

राष्ट्रीय केमिकल्स एण्ड फर्टिलाइजर्स लिमिटेड

(भारत सरकार का उपक्रम)
साथ बढ़ें समृद्धि की ओर



Rashtriya Chemicals & Fertilisers Limited

(Government of India Undertaking)
Let us grow together

1462

ISO 9001-2015, ISO 14001-2015, ISO 45000-2018 Compliant

थळ इकाई, थळ, तालुका अलिबाग, जिला रायगड (महाराष्ट्र) पिन - 402 208.

THAL UNIT, THAL, TALUKA ALIBAG, DIST. RAIGAD (MAHARASHTRA) PIN - 402 208.

• फॅक्स : 02141 - 238206 / 238091 • FAX : 02141-238206 / 238091

Website : www.rcflltd.com CIN L24110MH1978GOI020185

TH / 90 / RCF / Project / 11 / 2023

25.11.2023

To,

Additional Director,
Ministry of Environment & Forests, Climate Change,
Indira Paryavaran Bhavan, Aliganj, Jorbagh Road,
New Delhi - 110 003.

Sub: Submission of Compliance Report of Installation of Gas Turbine Generator and Heat Recovery Steam Generator under energy reduction scheme at Tehsil Alibag, District Raigad, Maharashtra by Rashtriya Chemicals & Fertilizers Ltd. MOEF & CC Memorandum No. F. No. J-11011/392/2014-IA-II (I) dated 10th February 2016, For the period from April 2023-September 2023.

Ref: 1) MOEF Office Memorandum No. J-11011/392/2014-IA-II (I) dated 10th February 2016.

Dear Sir,

We submit herewith the compliance report for proposed Project titled "Installation of Gas Turbine Generator and Heat Recovery Steam Generator" under energy reduction scheme at Tehsil Alibag, District Raigad, and Maharashtra by Rashtriya Chemicals & Fertilizers Ltd. MOEF & CC Memorandum No. F. No. J-11011/392/2014-IA-II (I) dated 10th February 2016 issued by Ministry of Environment, Forest & Climate Change, Govt. of India, New Delhi.

Please find enclosed herewith point-wise compliance status of various stipulations with supporting documents.


पंजीकृत कार्यालय : प्रियदर्शिनी, ईस्टर्न एक्सप्रेस हायवे, सायन मुंबई - 400 022.

REGD. Office : PRIYADARSHINI, EASTERN EXPRESS HIGHWAY, SION, MUMBAI-400 022.

हम हिन्दी में पत्राचार का स्वागत करते हैं ।

Enclosed the reports of Monitoring of Environmental parameters like Ambient Air, Stack emissions, liquid effluent, noise etc. that are conducted on regular basis for existing plants as per statutory norms.

Thanking You.

ए. एम. खाडिलकर
A. M. Khadilkar
कार्यपालक निदेशक (थल)
Executive Director (Thal)
राष्ट्रीय केमिकल्स एंड फर्टिलाइजर्स लिमिटेड, थल
Rashtriya Chemicals & Fertilizers Limited, Thal
Yours faithfully,

(A.M. Khadilkar)
Executive Director (Thal)
RCF Thal Unit

Enclosures:

- 1) Monitoring Report Data Sheet.
- 2) Compliance Report Point Wise in tabular form with annexure I to IX

CC: MPCB, CPCB- for information please.

To,
Additional Director,
Ministry of Environment & Forests, and Climate Change
Indira Paryavaran Bhavan, Aliganj, Jorgagh Road,
New Delhi - 110 003.

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Website : www.rcfltd.com CIN L24110MH1978GOI020185

TH / 90 / RCF / Project / 11 / 2023

25.11.2023

To,

Director,
Ministry of Environment, Forests & Climate Change,
Regional Office, (WCZ), New Secretariat Building,
(Opposite Old VCA Stadium),
Ground Floor, East Wing, Civil Lines,
Nagpur - 440001. Maharashtra.

