail Outlets dispensing Automotive fuels including Auto LPG, CNG, LNG, LCNG and their variants. It is stated in the aforementioned regulations that the provisions of these regulations shall be construed so as to extend to cover the minimum requirements for engineering and safety considerations in layout, design, operating procedures, maintenance, inspection, safety equipment, electrical power distribution system, automation, competence assurance, emergency management plan, customer safety and awareness at retail outlets dispensing automotive fuels such as MS, HSD, Auto LPG, CNG, LNG, LCNG and their variants. That this respondent craves leave of this Hon'ble Tribunal to submit relevant provisions of Petroleum and Natural Gas Regulatory Board Regulations, 16.11.2018.

ii. Technical Standards and Specifications including Safety Standards for Liquefied Natural Gas Facilities) Regulations, 2017 vide notification dated 18.01.2018 that are applicable to all LNG facilities including terminals. The scope of these regulations state that these regulations cover engineering considerations in design, operations, maintenance, inspection and installations including fire protection and safety systems.
That this respondent craves leave of this Hon'ble Tribunal to submit relevant provisions of Petroleum and Natural Gas Regulatory Board Notification, 18.01.2018

17. That with reference to averments made in paragraph no. 16 of Original Application wherein submissions are made by the petitioner about hazardous nature of petroleum substances, it is submitted that approval of sites for storage of flammable substances is required from Chief Controller of Explosives.
18. That no comments are offered by this answering respondent over the averment made in paragraph no. 17 regarding alleged felling of trees

NOTARY SUMITRA CHATTACHARYYA City Civil Court Calcutta Regn. No. 085 of 2022 Expiry Date: 1.4.2027 Govt. Of West Bengal

19. That with reference to averments made in Para 18 of Original Application regarding no consent to establish obtained from the Respondent No.6 OSPCB, it is submitted that the matter of grant of consent under the Water (Prevention and Control of Pollution) Act and Air (Prevention and Control of Pollution) Act, 1981 is dealt by the concerned State Pollution Control Board/Pollution Control Committee. Further, Hon'ble Supreme Court of India vide para 46 of judgement dated 14.03.2023 passed in Civil Appeal no. 421 of 2022 has asserted that it is not necessary to make obtaining of CTE and CTO mandatory for petroleum outlets. The relevant excerpts of the judgement dated 14.03.223 is given below for ready reference;

"........46. What is important for us to note is that in the directions/guidelines issued by the CPCB dated 30.04.2020 and 07.03.2016 reply the automobile fuel outlets have been classified as "green" which may be exempted from consent management. The learned Solicitor General submitted that it is only after due consideration and deliberations that the CPCB issued the said directions. The NGT itself in para 66 of its impugned order has noted that the oil industry is characterized as "green category" and the CTE and CTO was not required. It appears to us that the apprehension on the part of the NGT that the installation of VRS may not be strictly monitored by the State Pollution Control Boards, led the NGT to issue directions to the CPCB & State Pollution Control Boards to issue a circular making it mandatory for obtaining the CTE and CTO as a condition precedent for establishing new petroleum outlets. What has been argued before us and also on the basis of the materials on record, we are convinced that it is not necessary to make obtaining of CTE and CTO mandatory. We would like to impress upon the CPCB to ensure that its guidelines referred to above are scrupulously followed and once the guidelines are scrupulously adhered to, no direction to obtain CTE and CTO for starting/operating a RO is warranted. We are at one with the learned counsel appearing for the respective appellants that asking the existing ROs to obtain CTO is something very unreasonable and may lead to various difficulties. Even directing the ROs that may come up in future to obtain the CTE and CTO would be cumbersome and time consuming and thus we do not find it reasonable......"

20. That no comments are offered by this answering respondent over the averment made in paragraph no. 19 of Original Application regarding incident of explosion at petrol pump.

21. That no comments are offered by this answering respondent over the averment made in paragraph no. 21 and 22 of Original Application regarding characteristics and utility of CNG and PNG.

22. That no comments are offered by this answering respondent over the averment made in paragraph no. 23 of Original Application wherein grant of Authorisation by the 'Petroleum and Natural Gas Regulatory Board' to GAIL for development of City Gas Distribution (CGD) network has been provided.

23. That with reference to the averments made in paragraphs no. I to XIII which are 'Grounds' of the Original Application, it is humbly submitted that the submissions made in preceding paragraphs are re-iterated and are not repeated herein for the sake of brevity. Further, CPCB reserves its right to deal with the said 'Grounds' properly at the time of hearing of this Original Application

24. That, this answering respondent i.e. CPCB craves leave of the Hon'ble Tribunal for filing of additional reply, if required, in future.

25. That in light of the above submissions, it is respectfully submitted that this answering Respondent i.e. CPCB, shall abide by all the order(s) or direction(s) passed by this Hon'ble Tribunal in the instant Original Application.

Mrinal Kanti Biswas
Regional Director & Scientist E,
CPCB, Kolkata

NOTARY
SUMITRA BHATTACHARYYA
City Civil Court
Calcutta
Regn. No. 065 of 2022
Expiry Date: 1.4.2027
Govt. of West Bengal

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Original Application No. 19 of 2025

NOTARY SUMITRA BHATTACHARYYA City Civil Court Calcutta Regn. No. 065 of 2022 Expi ry Date: 1.4.2027

IN THE MATTER OF:

Shukadev Mohanty

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State of Odisha & Ors.

...Respondent(s)

AFFIDAVIT

I, Mrinal Kanti Biswas, S/o Saroj Kumar Biswas aged about 43 years, having office at the Regional Directorate, Central Pollution Control Board, Southend Conclave' Block No.502, 5th& 6th Floor,1582, Rajdanga Main Road, Kolkata-700107, do hereby solemnly affirm and sincerely state as follows: -

1. That I, the deponent herein is well conversant with the facts and circumstances of the present case on the basis of the information derived from the official records, and hence, I am competent to verify, sign and swear this affidavit on behalf of the Respondent CPCB.
2. That the accompanying reply may be read part and parcel of the present affidavit as I am competent to swear this affidavit.
3. That the accompanying reply has been drafted and filed under my instructions and authority the contents thereof are true and correct on the basis of the record maintained during ordinary course of business of CPCB and available records and documents and the contents of the same are read over and explained to me and are not repeated herein for the sake of brevity.

