BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

Original Application No.256 of 2020 [SZ]

IN THE MATTER OF

Tribunal on its own motion-SUO MOTU Based on The News item in News Desk Magazine Dated 11.11.2020 , Air Pollution and Industries, " These Six Industries in North Chennai are polluting the air For more than half the year, the North Chennai Thermal Power Station alone Ennore Port".

...Applicant(s)

Vs

Union of India and others.

... Respondent(s)

FUTURE PLANS AND POLLUTION MONITORING , CONTROL MEASURES

FILED ON BEHALF OF THE 16TH RESPONDENT

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Dated at Chennai on this 27th day of January, 2023

Ritaselcar

Counsel for 16th Respondent

एम.एफ़.एल.

मद्रास फ़र्टिलाइज़र्स लिमिटेड
Madras Fertilizers Limited
(भारत सरकार का उपक्रम / A Government of India Undertaking)
पोस्ट बैग सं, 2, मणलि, चेन्नै - 600 068. भारत दूर : 2594 1001 / फैकस सं.: 044-25941010
Post Bag No. 2, Manali, Chennai - 600 068. INDIA. Tel : 2594 1001 / Fax No. 044 25941010
कार्मिक/ Per 25945210 · संयंत्र / Plant 25941133 विप: / Mktg 25941285 वित्त /Fin 25941072
Website: www.madrasfert.co.in email: gmpasec@madrasfert.co.in
CIN: L32201TN1966GO1005469 GSTIN - 33AAACM5198E1ZK

ISO 14001 : 2015 APPROVED BY ICS

VIJAY MADRAS FERTILIZERS

20 January 2023 Lr No: MFL/TNPCB/2023/1

The Member Secretary
Tamil Nadu Pollution Control Board
Board office
Chennai 600 032.

Sir,

Sub: **Pollution Monitoring and Control measurement in MFL – reg.,**

This is to inform that Madras Fertilizer Limited is a PSU, Ministry of Chemicals and Fertilizers, GoI engaged in the manufacture of Ammonia, Urea, Complex Fertilizers and Biofertilizer.

MFL is operating continuously as per the Environmental compliance of CPCB/TNPCB. MFL has implemented various schemes and installed online analysers as per the directions of TNPCB and connected with Care Air Centre for continuous monitoring & protecting the Environment.

Please find attached **Annexures 1 and 2** which explains all the existing schemes and the Future plans in detail.

MFL always complies with all the directions issued by TNPCB and assure to work towards protecting the Environment in the best possible way.

For your information please.

Very truly yours,

20/01/23

T Vannia Perumal
DGM – Prodn & ESE
For Madras Fertilizers Limited

Copy to:

1. Joint Chief Environmental Engineer(M), TNPCB
2. District Environmental Engineer, Ambattur, TNPCB.

Annexure -1

Madras Fertilizers Limited

Report on Pollution Monitoring and Controlling Facilities

MFL is a Public Sector Undertaking, comes under the Department of Fertilizers, Ministries of Chemicals & Fertilizers, Govt of India. MFL is the only PSU producing Urea in South India, with RLNG as feed stock and comes under the Essential Commodities Act 1955. It supplies Fertilizers to all states of South India and having a market share of 14% in Urea sales & 9% in NPK Complex fertilizers.

Products & facilities:

- MFL produces Urea and NPK complex fertilizers in different grades.
- It has an Ammonia plant which is the main feed stock for the production of Urea.
- It has a Utility plant which caters the water requirements of the company.
- It has a RO plant where the Tertiary treated Sewage is further treated to be used in the Boilers.
- MFL imports Phosphoric acid and Muriate of Potash (MOP) which are essential for the manufacturing of NPK complex fertilizer.