Sub: Submission of Compliance Report of Installation of Gas Turbine Generator and Heat Recovery Steam Generator under energy reduction scheme at Tehsil Alibag, District Raigad, Maharashtra by Rashtriya Chemicals & Fertilizers Ltd. MOEF & CC Memorandum No. F. No. J-11011/392/2014-IA-II (I) dated 10th February 2016, for the Period from April 2023-September 2023.

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Please find enclosed herewith point-wise compliance status of various stipulations with supporting documents.

पंजीकृत कार्यालय : प्रियदर्शिनी, ईस्टर्न एक्सप्रेस हायवे, सायन मुंबई - 400 022.

REGD. Office : PRIYADARSHINI, EASTERN EXPRESS HIGHWAY, SION, MUMBAI-400 022.

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Thanking You.

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A. M. Khadilkar
कार्यपालक निदेशक (थल)
Executive Director (Thal)
राष्ट्रीय केमिकल्स एंड फर्टिलाइजर्स लिमिटेड, थल
Rashtriya Chemicals & Fertilizers Limited, Thal

Yours faithfully,



(A.M. Khadilkar)
Executive Director (Thal)
RCF Thal Unit

Enclosure:

- 1) Monitoring Report Data Sheet.
- 2) Compliance Report Point Wise in tabular form with annexure I to IX

CC: for information please.

To,
Director,
Ministry of Environment, Forests & Climate Change,
Regional Office, (WCZ), New Secretariat Building,
(Opposite Old VCA Stadium),
Ground Floor, East Wing, Civil Lines,
Nagpur - 440001. Maharashtra.

Monitoring the Implementation of Environmental Safeguards
Ministry of Environment & Forest
Western Region, Regional Office, Nagpur

MONITORING REPORT
PART - I
DATA SHEET
RASHTRIYA CHEMICALS AND FERTILISERS LTD, THAL UNIT

1.	Project type : River-valley/Mining/Industry/Thermal/Nuclear/Other (specify)	Industry
2.	Name of the project	Installation of Gas Turbine Generator and Heat Recovery Steam Generator under energy reduction scheme at Tehsil Alibag, District Raigad, Maharashtra by M/s. Rashtriya Chemicals & Fertilizers Ltd.
3.	Clearance letter (s)/OM No. and date	J-11011/392/2014-IA. II (I) dated 10.02.2016.
4.	Location: a) District (s) b) State (s) c) Location Latitude/Longitude	Raigad Maharashtra longitude 72°52'38" East and latitude 18°42'19" North
5	Address for correspondence a) Address of the Head of the Unit (with Pin Code & telephone/ telex/ fax numbers) b) Address of the General Manager (with Pin Code & telephone/ telex/ fax numbers)	Shri. A M Khadilkar Executive Director (Thal) RCF Thal Vaishet Dist Raigad, Maharashtra Pin 402208 Phone No 02141238001 Fax No 02141 238206 Mrs. Jyoti Patil General Manager (Proj/TS/Lab/SGP/WS & PHS) RCF Thal -Vaishet Dist. Raigad Maharashtra Pin 402208 Phone No 02141-238003 Fax No 02141 238206
6.	Salient features a) Of the project b) Of the Environmental management plans.	a) Gas Turbine Generator 2 nos. of 32 MW capacity each. b) Heat Recovery Steam Generator 2 nos. of 100 TPH capacity each.

	c) Environment Management plan	c) All emissions shall be below prescribed norms. Flare stacks shall be installed for GTG/HRSG plant. Stacks of adequate height shall be installed for flue gasses to ensure proper dispersion. All condensates shall be recycled after proper treatment. The treated effluent shall be disposed off through existing marine outfall line.
7.	Breakup of the project area a) Submergence area: forest & non-Forest b) Others	a) Nil b) Within boundaries of existing plot.
8.	Breakup of the project affected population with enumeration of those losing houses/dwelling units only agricultural land only Both dwelling units & agricultural land & landless laborers/artisans: a) SC, ST/Adivasi b) Others (Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details & year of survey)	Not applicable. This project is installed within the existing factory premises, therefore no land acquisition is involved.
9.	Financial details: Projects cost as originally planned and subsequent revised estimates and the year of price reference.	Estimated Project cost was Rs. 362.82 crores. The revised Project cost is Rs. 482.85 crores. Year of reference is 2016.
10.	Forest land requirement a) The status of approval for diversion of forest land for non-forestry use b) The status of clearing felling c) The status of compensatory afforestation, if any d) Comments on the viability & sustainability of compensatory afforestation program in the light actual field experience so far	a) NA b) NA c) NA d) NA
11.	The status of clear felling in non-forest areas (Such as submergence area or reservoir, approach Roads.), if any with quantitative information required.	NA
12.	Status of construction (Actual &/or planned) a) Date of commencement (Actual &/or planned)	The zero date of the project was 12 th February 2016. (Date of Letter of Intent issued to M/s. Thermax Ltd.) The date of commencing the land development work was 11 th March 2016.