Identified by me

DEPONENT

Suvendra Kumar

Advocate

Solemnly Affirmed and Declared before me U/S 139 CPC (C)

Notary

Sumitra Bhattacharyya

Sumitra Bhattacharyya
Notary, Govt. of W.B.
Regd. No. 065 of 2022
City Civil Court, Calcutta

0 8 APR 2025

VERIFICATION

Verified at Kolkata on this day of _____ 2025 that the contents of the above reply are correct and true on the basis of the record of the cases as mentioned in the day-to-day affairs of the CPCB. Nothing has been concealed therefrom or mis-stated.

Verified at Kolkata on this the... Day of _____ 2025.

Identified by me

DEPONENT

Suvendra Kumar
Advocate

WB 535-A/1998

NOTARY
SUMITRA BHATTACHARYYA
City Civil Court
Calcutta
Regn. No. 065 of 2022
Expiry Date:
1.4.2027
Govt. of West Bengal

Annex-I

CENTRAL POLLUTION CONTROL BOARD

DELHI 110 032

January 07, 2020

B-13011/1/2019-20/AQM 10802-10847

OFFICE MEMORANDUM

Sub: Guidelines for Setting Up of New Petrol Pumps in Compliance of Hon'ble NGT order dated January 18, 2019 in OA No. 86/2019: Gyanprakhash@ Pappu Singh vs GoI & Ors -regarding.

Hon'ble National Green Tribunal, vide order dated January 18, 2019 in OA No. 86/2019: Gyanprakhash@ Pappu Singh vs GoI & Ors directed Central Pollution Control Board and MoPNG to look into the issue of setting up of large number of petrol pumps in the country and directed that appropriate guidelines be issued by the Central Pollution Control Board in exercise of statutory power.

An Expert Committee comprising of members from IIT Kanpur, NEERI, IIP, TERI, MoPNG and CPCB was constituted to frame Guidelines for setting up of new Petrol Pumps including siting criteria and pollution prevention and control measures

The guidelines were placed in public domain and comments/suggestions/objections were invited from public and concern stakeholder and these were reviewed and guideline have been finalised.

The final Guidelines prepared by Expert Committee are hereby circulated for implementation by concerned stakeholders. These guidelines are hereby issued with the approval of the Competent Authority.

(V.K. Shukla)
Additional Director, AQM Div.

Encl.: As Above

To.

1. As per List Enclosed

Copy to:

1. Joint Secretary
   CP Division
   Ministry of Environment, Forest and Climate Change
   Indira Paryavaran Bhavan,
   Jorbagh Road, New Delhi – 110 003
2. PS to CCB
3. PS to MS

IX

GUIDELINES FOR SETTING UP OF NEW PETROL PUMPS

A. Containment and treatment of spillages from fuel filling operations at petrol pumps:

1. Petrol pumps located in areas with high groundwater table i.e. groundwater levels less than 04 meters shall have secondary containment by way of double walled tanks or concrete protection walls so as to minimize groundwater and soil contamination. It shall be the responsibility of OMC to properly get measured groundwater level at the site of proposed petrol pump and ensure implementation of these adequate protection measures for such sites. Details of measures taken by Oil Marketing Company shall be placed in public domain and in case of contradictory view, view of State/ Central Ground Water Board/ Authority will prevail.

2. All new retail outlets shall have underground tanks/ above ground tank and its ancillary components such as pipes, flexible connectors, pumps, fittings etc. protected from leaks due to corrosion by adopting materials (HDPE/ Mild Steel etc.) with required protective coating, as applicable, duly approved by PESO.

3. Any major leakage/ spillage of Petrol, Diesel, Lube Oil (more than 1 barrel-165 litres) occurs at fueling station, concerned OMC shall report to State Pollution Control Board, PESO and District Administration under intimation to CPCB within 24 hours of occurrence.

   Operation of concerned underground storage tank (UST) and its ancillary components shall be stopped immediately and not be resumed till corrective measures to contain and stop leakage/ spillages are implemented to the satisfaction of PESO and concerned SPCB.

   OMCs will be held liable for Environmental Compensation (imposed by SPCBs/PCCs) and assessment of environmental damage (depending on extent of contamination in soil and groundwater) and site remediation. Consultant/ Expert agency appointed by OMCs for damage assessment and site remediation shall have minimum national/ international experience of 5 years in this field. Various approved methods shall be considered for cleaning underground contaminants.

4. All DUs shall have Auto Cut off Nozzles which shuts dispensation of fuel if its level in customer fuel tank reaches full capacity.

5. Breakaways to be installed for all the hoses of dispensing units to reduce spillage in the event of customer vehicles moves away with nozzle still in the fueling position.

18

6. Single/ double plane swivel with breakaway coupling shall be installed for all the dispensing units for better positioning of nozzle while refueling so that it does not fall off accidently.

7. In pressurized dispensation, all dispensing units shall be installed with shear valves to cut the fuel flow from pipe line immediately upon accidental knocking of dispensing units from its position.

8. In pressurized system all Submersible Turbine Pumps (STPs) are to installed with line leak detectors and in the event of pipeline leaks STPs shall stop pumping fuel from underground tanks.

9. Emergency stop button switch shall be provided on the Multi-Product Dispenser (MPD) to stop the dispensation in case of emergency.

10. Automation system shall be installed at all new retail outlets to alert in case of tank leak by way of auto gauging system approved by PESO.

11. All Retail Outlets shall provide overfill alarm through automation.

12. Measures for spill containment in fill point chambers and forecourt area shall be implemented as prescribed by PESO.

B. **Check on leakages (Leakage Detection System) from underground storage tanks so as to prevent groundwater and soil contamination:**

1. All new retail outlets will have automation system installed which will provide reports on volume balance after every day operation and records shall be maintained.