Possible Air Pollutants:

a) PM, SOx and NOx emission from Boiler stacks

b) Ammonia emission from Urea plant Prill Tower

c) HF, PM and Ammonia emission from NPK plant stack

Existing Pollution Monitoring and Controlling measures in MFL

Stack Monitoring:

Process Stacks in MFL	Pollution Monitoring system	Pollution Control Mechanism
Urea Prill Tower	Possible Air pollutant from Prill Tower stack is Ammonia. An online Ammonia Analyzer was installed in Prill Tower to measure Ammonia content from the exit gas. The Ammonia values from the stack are well within the allowable limits and the data are being uploaded in TNPCB & CPCB servers.	A Demister has been set up at Prill Tower to control Ammonia escape from stack. It is a wet stack with chevron filters which will scrub NH3 that may escape from the Evaporator outlet. These NH_3 vapours are absorbed using water and the ammonia rich water is taken back to the Urea process.
NPK Stack	HF, PM and NH_3 Analyzer has been installed in NPK stack to monitor its presence. The data are continuously being uploaded to TNPCB / CPCB servers. The values are within the limits prescribed in the standards.	MFL is not producing HF but the Phosphoric Acid which is one of Raw Material for NPK production may contain HF (Max allowable in Feed is 1.0 %) and the possible emission to stack can never exceeded. Hence, always HF will be withion the permissible limits. A Scrubbing System has been installed in the process to control PM and Ammonia from stack gases. Scrubbing system is a part of the NPK manufacturing process. The scrubbed liquid is recycled in the process.
110 ATA / Process Condensate Boiler Stack	Continuous Emission Monitoring Station (CEMS) is in place to measure PM, NOx and Sox level is stack gases. The values are well within the limits. The data are continuously uploaded to TNPCB / CPCB severs.	**Stack Height:** Boiler stacks are built to comply with Minimum National Standards (MINAS) prescribed by CPCB, with sufficient height (117 M) so as to avoid the flue gas descending into the nearby area. **Fuel conversion to RLNG:** Fuel for these Boilers has been converted from Fuel oil to a clean fuel Natural Gas (RLNG) effective Mar 2019.
Utility Boiler 1 & 2 Stack	Continuous Emission Monitoring Station (CEMS) is in place to measure PM, NOx and Sox level is stack gases. The values are well within the limits. The data are continuously uploaded to TNPCB / CPCB severs.	**Stack Height:** Boiler stacks are built to comply with MINAS standards with sufficient height (70 M) so as to avoid the flue gas descending into the nearby area. **Fuel conversion from Fuel Oil to RLNG firing Project** is in progress and is expected to be completed by May 2022.

Ambient Air Quality Monitoring:

Continuous Ambient Air Quality Monitoring Stations (CAAQMS):

MFL has installed five Continuous Ambient Air Quality Monitoring Stations (CAAQMS) and the data are connected to Care AirCentre of TNPCB. 11 nos of Ammonia Sensors have been installed in the peripheral of MFL.

Feedstock conversion: MFL has completed Feed stock conversion form Naphtha to RLNG, a clean fuel for Ammonia Plant Reformer process and Fuel and two of the Boilers in Ammonia Plant (110 Ata and PCB) during the year 2019 with an investment of Rs 100 Crores approx.

MFL has three layered strategy of identification, abatement and monitoring as a policy of its environmental care activities. We have implemented several monitoring mechanisms such as online continuous, classical monthly analyses, third party surveys and survey by statutory authorities.

It is noteworthy to mention here that MFL has taken continuous efforts and spent about 16 Crores since 2018 towards implementing various directives of TNPCB either new installations or restoration of the existing ones amidst huge financial crisis and administrative constraints **(Annexure 2)**. This shows that MFL will always strives to comply with all the directions from TNPCB and we assure that we will take all steps to protect and preserve the Environment according to the Law of Land.

Future Plan towards pollution Abatement and to protect Environment

MFL LONG TERM ACTION PLAN

Action Plan	Status as on 19.01.23	Expected Date of Completion	Investment (Rs)
Change of fuel from furnace oil to RLNG for Utility Boiler to reduce PM from Stack Emission	**Job in progress.** **Details:** AOW issued on June 16, 2021 to M/s Thermax. All the materials have been supplied by the vendor and the construction of New control room also completed. The installation of equipment's and commissioning requires stoppage of Boilers. This will lead to stoppage of Urea plant and fertilizer demand as per GoI directions cannot be met. Hence, to meet the fertilizers needs of farming community as committed to GoI, it is planned to take up the installation during the ensuing Annual Turnaround activities which is planned during Apr 2023.	May 2023	7.02 Crores
The unit shall revamp the plant equipment and re- design the process to abate the pollution problem. To make zero Ammonia emission to Atm.	Requested M/s Haldor Topsoe, Process Licensor to study and recommend schemes to reduce pollution abatements. As it involves detailed study and preparation of drawings, it takes more time than expected. Hence, we approached M/s Engineers India Ltd for the design and installation of Ammonia flares	May 2025 (Installation alone requires 18 months)	Expected 20 Crores Approx.