	b) Date of completion (Actual &/or planned)	Civil and Mechanical erection work has been completed The project work is completed. Plant is commissioned.
13.	Reason for the delay. The project is yet to start.	NA



Signature of Head of the Unit

25.11.2023

Compliance Report on Proposed Project of "Installation of Gas Turbine Generator and Heat Recovery Steam Generator under energy reduction scheme at Tehsil Alibag, District Raigad, and Maharashtra by Rashtriya Chemicals & Fertilizers Ltd." MOEF & CC Memorandum No. F. No. J-11011/392/2014-IA-II (I) dated 10th February 2016.

A. SPECIFIC CONDITIONS:

Sr. No.	CONDITIONS	COMPLIANCE
i)	Adequate stack height shall be provided to Gas Turbine Generator with Heat recovery steam generator (HRSG). Low NOx burners shall be provided to control NOx emissions.	Adequate stack height provided to Gas Turbine Generator with Heat recovery steam generator (HRSG). Low NOx burners are provided to control NOx emissions.
ii)	As proposed, Specific energy consumption for the Fertilizer Plant shall be 5.446 Gcal/MT of Urea.	Complied. Specific energy consumption, less than 5.446 Gcal/MT of Urea for the Fertilizer Plant is achieved.
iii)	Efforts shall be made to bring down the water consumption up to 6 m3 per MT of Urea Production.	Complied. Water consumption, less than 6 m3 per MT of Urea Production is achieved.
iv)	Treated Effluent shall be passed through Guard Pond / holding pond before discharging outside the plant premises and Automatic / on line monitoring system (24 x 7 monitoring devices) for flow and relevant pollutants (i. e. pH, ammonical nitrogen, nitrate nitrogen etc) shall be provided high level alarm system. The data to be made available to the respective SPCB and in the company's website.	On line Monitoring system for monitoring of pH, Flow & Ammonical Nitrogen is already installed and online data is continuously uploaded on CPCB/MPCB server and RCF website. Complied.
v)	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines implemented.

B. GENERAL CONDITIONS:

Sr. No.	CONDITIONS	COMPLIANCE
i)	The project authorities shall strictly adhere to the stipulations made by the MPCB.	Complying
ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Complying
iii	The project authorities must strictly comply with the rules and regulations under Manufacture, storage and import of Hazardous Chemicals Rules, 2000 as amended subsequently. Prior approval from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained, wherever applicable.	Complying
iv	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time)	The overall noise levels in and around the plant area are kept within the standards by providing noise control measures on all sources of noise generation as enclosed in Annexure-VI .
v	A separate Environment management cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	A separate Environment management cell equipped with full fledged laboratory facilities is already set up to carry out the Environmental Management and Monitoring liquid effluent parameters.
vi	Adequate funds shall be earmarked towards capital cost and recurring cost / annum for environment pollution control measures and shall be used to implement the conditions stipulated by the Ministry of Environment & Forest as well as the State Government along with the implementation schedule for all the conditions stipulated herein.	Adequate funds are provided towards Capital and recurring expenditure for environment pollution control. Funds will be used for implementing conditions stipulated by the Ministry of Environment & Forest and the State Government. The funds so provided will not be diverted for any other purposes.