2. Manual gauging shall be done once in a month and compare the same with Automatic Tank Gauging for accuracy.

3. Daily MS and HSD loss shall not exceed MoPNG prescribed limits. In case of leakage beyond such limits, matter shall be got analyzed by OMCs and further action shall be taken for ascertaining the reasons of losses. In case of leakage resulting in soil / groundwater contamination:

   a. Concerned OMC shall report to State Pollution Control Board, PESO and District Administration under intimation to CPCB within 24 hours of occurrence. Operation of such underground storage tank (UST) and its ancillary components shall be stopped immediately.
   b. Fuel shall be removed immediately from underground storage tank to prevent further release to environment. Measures to prevent explosion due to vapors released due to leakage as recommended by PESO shall be implemented immediately.

c. OMCs will be held liable for Environmental Compensation (imposed by SPCBs/PCCs) and assessment of environmental damage (depending on extent of contamination in soil and groundwater) and site remediation. Consultant/ Expert agency appointed by OMCs for damage assessment and site remediation shall have minimum national/ international experience of 05 years in this field. Various approved methods shall be considered for cleaning underground contaminants.

d. Operation of Underground tank and its ancillary components shall not be resumed till corrective measures to contain and stop leakages are implemented to the satisfaction of PESO and concerned SPCB.

4. All underground tanks and pipelines shall be subjected to test for leaks every 7 years.

C. **Policy towards Treatment and disposal of sludge removed from underground tanks during cleaning:**

Sludge shall be collected, stored and disposed as per Rule 8 of Hazardous Waste (Management and Transboundary) Rules, 2016 and amendments thereof and records shall be maintained.

D. **Installation, Operation and maintenance of Vapour Recovery System:**

1. All new retail outlets set up with sale potential of 300KL MS per month and setting up in cities with population more than 1 lakh will be provided with VRS. VRS should be functional by the time of sale of MS touch 300 KL. In case of failure of installation of VRS, Environment Compensation will be levied by SPCBs/ PCCs equivalent to the cost of VRS and this will further increase proportionate to the period of non-compliance.

2. Any new retail outlet set up in cities having population more than 10 lakh and having sale potential of 100 KL MS per month will be provided with VRS. VRS should be installed within a period 03 months from the day of sale of MS touch 100 KL. In case of failure of installation of VRS, Environment Compensation will be levied by SPCBs/ PCCs equivalent to the cost of VRS and this will further increase proportionate to the period of non-compliance.

3. In case of Stage II VRS, nozzle shall be provided with flexible cover flap or other alternative system for proper covering of filling tank and therefore proper recovery of vapors.

4. OMCs are responsible for maintaining installed VRS. They have to maintain periodic inspections for A/L regulator as prescribed by Legal Metrology. Proper record shall be maintained.

5. Working of dispenser shall be interlinked with VRS functioning. Online system shall be developed within 06 months to monitor status of operation of VRS. In case of non-operation of VRS, the same shall be automatically reported to concerned OMC. VRS shall be brought into operation immediately within 24 hrs and in any case within 72 hrs failing which sale of MS shall be stopped from the fueling station. Proper records of operation of VRS shall be maintained.

6. Work zone monitoring for Total VOC and Benzene shall be conducted by OMCs for petrol pumps selling more than 300 KL/ month and more than 10 lakh population (in first phase) by E(P)Act, 1986 approved labs once in a year to check compliance with OSHA norms (Time-Weighted Average) and report shall be submitted to SPCB. In addition, pilot study shall be conducted by OMCs through expert institutions for online monitoring of VOCs.

E. **Ground water and soil quality monitoring within petrol pump selling more than 300 KL/ month and more than 10 lakh population shall be conducted by OMCs once in two years through E(P)Act, 1986 approved labs for the following parameters from the nearest source and report submitted to SPCB:**

Permissible Limit

Sr.No.	Parameter	Permissible Limit
1.	Total petroleum hydrocarbons	600µg/l
2.	BTEX	i. Benzene- 950µg/l ii. Toluene- 300µg/l iii. Xylenes- a. o-xylene- 350µg/l b. m & p- xylene- 200µg/l
3.	Ethanol	1400 µg/l
4.	Methyl Tertiary Butyl Ether	13µg/l
5.	PAH	0.0001µg/l

Enforcement agencies including SPCB can collect samples in and around petrol pump to check contamination.

X

F. **Measures for protection of Worker's Health**

1. All workers engaged at retail outlets may be covered under ESI. OMC dealers shall implement the personal protective equipment (PPE) as per labor laws.

2. IEC (Information Education Communication) activities should be organized by OMC dealers for workers at regular intervals in order to sensitize them about harmful impacts of VOC emissions.

G. **Audit of all protection measures and monitoring system implemented at petrol pumps:**

PESO shall conduct audit of tanks and fuel equipment including pipes, overfill protection equipment and alarm system on annual basis and maintain records.

H. **Siting criteria of Retail Outlets:**

In case of siting criteria for petrol pumps new Retail Outlets shall not be located within a radial distance of 50 meters (from fill point/ dispensing units/ vent pipe whichever is nearest) from schools, hospitals (10 beds and above) and residential areas designated as per local laws. In case of constraints in providing 50 meters distance, the retail outlet shall implement additional safety measures as prescribed by PESO. In no case the distance between new retail outlet from schools, hospitals (10 beds and above) and residential area designated as per local laws shall be less than 30 meters. No high tension line shall pass over the retail outlet.

These guidelines are supplementary to all existing relevant Rules, Guidelines, Orders etc.

IX

Annexure-II

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

By Speed Post/ Email

CM-13014/1/2023-RD-RD-SHILLONG-RD (Shillong) 8898-8933 January 30, 2025

To

The Member Secretary
(All SPCBs/ PCCs)
List enclosed

Sub: Standard Operating Procedure (SOP) for Petrol Depots –reg.

Sir,

The SOP of Petrol Depots which was submitted to Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata in the matter of Original Application No.154/2022/EZ (I.A. No.236/2022/EZ) was circulated by CPCB to all SPCBs / PCCs for information vide letter dated 26.11.2024.

Further, the Hon'ble NGT has passed its order dated 10.01.2025. The relevant excerpt of Para 21 of the order passed by Hon'ble NGT reads as follows: "We expect that Central Pollution Control Board would implement this SOP throughout the country as it is already accepted by the Ministry of Petroleum and Natural Gas."

In this regard, it is requested to kindly implement the SOP sent by CPCB vide letter dated 26.11.2024.

Yours faithfully,

(Dinabandhu Gouda)
Sc. F & DH IPC -I

Encl.: as above

Copy to

1 Divisional Head, IT Division : with request to upload SOP for Petrol Depots on CPCB website under CPCB's Technical Guidelines /SOPs

(Dinabandhu Gouda)

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
निर्गत.....
दिनांक...07/02/25...