MFL SHORT TERM ACTION PLAN

Action plan	Status as on 19.01.23	Expected Date of Completion	Investment (Rs)
Dedicated RO to treat cooling water blow down plant outlet.	**Job completed.** One of the existing RO stream already has been dedicated to treat CWBD. **New Plant:** Erection and installation of equipment's were completed in Dec 2021. The Commissioning by the vendor M/s Davey products is pending. Due to delay in commissioning, LD was imposed on the vendor. Further, the vendor was informed vide e-mail dt 21.07.2022 that their contract will be terminated if commissioning activities are not started on or before 31.07.2022 and alternate arrangement will be made for completing the project invoking NIT terms.	May 2023	4.4 Crores
Laying of new roads inside the Plant Inside premises	Internal road consists of Tar and Cement road reconstruction work is being carried out.	Sep 2023	Expected Rs 3.0 Crores Approx.

20/01/2023

DGM-Prodn & ESE (i/c)

T VANNIA PERUMAL
Dy. General Manager -
Production & ESE
Madras Fertilizers Limited
Manali, Chennai - 600 068

Annexure 2

MADRAS FERTILIZERS LIMITED

Expenses Towards Environmental Assessment /Improvement

Year	Item Description	Value (Rs)
2018-19	Air Quality Survey by TNPCB	91,100
	CAAQMS - AMC	1,48,897
	CAAQMS - CONSUMABLES	2,18,727
	CAAQMS - SPARES	12,72,411
	Stack Monitoring - Third Party	1,41,600
	Ammonia analyser @ urea demister & HF analyser in NPK C stack and uploading Data to TNPCB	40,00,000
2019-20	Air Quality Survey by TNPCB	1,09,700
	Stack Monitoring Kit	1,34,048
	CAAQMS - SPARES	7,15,305
	Detector Tubes	47,082
	Display (LED) Board	64,900
	Flue Gas Analyser	7,67,000
	High Volume Samplers	2,71,117
	Zero Air for Ozone Calibration	14,809
	CAAQMS - Span Gas Cylinders	10,089
	CAAQMS - SPARES	10,77,039
	CAAQMS - AMC	1,63,786
	Stack Monitoring - Third Party	1,86,303
	CAAQMS - Data Upload Software	47,200
	CAAQMS - Data Logger to LED Board	47,200
	LAN to Display Board	49,798
	PM Analyser @ NPK C Stack and uploading Data to TNPCB, Guindy	11,00,000
2020-21	CAAQMS - ETP - Repair Job	49,914
	CAAQMS - Data Upload Subscription	35,400
	CAAQMS - Five years CMC	76,61,288
	Installation of 11 Ammonia Sensors & uploading data to TNPCB	9,94,000
	Installation of PM analyser @ 110 ATA & PCB common stack	4,72,000
	Installation - CEMS @ Boiler 1 &2 stack @PM,SOx,NOx analyser	20,65,000
	Procurement of 3 CAAQMS Stations	2,13,06,137
	Installation of Ammonia Analyser at NPK C Train stack	24,78,000
2021-22	Conversion of Utility Boiler from Fuel Oil to RLNG Firing	7,01,51,000
	Dedicated RO Plant Installation	4,38,73,000
Grand Total		**15,97,63,850**

2019	Feed Stock Conversion from Naphtha to RLNG	100 Crores Approx.

26/01/2023

DGM-Production & ESE (i/c)

T VANNIA PERUMAL
Dy. General Manager -
Production & ESE
Madras Fertilizers Limited,
Manali, Chennai – 600 068

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Counsel for 16th Respondent

M/s Aiyar and Dolia

aiyaranddolia@gmail.com

9840989809