	The funds so provided shall not be diverted for any other purposes.	
vii	The Regional office of this Ministry/Central Pollution Control Board/ State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	A six monthly compliance report and the monitored data along with statistical interpretation is being regularly submitted to Regional office of the Ministry and State Pollution Control Board. (Monitoring data is enclosed in Annexure I -A/B/C to VI)
viii	A copy of clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parishad/ Municipal Corporation, Urban local body and the local NGO, if any, from who suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	A copy of clearance letter has been already sent to concern Panchayat, Zila Parishad. The clearance letter has also been posted on the web site of our company.
ix	The project proponent shall upload the status of the compliance conditions, also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB & SPCB. The criteria pollutant levels namely; PM-10, PM-2.5, SO ₂ , NO _x HC (Methane & Non Methane). VOCs (Ambient level as well as stack emissions) or critical sectorial parameters, indicated for the projects shall be monitored and displayed at a convenient location near main gate of the company in the public domain.	The status of the six monthly compliance conditions report including results of monitored data is uploaded on company website and is also updated the same periodically. It is sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB & SPCB. The criteria pollutant levels namely, PM-10, PM-2.5, SO ₂ , NO _x are monitored regularly and displayed at a convenient location near main gate of the company.
x	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of the monitoring data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective zonal office of CPCB and the SPCB. The Regional Office of this Ministry / CPCB / SPCB shall monitored the stipulated conditions.	The project proponent is submitting six monthly reports on the status of the compliance of the stipulated environmental conditions including results of the monitoring data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective zonal office of CPCB and the SPCB.
xi	The environmental statement for each financial year ending 31 st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board	The environmental statement for financial year 2022-23 in Form-V is submitted online to State Pollution Control Board as prescribed under the

	as prescribed under the Environmental (Protection) Rules, 1986, as amended Subsequently, shall be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	Environmental (Protection) Rules, 1986. The status of compliance of environmental clearance conditions is being sent to respective Regional Offices of MoEF & CC.
xii	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office.	Press advertisement was issued in three local newspapers which are widely circulated in the region out of which one is in the vernacular language of the locality.
xiii	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	The date of financial closure is 4 th March 2016 (Work order issued to M/s. Thermax Ltd) and final approval of the project from RCF Board is 28 th January 2016. The date of commencing the land development work is 11 th March 2016. The revised estimated cost of the project is 482.85 crores

Annexure-I A

RASHTRIYA CHEMICALS & FERTILIZERS LIMITED
THAL UNIT
STEAM GENERATION PLANT – STACK EMISSION
April 2023-September 2023

MONTH	PARAMETERS / UNIT	FIRST SAMPLE	SECOND SAMPLE
APRIL 2023	TPM (mg / m ³)	13.6	15.2
	SO ₂ (mg / m ³)	4.1	6.2
	SO ₂ (ppm)	1.43	2.17
	NO _x (ppm)	5.06	4.1
MAY 2023	TPM (mg / m ³)	18.3	14.9
	SO ₂ (mg / m ³)	4.1	6.2
	SO ₂ (ppm)	1.43	2.17
	NO _x (ppm)	2.73	4.04
JUNE 2023	TPM (mg / m ³)	18.1	14.8
	SO ₂ (mg / m ³)	8.2	4.1
	SO ₂ (ppm)	2.87	1.44
	NO _x (ppm)	5.06	3.5
JULY 2023	TPM (mg / m ³)	18.3	27.1
	SO ₂ (mg / m ³)	8.2	4.1
	SO ₂ (ppm)	2.87	1.43
	NO _x (ppm)	5.06	7.49
AUGUST 2023	TPM (mg / m ³)	21.1	20.3
	SO ₂ (mg / m ³)	6.2	4.1
	SO ₂ (ppm)	2.17	1.43
	NO _x (ppm)	5.5	5.55
SEPTEMBER 2023	TPM (mg / m ³)	15.1	18.7
	SO ₂ (mg / m ³)	8.2	6.2
	SO ₂ (ppm)	2.87	2.17
	NO _x (ppm)	6.6	4.5