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, New Delhi - 110032
दूरभाष/Tel: 43102030, 22305792, वेबसाईट/Website : www.cpbc.nic.in

I ✗

State Pollution Control Boards/Committees

1. The Member Secretary
Andhra Pradesh State Pollution Control Board
D No. 33-26-14 D/2, Near Sunrise Hospital,
Pushpa Hotel Centre, Chalmvari Street,
Kasturibaipet, Vijayawada- 520010, Andhra Pradesh

2. The Member Secretary
Arunachal Pradesh State Pollution Control Board
'Paryavaran Bhavan', Yupla Road,
Pappu Nallah,
Naharlagun – 791110, Arunachal Pradesh

3. The Member Secretary
Assam State Pollution Control Board
Bamunimaidan,
Guwahati – 781021, Assam

4. The Member Secretary
Bihar State Pollution Control Board
Parivesh Bhawan, Plot No.N-B/2,
Patliputra Industrial Area, Patna-800023

5. The Member Secretary
Chhattisgarh Environment Conservation Board
Paryavaran Bhawan, North Block Sector-19
Naya Raipur – 492 099, Chhattisgarh

6. The Member Secretary
Goa State Pollution Control Board
Nr. Pilerne Industrial Estate,
Opp. Saligao Seminary,
Saligao - Bardez Goa - 403511

7 The Member Secretary
Gujarat State Pollution Control Board
Sector 10-A, Gandhi Nagar – 382043, Gujarat

8 The Member Secretary
Haryana State Pollution Control Board
C-11, Sector 6, Panchkula, Haryana 134109

9 The Member Secretary
Himachal Pradesh State Pollution Control Board
Him Parivesh, Phase-III, Below BCS,
New Shimla, Himachal Pradesh 171009

10 The Member Secretary
J&K State Pollution Control Board,
Shiekh-ul-Campus, behind Govt. Silk
Factory, Raj Bagh, Srinagar. Jammu and Kashmir

17

11. The Member Secretary
Jharkhand State Pollution Control Board
T A Building, HEC Campus; P.O. Dhurwa
Ranchi – 834004, Jharkhand

12. The Member Secretary
Karnataka State Pollution Control Board
Parisara Bhavan, 4th& 5th floors, Church Street,
Bangalore – 560 001, Karnataka

13. The Member Secretary
Kerala State Pollution Control Board
Plamoodu Jn., Pattom Palace P.O.
Thiruvananthapuram-695 004

14. The Member Secretary
Maharashtra Pollution Control Board,
Kalpataru Point, 2nd – 4th Floor
Opp Cine Planet Cinema, Nr. Sion Circle,
Sion (E), Mumbai – 400 022

15. The Member Secretary
Madhya Pradesh State Pollution Control Board
Paryavaran Parisar, E-5 Arera Colony
Bhopal – 462016, Madhya Pradesh

16. The Member Secretary
Manipur State Pollution Control Board
Lamphelpat, Imphal
West D.C. Office Complex – 795004, Manipur

17. The Member Secretary
Meghalaya State Pollution Control Board
Arden, Lumpyngngad,
Shillong – 793014, Meghalaya

18. The Member Secretary
Mizoram State Pollution Control Board
New Secretariat Complex,
Khatla, Thlanmual Peng, Aizwal, Mizoram- 796001

19. The Member Secretary
Nagaland State Pollution Control Board
Signal Point, Dimapur, Nagaland – 797112

20. The Member Secretary
Odisha State Pollution Control Board
Paribesh Bhawan A-118, Nilakanta Nagar,
Unit –VIII, Bhubaneshwar – 751012, Odisha

21. The Member Secretary
Punjab Pollution Control Board,
VatavaranBhawan, Nabha Road, Patiala, Punjab

22. The Member Secretary
Rajasthan State Pollution Control Board
A-4 Institutional Area, Jhalana Doongri
Jaipur – 302004, Rajasthan

23. The Member Secretary
Sikkim State Pollution Control Board,
Department of Forest, Environment &
Wildlife Management Government of
Sikkim, Deorali, Gangtok, -737102, Sikkim

24. The Member Secretary
Tamil Nadu State Pollution Control Board
No 76, Mount Salai, Guindy,
Chennai – 600032, Tamil Nadu

25. The Member Secretary
Telangana State Pollution Control Board
Paryavaran Bhavan
A-3, Industrial Estate, Sanath Nagar,
Hyderabad – 500 018, Telangana

26. The Member Secretary
Tripura State Pollution Control Board
Parivesh Bhawan, Pt. Nehru Complex,
Gorkhabasti P.O., Kunjaban, Agartala,
West Tripura - 799 006, Tripura

27. The Member Secretary
Uttarakhand Pollution Control Board
Gaura Devi Bhawan, 46 B IT Park
Sahastradhara, Dehradun, Uttarakhand- 248001

28. The Member Secretary
Uttar Pradesh State Pollution Control Board
Building No TC-12V
VibhutiKhand, Gomti Nagar,
Lucknow– 226010, Uttar Pradesh

29. The Member Secretary
West Bengal State Pollution Control Board
ParibeshBhavan, 10A, Block-L.A., Sector III,
Bidhan Nagar, Kolkata - 700 10, West Bengal

30. The Member Secretary
Andaman & Nicobar Islands Pollution Control Committee
Department of Science & Technology
Dollyganj Van Sadan, Haddo P.O.,
Port Blair-744102, Andaman & Nicobar

31. The Member Secretary
Chandigarh Pollution Control Committee
Paryavaran Bhawan
Madhya Marg, Sector - 19 B,
Chandigarh – 160019

32. The Member Secretary
Daman, Diu & Dadra Nagar Haveli Pollution Control Committee
Nagar Haveli and Daman and Diu
1st Floor, UdhyogBhavan
Bhenslore, Dunetha
NaniDaman Daman - 396210

33. The Member Secretary
Delhi Pollution Control Committee
4th floor, ISBT Building,
Kashmere Gate, Delhi – 110006

34. The Member Secretary
Lakshadweep Pollution Control Committee
Lakshadeweep Administration
Department of Science, Technology & Environment
Kavarati – 682555, Lakshadweep

35 The Member Secretary
Puducherry Pollution Control Committee
Department of Science, Technology & Environment
Housing Board Complex,
3rd floor, Anna Nagar,
Puducherry – 600 005

35 The Member Secretary
Ladakh Pollution Control Committee
Skara yokma, near KBR Airport, UT of Ladakh- 194101

9X2

Standard Operating Procedure (SOP) for Petrol Depots

Background

Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata in the matter of Original Application No.154/2022/EZ (I.A. No.236/2022/EZ) vide order dated 17.04.2023 directed Central Pollution Control Board to prepare Standard Operating Procedure (SOP) for Petrol Depots within three months.