22/10/23
25-11-2023

RASHTRIYA CHEMICALS & FERTILIZERS LIMITED
THAL UNIT

AMMONIA PLANT – STACK EMISSION
APRIL 2023 - SEPTEMBER 2023

MONTH	PARAMETERS	REFORMER STACK			
		First Sample		Second Sample	
		Line - I	Line-II	Line - I	Line-II
APRIL 2023	TPM (mg / m3)	S/D	11.1	12.8	13.7
	SO ₂ (mg / m3)	S/D	4.1	4.1	6.2
	NO _x (mg/m3)	S/D	9.2	3.5	11.2
MAY 2023	TPM (mg / m3)	16.2	11.2	13.4	13.6
	SO ₂ (mg / m3)	6.2	4.1	4.1	6.2
	NO _x (mg/m3)	9.2	8.3	6.3	10.4
JUNE 2023	TPM (mg / m3)	16.3	11.5	19.1	18.1
	SO ₂ (mg / m3)	6.2	4.1	4.1	6.2
	NO _x (mg/m3)	9.4	8.4	5.6	10.4
JULY 2023	TPM (mg / m3)	15.2	13.3	25.0	18.7
	SO ₂ (mg / m3)	6.2	4.1	4.1	8.2
	NO _x (mg/m3)	8.2	7.2	14.8	13.6
AUGUST 2023	TPM (mg / m3)	15.1	17.3	12.7	14.1
	SO ₂ (mg / m3)	6.2	4.1	4.1	6.2
	NO _x (mg/m3)	10.2	11.3	9.2	8.4
SEPTEMBER 2023	TPM (mg / m3)	15.8	12.5	12.1	15.5
	SO ₂ (mg / m3)	4.1	4.1	4.1	6.2
	NO _x (mg/m3)	11.2	11.2	1.2	8.2

*S/D- Under Shutdown

25-11-2023

Annexure-I C

RASHTRIYA CHEMICALS & FERTILIZERS LIMITED
THAL UNIT

UREA PLANT – STACK EMISSION
APRIL 2023 - SEPTEMBER 2023

MONTH	PARAMETERS	FIRST SAMPLE			SECOND SAMPLE		
		11	21	31	11	21	31
APRIL 2023	TPM (mg / m ³)	20.5	S/D	16.6	25.1	S/D	21.8
	TPM (ppm)	16.4	S/D	13.3	20.1	S/D	17.44
	NH ₃ (ppm)	34	S/D	31.76	27.93	S/D	26.75
MAY 2023	TPM (mg / m ³)	18.8	16.9	19.2	15.1	18.1	22.1
	TPM (ppm)	15.04	13.52	15.36	12.1	14.5	17.7
	NH ₃ (ppm)	33.6	25.3	31.75	27.8	30.44	27.4
JUNE 2023	TPM (mg / m ³)	19.8	23.2	20.1	14.1	17.5	16.6
	TPM (ppm)	15.84	18.56	16.1	11.3	14.0	13.3
	NH ₃ (ppm)	33.2	35.0	31.9	27.5	29.5	35.7
JULY 2023	TPM (mg / m ³)	11.2	12.5	13.1	15.8	17.0	13.1
	TPM (ppm)	8.96	10.0	10.5	12.64	13.6	10.5
	NH ₃ (ppm)	21.2	25.4	29.5	39.53	37.11	30.44
AUGUST 2023	TPM (mg / m ³)	12.1	14.4	16.6	16.6	17.2	18.3
	TPM (ppm)	9.68	11.52	13.28	13.28	13.76	14.64
	NH ₃ (ppm)	35.7	29.9	34.5	42.4	37.55	40.2
SEPTEMBER 2023	TPM (mg / m ³)	18.5	20.2	16.3	14.5	16.8	19.5
	TPM (ppm)	14.8	16.16	13.04	11.6	13.44	15.6
	NH ₃ (ppm)	34	38.6	35.7	38.9	34.4	39.66

*S/D- Under Shutdown

25/11/23
25-11-2023

Annexure-II

RASHTRIYA CHEMICALS AND FERTILIZERS LTD.
THAL UNIT

AMBIENT AIR DATA (Inside factory)

APRIL 2023 - SEPTEMBER 2023

MONTH	SO ₂	AMMONIA	NO _x	PM - 10	P M - 2.5
APRIL 2023	14.88	52.77	27.54	44.65	15.95
MAY 2023	16.41	17.96	22.79	41.63	20.81
JUNE 2023	15.81	15.12	20.45	31.98	18.60
JULY 2023	23.05	29.69	29.65	46.86	20.98
AUGUST 2023	10.08	15.89	16.72	19.45	10.40
SEPTEMBER 2023	9.53	18.35	18.21	18.42	12.16
N.A.A.Q. STANDARDS (µg/m ³)	80	400	80	100	60

* VALUES FOR SO₂, NH₃, NO_x, PM-10, PM-2.5 ARE IN µg/m³

25/11/23

Annexure-III

RASHTRIYA CHEMICALS AND FERTILIZERS LTD.
THAL UNIT
LIQUID EFFLUENT DISCHARGE TO SEA AFTER TREATMENT
APRIL 2023 - SEPTEMBER 2023

PARAMETERS / MONTH	APRIL 2023	MAY 2023	JUNE 2023	JULY 2023	AUG. 2023	SEPT.2023	MPCB LIMIT
pH	6.81	7.86	7.15	7.39	6.7	7.38	6.5 – 8.5
CYANIDE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.1
FREE AMMONIA	0.7	0.62	0.5	0.72	0.5	0.4	2
AMMONICAL NITROGEN	27	22.24	18.24	20.24	25.04	21.12	75
T. K. N	38	34.48	27.31	32.24	26.16	22.24	75
NITRATE NITROGEN	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	10
TOTAL SUSPENDED SOLIDS	24	86	32	20	32	62	100
OIL AND GREASE	4	6.2	5	4	6.8	5	10
DISSOLVED OXYGEN	5.3	5.8	5.1	6.5	5.2	6.2	>5.0
C O D	104	90	71	98	87	51	250
B O D	25	16.3	15	21.8	24	14.2	100
VANADIUM	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
ARSENIC	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.2
HEXAVALENT CHROMIUM	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.1
PHOSPHATE	0.36	1.54	2.1	< 0.1	0.61	2.64	5

* All figures are in mg/ltr. Except pH

24/11/23
25-11-2023

Annexure-IV

RASHTRIYA CHEMICALS AND FERTILIZERS LTD.
THAL UNIT

WATER CONSUMPTION

APRIL 2023 - SEPTEMBER 2023

MONTH	INDUSTRIAL	DOMESTIC	TOTAL
APRIL 2023	27852	6500	34353
MAY 2023	36994	6408	43402
JUNE 2023	36757	6450	43207
JULY 2023	37701	6415	44116
AUGUST 2023	32175	5849	38024
SEPTEMBER 2023	37615	6110	43725