Accordingly, Central Pollution Control Board prepared Standard Operating Procedure (SOP) for Petrol Depots.

This SOP shall be applicable for Petrol Depots (other than Petrol Pumps / Retail Outlets) having facilities for storing, handling, distribution, transportation, loading or unloading of petrol and that are liable to take approval / license from the Chief Controller of Explosives for storage of petrol.

Standard Operating Procedure (SOP) for Petrol Depots is as follows:

A. General Compliance:

1. Petrol depots shall have to obtain Consent to Establishment prior to establishment and Consent to Operate prior to starting operations from the concerned State Pollution Control Board / Pollution Control Committee (SPCB / PCC).
2. Prior to commissioning, petrol depots shall take out one or more insurance policies in accordance with the stipulations of The Public Liability Insurance Act, 1991 as amended.
3. Prior to commissioning, petrol depots shall provide a baseline monitoring data of ambient air, soil and groundwater quality (of the locations situated between the boundary of the planned storage and 50 m outwards) covering relevant pollutant parameters; from any laboratory recognized under Environment (Protection) Act 1986 / laboratory accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) to concerned SPCB / PCC. The existing petrol depots may obtain baseline data from any earliest date within a year subsequent to issuance of this SOP.
4. Any major leakage/spillage occurring inside the petrol depot or around the petrol depot during transportation / supply of petrol / any other activity related

to the concerned petrol depot shall be reported by petrol depot to the concerned SPCB/ PCC, Petroleum and Explosive Safety Organization (PESO), Oil Industry Safety Directorate (OISD), Petroleum and Natural Gas Regulatory Board (PNGRB) and District Administration under intimation to CPCB within 24 hours of occurrence

5. Petrol Depots shall conduct groundwater monitoring to detect any contamination. Ground water sampling and monitoring for detection of any contamination shall be done through existing piezometer / bore well located within premises of petrol depot or within 50 m from petrol depot (in case no piezometer /bore well exists in petrol depot) from at least three different directions with reference to the expected point of groundwater contamination or in the upstream and downstream direction to the flow of groundwater with reference to the expected point of groundwater contamination.

6. Groundwater monitoring wells should be monitored within 30 days of commissioning of the petrol depots. Thereafter, groundwater sampling and analysis should be undertaken annually. Groundwater should compulsorily be sampled and analysed under information to the concerned SPCB / PCC when any leakage occurs or suspected to have occurred.

The parameters for which groundwater samples shall be analysed and their respective screening values are as follows:

S. No.	Parameter	Screening Values
1.	Total petroleum hydrocarbons (C_{10} -C_{40})	**0.6mg/L**
2.	Benzene, Toluene and Xylene	i. Benzene- **0.01mg/L** ii. Toluene- **0.7mg/L** iii. Xylene-**0.5mg/L**
3.	Methyl Tertiary Butyl Ether	**13µg/l**
4.	Total Polycyclic aromatic hydrocarbons (PAH)	**0.0001mg/l**

7. Further, soil sample shall be collected from a borehole within the premises of the petrol depot adjacent to the underground storage tank or above ground storage tank. The depth of bore hole should be up to 1m below the bottom of the storage tank level.

2X

The parameters for which soil samples shall be analysed and their respective screening values are as follows:

S. No.	Parameter	Screening Values(mg/kg)
1.	Total petroleum hydrocarbons (TPH)	5000
2.	Benzene	5
3.	Toluene	30
4.	Xylene	50
5.	Methyl Tertiary Butyl Ether	100
6.	Total PAH	40

8. Ground water and soil quality monitoring shall be conducted by petrol depots once a year through Environment (Protection) Act, 1986 approved laboratories / NABL accredited laboratories and the reports shall be submitted to concerned SPCB / PCC.

9. In case of exceedance of screening values for any parameter or; in case of any major deviation from the baseline data or; in case of leakage resulting in soil/groundwater contamination, the Petrol Depot shall immediately inform the concerned SPCB / PCC and shall take immediate action to detect and prevent the leakage; and shall carry out further environmental remediation.

10. The petrol depots shall submit ambient air monitoring report w.r.t. notified ambient hydrocarbon parameters on six monthly basis from any laboratory approved under Environment (Protection) Act, 1986 / laboratory accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) to concerned SPCB / PCC.

11. Petrol depots shall compulsorily provide adequate Effluent Treatment Plant or Oil Water Separator to treat any effluent generated because of tank cleaning or cleaning of storage area, contamination of storm water, any other effluent generating activity and shall ensure that the treated effluent complies with the prescribed standards.

12. Petrol depots shall take necessary steps to prevent entry of storm water to the storage area. In case storm water gets contaminated, there must be adequate arrangements for collection and treatment of storm water prior to its discharge.

13. Petrol depots shall obtain authorization for managing hazardous and other wastes under Hazardous and Other Wastes (Management and Transboundary

Movement) Rules, 2016 from the concerned SPCB / PCC. Storage, collection, handling and disposal of hazardous and other wastes generated because of tank cleaning, effluent treatment or other activities shall be strictly carried out as per stipulations of the aforementioned authorization.

14. The petrol depots shall install Vapour Recovery Systems w.r.t. pertinent directions issued by CPCB / concerned SPCBs / PCCs / PNGRB regulations for petroleum installations / other statutory bodies, as applicable.

B. Prevention of Leakage:

1. For preventing fugitive emissions and standards for equipment leaks, the petrol storage depots may comply with the relevant stipulations stated in Section C (under subheading Fugitive Emissions and Standards for Equipment Leaks) of the Petroleum Oil Refinery standards notified by the Ministry of Environment and Forests (Now the Ministry of Environment, Forests & Climate Change) vide Notification no. GSR 186 (E) dated 18.03.2008, as applicable (Annexed as Annexure –I) **OR** any other applicable norms / guidelines issued by Ministry of Petroleum and Natural Gas / other statutory bodies.

   It is clarified that petrol depots may provide the storage tanks and seals as specified in the aforementioned standards notified by the Ministry of Environment and Forests or any other applicable norms / guidelines issued by Ministry of Petroleum and Natural Gas / other statutory bodies. However, the norms (for vapour removal efficiency, Emission control standards for Road tank truck/Rail Tank wagon loading in respect of VOC reduction and Emission, Standards for Equipment Leaks including Leak Detection and Repair, Frequency of monitoring of leaks etc.) that are more stringent among the aforementioned standards shall be complied by the petrol depots.

2. Petrol depots shall install hydrocarbon detectors along with alarming system at the leakage prone locations to detect any leakage at the earliest as per PNGRB regulations for petroleum installations, as applicable.

3. Petrol depots shall install spill prevention equipment and overfill prevention equipment as per extant and applicable standards and guidelines.

4. The separation between above ground petrol storage tanks shall be as per extant norms / guidelines of Ministry of Petroleum and Natural Gas (MoPNG) / OISD / PNGRB or other statutory bodies.

5. The tanks and pipework of petrol storage tanks should meet the following requirements:

   i. The material of construction and design of storage tanks and pipelines should be in accordance with the extant and applicable standards.

   ii. Efficient secondary containment (as detailed in Section C) shall be provided to prevent release of any leakage to the environment.

   iii. There should be adequate monitoring system to detect any leakage from the tank or pipelines as per norms / guidelines of MoPNG / OISD or other statutory bodies.

6. The petrol depots shall provide adequate tertiary containment to prevent escape of spills due to failure of secondary containment as per Petroleum and Natural Gas Regulatory Board (Technical Standards and Specifications including Safety Standards for Petroleum Installations) Regulations, 2020.

C. Secondary containment:

Secondary containment systems must be designed, constructed, and installed to contain leakage / spillage released from the storage tank and shall have system to detect the failure / breach of the containment system and shall prevent the release of leaked petrol to the environment at any time during the operational life of the storage tank system; and may be checked for leakage regularly. There should be proper arrangements so that any leakage within the secondary containment area may be timely detected and disposed in an environmentally safe and sound manner.

1. <u>Secondary containment for underground tanks:</u>

All the underground petrol storage tanks shall provide secondary containment system to prevent the leakage to escape to the environment by providing enclosure which is impervious for petrol and able to contain and withstand the hydraulic pressure of the leaked petrol.
Secondary containment can be provided by providing double walled tanks or by constructing concreted and impervious enclosure around storage tanks.
Double walled tanks must be capable of:

i. Contain a leak from any portion of the inner tank within the outer wall;
ii. Detect the failure / breach of the inner wall.

2. Secondary containment for above ground petrol tanks:

All the above ground petrol storage depots shall provide secondary containment system to prevent the leaked petrol to escape to the environment. The secondary containment may be provided by constructing a dyked enclosure. The dyked area should prevent the interference of storm water or groundwater intrusion, should surround the tank completely and should be impervious and capable of preventing migration of leaked petrol.

Alternatively, any other secondary containment system for above ground / underground storage tanks as per norms / guidelines of MoPNG / OISD / Petroleum and Natural Gas Regulatory Board (PNGRB) or other statutory authorities / internationally best practiced containment systems that are adequate to contain the leakages may be provided.

The secondary containment system shall be routinely inspected for its structural stability and adequacy for providing containment.

D. Monitoring

1. Interstitial monitoring:

Interstitial monitoring system having hydrocarbon detectors and alarming system / other monitoring devices shall be installed between the petrol storage tanks and secondary containment barrier to detect any leakage.

2. Vapour monitoring wells:

In case interstitial monitoring (of underground tanks) is not feasible, vapour monitoring wells may be installed as alternative leak detection system that can be used either continuously or regularly to monitor for hydrocarbon vapours in the soil surrounding the tanks (beyond secondary containment). It should be ensured that the soil / filler material between secondary containment and the vapour monitoring wells has a sufficient liquid / vapour conductivity for passage of petrol vapours. The vapour monitoring system should not be affected by rainfall or moisture or any contamination which can interfere with monitoring.

3. Other routine leakage detection systems:

All new petrol storage tanks will have automation system (automatic tank gauging) installed which will provide reports on volume balance after every day operation

28

and records shall be maintained. If feasible, manual gauging shall be done at least once in a month for determining the accuracy of Automatic Tank Gauging; alternatively, the automatic tank gauging system should be calibrated as per equipment manufacturer's guidelines.

The leakage detection system may be provided as per any other applicable norms / guidelines issued by Ministry of Petroleum and Natural Gas / OISD / other statutory bodies.

4. In case of leakage resulting in soil/groundwater contamination:

i. Concerned Petrol Storage Depot shall report to the concerned State Pollution Control Board / Pollution Control Committee, OISD, PESO, PNGRB and District Administration under intimation to CPCB within 24 hours of occurrence. Operation of such underground storage tank and its ancillary components shall be stopped immediately.

ii. Petrol shall be removed immediately from petrol storage tank to prevent further release to environment. Measures to prevent explosion due to vapours release due to leakage as recommended by PESO / OISD or other statutory body shall be implemented immediately.

iii. The petrol storage depot may be held liable for Environmental Compensation (to be imposed by CPCB/ concerned State Pollution Control Board / Pollution Control Committee) and environmental remediation on the basis of proven negligence or violation resulting in environmental damage.

iv. Operation of petrol storage tank and its ancillary components shall not be resumed till corrective measures to contain and stop leakages are implemented to the satisfaction of PESO and concerned State Pollution Control Board / Pollution Control Committee.

5. Equipment Integrity Test for underground petrol tanks:

The Equipment Integrity Test (EIT) measures the containment integrity of the tanks, fittings and pipes. An EIT should be conducted to evaluate if an underground petrol storage tanks can cause any leakage to the environment and to evaluate if it can provide containment as required

An Equipment Integrity Test should be performed:

i. Before any new underground petrol storage tank is commissioned

ii. After any modification or upgradation of underground petrol storage tanks.

39

iii. After any repair following the discovery of a leak in the system or replacement of tanks or piping.

The Equipment Integrity Test should be done as per approved Indian or international procedure.

E. For prevention of accidents:

1. Subject to the quantity of petrol that may be stored in a depot and the threshold quantity specified for extremely flammable liquids in The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended, a petrol depot shall ensure compliance of the aforementioned rules including but not limited to:

   i. General responsibility of the occupier during industrial activity;

   ii. Notification of Major accident;

   iii. Approval and Notification of sites;

   iv. Updating of the site notification following changes in the threshold quantity;

   v. Safety audit reports and their updating;

   vi. Quantitative risk assessment /Cumulative risk assessment;

   vii. Preparation of offsite/ on-site emergency plan and carrying out of mock drills;

   viii. Information to be given to persons liable to be affected by a major accident etc.

2. A petrol depot shall ensure compliance of all the provisions of The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 (as amended), as applicable.

3. A petrol depot must obtain no objection certificate from the fire department, as per applicable laws of the concerned State / Union Territory. Approval from the concerned authority as stipulated in Rule 7 of the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 (as amended) must invariably be taken by the Petrol Depot.

4. A petrol depot must invariably comply with the extant laws / guidelines concerned with safety or prevention of accidents issued by Ministry of Petroleum and Natural Gas / PESO /OISD/ PNGRB / any other statutory organization, as applicable.

30

5. In case, a major accident occurs, the petrol depot shall within 48 hours notify the concerned authority as identified in Schedule 5 (of the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended) of that accident, and furnish thereafter to the concerned authority a report relating to the accidents in Schedule 6 (of the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 (as amended)). However, the concerned authorities, local crisis group, District emergency authorities etc. have to be informed by the petrol depot as early as possible.

6. The petrol storage depots must provide proper arrangements to prevent and contain the spread of fire / explosion, as per extant and applicable norms and guidelines issued by Ministry of Petroleum and Natural Gas / PESO /OISD/ PNGRB any other statutory organization.

7. The petrol storage depots must have alarming system to inform and alert the surrounding inhabitants in case of any accident or emergency.

8. The Petrol Depot shall ensure carrying out routine leakage detection and leakage monitoring in case of temporary shutdown.

9. The petrol depots shall adhere to the provisions of the National Disaster Management Act and accordingly, prepare onsite and offsite Emergency Response and Disaster Management Plan(DMP) and shall comply with the Petroleum and Natural Gas Regulatory Board (Codes of Practices for Emergency Response and Disaster Management Plan) Regulations, 2010.

10. The petrol depots must ensure that overall safety measures taken by the depot and other ancillary procedures viz. safety audit, risk analysis, risk management etc. shall cover its own premises as well as the area beyond its premises which is vulnerable to risk in case of any incident. Adequate safeguarding measures must be taken so that there may be no risk to the life and property of inhabitants beyond the premises of depot in case of incident.

F. Location and Siting of Petrol Depot:

1. The location and siting of petrol depot shall strictly be in accordance with the extant law / guidelines issued by Ministry of Petroleum and Natural Gas / PESO / any other statutory organization as applicable.

2. The petrol depots shall comply with the MoPNG accepted recommendations of the M.B. Lal Committee (which was constituted by MoPNG to probe the incident of fire at Indian Oil Corporation's POL (Petroleum Oil Lubricants) Terminal at Jaipur in 2009) regarding creation of a buffer safety zone of 250 to 300 metres around petroleum installations (including petrol depots).

   It is clarified that a buffer zone of 250 to 300 metres shall be provided between the periphery of petrol depot and any area of human inhabitation around it

including residential, industrial and commercial areas and other sites of human gathering including educational institutions, healthcare facilities, historical structures, places of worship etc. in accordance with the recommendations of MB Lal Committee. The quantitative/cumulative risk of all tanks of petrol depots should be zero at petrol depot boundary wall by providing adequate mitigation / remedial measures.

3. The SPCBs / PCCs while granting Consent to Establish / Operate to new petrol depots shall give due consideration to the pollution causing potential and ecological sensitivity of the pertinent region as well as extant local government laws regarding setting of such major accident hazard industries and extant law / guidelines issued by MoPNG / PESO / any other statutory organization as applicable.

4. New / upcoming petrol depots shall be located at least 100 m away from the surface water bodies including lakes, ponds, streams, rivers, wetlands, canals and creeks. In case of streams and rivers, the distance shall be considered from the flood way. In case, flood way is not defined, the distance shall be considered from firm banks / edges of the river.

G. Decommissioning of tanks:

1. In case any above ground or underground petrol storage tank has to be dismantled, the following must be ensured:
   i. Removal of all petrol and its disposal in an environmentally sound manner.
   ii. Removal of any residual flammable vapour and its safe disposal.
   iii. Removal of any hazardous waste like tank sludge in an environmentally sound manner and its disposal as per extant hazardous waste management rules.

2. The petrol depot before dismantling of tanks shall take permission from the concerned statutory authority and concerned SPCB / PCC.

3. The petrol depot at the time of permanent decommissioning must ensure that the site is investigated for any potential environmental contamination from an expert institution and submit the report to the concerned SPCB / PCC.

32

Annexure -1

Section C (under subheading Fugitive Emissions and Standards for Equipment Leaks) of the Petroleum Oil Refinery standards notified by Ministry of Environment and Forests vide Notification no. GSR 186 (E) dated 18.03.2008

Fugitive Emission

Storage of Volatile Liquids: General Petroleum Products

1. Storage tanks with capacity between 4 to 75 m^3 and total vapour Pressure (TVP) of more than 10 kpa should have Fixed Roof Tank (FRT) with pressure valve vent.
2. Storage tank with the capacity between 75 to 500 m^3 and total vapour Pressure (TVP) of 10 to 76 kpa should have Internal Floating Root Tank (IFRT) of External Floating Root Tank (EFRT) or Fixed Roof Tank with vapour control or vapour balancing system.
3. Storage tanks with the capacity of more than 500 m^3 and total vapour Pressure (TVP) of 10 to 76 kpa should have Internal Floating Roof Tank or External Floating Roof Tank or Fixed Roof Tank with vapour control system.
4. The tanks with the capacity of more than 75m^3 and total vapour Pressure (TVP) of more than 76 kpa should have Fixed Root Tank with vapour control system.
5. Requirement for seals in Floating Roof Tanks:

i.

a. IFRT and EFRT shall be provided with double seals with minimum vapour recovery of 96%.
b. Primary seal shall be liquid or shoe mounted for EFRT and vapour mounted for IFRT. Maximum seal gap width will be 4 cm and maximum gap area will be 200 cm^2/m of tank diameter.
c. Secondary seal shall be rim mounted. Maximum seal gap width will be 1.3 cm and maximum gap area will be 20 cm^2/m of tank diameter.
d. Material of seal and construction shall ensure high performance and durability.

ii. Fixed Roof Tanks shall have vapour control efficiency of 95% and vapour balancing efficiency of 90%.

iii. Inspection and maintenance of storage tanks shall be carried out under strict control. For the inspection, API RP 575 may be adopted. In-service inspection with regard seal gap should be carried out once in every six months and repair

to be implemented in short time. In future, possibility of on-stream repair of both seals shall be examined.

Storage of Volatile Liquids: Benzene Storage

1. FRT with vapour to incineration with 99.9% of removal efficiency for volatile organic compounds (VOC) shall be provided.
2. IFRT/EFRT with double seals, emission-reducing roof fitting and fitted with fixed roof with vapour removal efficiency of at least 99% shall be provided.

Solvents for Lube-Base Oil production (Furfural, NMP, MEK, Toluene and MIBK)

IFRT with double seals and inert gas blanketing with vapour removal efficiency of at least 97% shall be provided.

Emission control for Road tank truck/Rail Tank wagon loading		
Loading of Volatile Products	Gasoline and Naphtha : i. VOC reduction, % ii. Emission, gm/ m^3	i. 99.5 ii. 5
	Benzene : i. VOC reduction, % ii. Emission, mg/ m^3	i. 99.99 ii. 20
	Toluene/Xylene: i. VOC reduction, % ii. Emission, mg/ m^3	i. 99.98 ii. 150
	Note : i. It shall be applicable for Gasoline, Naphtha, Benzene, Toluene and Xylene loading. ii. Road tank Truck shall have Bottom loading and Rail tank wagon shall have Top submerged loading. iii. Annual leak testing for vapour collection shall be done.	

~~34~~

Standards for Equipment Leaks

1. Approach: Approach for controlling fugitive emissions from equipment leaks shall have proper selection, installation and maintenance of non-leaking or leak tight equipment. Following initial testing after commissioning, the monitoring for leak detection is to be carried out as a permanent on-going Leak Detection and Repair (LDAR) programme. Finally, detected leaks are to be repaired within allowable time frame.

2. Components to be Covered: Components that shall be covered under LDAR programme include (i) Block Valves; (ii) Control Valves; (iii) Pump seals; (iv) Compressor seals; (v) Pressure relief valves; (vi) Flanges - Heat Exchangers; (vii) Flanges - Piping; (viii) Connectors - Piping; (ix) Open ended lines; and (x) Sampling connections. Equipment and line sizes more than 1.875 cm or ¾ inch are to be covered.

3. Applicability: LDAR programme would be applicable to components (given at 2 above) for following products/compounds: (i) hydrocarbon gases; (ii) Light liquid with vapour pressure @ 20 °C > 1.0 kPa; and (iii) Heavy liquid with vapour pressure @ 20 °C between 0.3 to 1.0 kPa.

4. While LDAR will not be applicable for heavy liquids with vapour pressure < 0.3 kPa, it will be desirable to check for liquid dripping as indication of leak.

5. Definition of Leak: A leak is defined as the detection of VOC concentration more than the values (in ppm) specified below at the emission source using a hydrocarbon analyser according to measurement protocol (US EPA-453/R-95-017, 1995 Protocol for equipment leak emission estimates may be referred to:

Component	General Hydrocarbon (ppm)		Benzene (ppm)	
	Till 31st Dec. 2008	w.e.f. January 01, 2009	Till 31st Dec., 2008	w.e.f. January 01, 2009
Pump/Compressor	10000	5000	3000	2000
Valves/Flanges	10000	3000	2000	1000
Other Components	10000	3000	2000	1000

6. In addition, any component observed to be leaking by sight, sound or smell, regardless of concentration (liquid dripping, visible vapour leak) or presence of bubbles using soap solution should be considered as leak.

7. Monitoring Requirements and Repair Schedule: Following frequency of monitoring of leaks and schedule for repair of leaks shall be followed:

Component	Frequency of monitoring	Repair schedule
	Quarterly (semi-annual after two consecutive periods with < 2% leaks and annual after 5 periods with < 2% leaks)	Repair will be started within 5 working days and shall be completed within 15 working days after detection of leak for general hydrocarbons. In case of benzene, the leak shall be attended immediately for repair.
Pump seals	Quarterly	
Compressor seals	Quarterly	
Pressure relief devices	Quarterly	
Pressure relief devices (after venting)	Within 24 hours	
Heat Exchangers	Quarterly	
Process drains	Annually	
Components that are difficult to monitor	Annually	
Pump seals with visible liquid dripping	Immediately	Immediately
Any component with visible leaks	Immediately	Immediately
Any component after repair/replacement	Within five days	-

8. The percentage leaking components should not be more than 2% for any group of components, monitored excluding pumps/compressor. In case of pumps/compressors, it should be less than 10% of the total number of pumps/compressors or three pumps and compressor, whichever is greater.

9. Emission Inventory: Refinery shall prepare on inventory of equipment components in the plant. After the instrumental measurement of leaks, emission from the components will be calculated using stratified emission factors (USEPA) or any other superior factors. The total fugitive emission will be established.

10. Monitoring following types of monitoring methods may be judiciously employed for detection of leaks: (i) instrumental method of measurement of leaks; (ii) Audio, visual and olfactory (AVO) leak detection; and (iii) Soap bubble method.

11. Data on time of measurement and concentration value for leak detection; time of repair of leak; and time of measurement & concentration value after repair of leak should be documented for all the components.

12. Pressure relief and blow down systems should discharge to a vapour collection and recovery system or to flare.

13. Open-ended lines should be closed by a blind flange or plugged.

14. Totally closed-loop should be used in all routine samples.

15. Low emission packing should be used for valves.

16. High integrity sealing materials should be used for flanges.