WATER CONSUMPTION IN m³per day24519 -
25-11-2023

Annexure-V A

RASHTRIYA CHEMICALS AND FERTILIZERS LTD.
THAL UNIT
SURROUNDING VILLAGE AIR QUALITY DATA
APRIL 2023 - SEPTEMBER 2023

MONTH	Parameters	Agarsure	Satirje	Kihim	Tudal	Lonare	Vaishet	Sport Com Alibaug
APR 23	SO ₂	21.2	19.2	18.24	24.2	19.02	21.00	19.25
	NO _x	27.30	26.52	24.80	26.10	21.00	22.53	27.03
	NH ₃	29.10	28.80	28.12	27.6	27.80	28.20	29.60
	PM 2.5	20.08	22.72	19.69	18.72	20.12	20.75	22.72
	PM 10	48.12	50.28	45.45	50.12	45.45	50.45	49.20
MAY 23	SO ₂	21.22	19.55	17.24	22.2	17.02	23.12	17.20
	NO _x	25.14	27.52	24.80	25.10	22.02	22.53	26.12
	NH ₃	27.24	29.80	28.12	27.6	26.92	29.01	28.52
	PM 2.5	19.70	22.72	20.69	19.47	21.54	21.75	19.20
	PM 10	50.50	50.28	50.02	50.12	51.78	52.28	52.42
JUNE 23	SO ₂	24.12	21	23.42	24.2	19.02	22	19.25
	NO _x	29	26.52	24	26.10	22	24.20	27.03
	NH ₃	30.02	29.10	29.24	29.2	28.10	27.14	29.60
	PM 2.5	21.82	22.72	20.20	18.72	21.12	21.64	22.72
	PM 10	56.54	52.20	54.20	56	52.40	68.12	49.20
JULY 23	SO ₂	22.98	20.76	22.02	23.01	20.01	21.01	19.01
	NO _x	29.58	28.02	25.12	24.84	22.12	25	25.12
	NH ₃	30.20	30.00	29.28	29.28	29.01	28.01	29.01
	PM 2.5	18.24	20.24	21.42	21.42	22.34	24.80	22.22
	PM 10	58.47	57.12	56.12	58.20	54.24	68.54	50.24
AUG 23	SO ₂	21.55	21.69	21.15	19.50	21.46	23.24	19.73
	NO _x	24.75	25.72	31.00	28.17	23.04	28.28	22.73
	NH ₃	28.84	28.55	26.96	31.89	28.84	30.29	29.93
	PM 2.5	26.51	18.93	34.09	22.72	26.51	34.09	18.93
	PM 10	53.8	59.45	58.28	67.67	60.45	57.20	59.45
SEPT 23	SO ₂	31.00	28.17	24.56	22.89	23.04	28.28	22.73
	NO _x	30.65	30.69	27.96	27.89	36.12	31.23	31.08
	NH ₃	28.84	29.93	30.29	31.93	30.73	29.13	31.96
	PM 2.5	32.11	39.48	26.76	32.11	39.48	26.76	21.68
	PM 10	62.28	69.2	74.51	45.11	47.02	70.00	63.95

* VALUES FOR SO₂, NH₃, NO_x, PM-10, PM-2.5 ARE IN µg/m³

2451d -
25-11-2023

Annexure-V B

RASHTRIYA CHEMICALS AND FERTILIZERS LTD.

THAL UNIT

SURROUNDING VILLAGE AMBIENT AIR DATA

APRIL 2023 – SEPTEMBER 2023

	Respirable Particulate Matter	Carbon Monoxide	Non Methyl Hydrocarbons	Methyl Hydrocarbons	Aldehyde
12.06.2023	(µg/m ³)	(µg/m ³)	(ppm)	(ppm)	(ppm)
Agarsure	19.82	ND	ND	ND	ND
Satirje	22.16	ND	ND	ND	ND
Kihim	18.84	ND	ND	ND	ND
Tudal	19.20	ND	ND	ND	ND
vaishet	34.12	ND	ND	ND	ND
Lonare	21.96	ND	ND	ND	ND
Alibag	19.35	ND	ND	ND	ND
	Respirable Particulate Matter	Carbon Monoxide	Non Methyl Hydrocarbons	Methyl Hydrocarbons	Aldehyde
01.09.2023	(µg/m ³)	(µg/m ³)	(ppm)	(ppm)	(ppm)
Agarsure	22.72	ND	ND	ND	ND
Satirje	26.57	ND	ND	ND	ND
Kihim	26.51	ND	ND	ND	ND
Tudal	18.93	ND	ND	ND	ND
vaishet	34.09	ND	ND	ND	ND
Lonare	27.02	ND	ND	ND	ND
Alibag	20.64	ND	ND	ND	ND

24/11/23 -
25.11.2023

Annexure-VI

**RASHTRIYA CHEMICALS AND FERTILIZERS LTD.
THAL UNIT**

Ambient Noise Level data at the Boundary and the 7 nearby Villages.

APRIL 2023 - SEPTEMBER 2023

MONTH	RCF Material Gate	Main Gate	Tudal Gate	Boris	Lonere	RCF Navgaon	Vaishet
APRIL 2023	60.17	58.15	54.9	53.67	55.02	51.8	54.7
MAY 2023	61.3	59.57	55.15	52.22	55.32	51.75	55.15
JUNE 2023	59.65	57.42	56.3	53.42	54.75	53.05	55.92
JULY 2023	56.1	56.5	56.05	53.62	53.75	50.35	55.6
AUGUST 2023	55.52	56.05	56.17	53.5	54	52.35	55.37
SEPTEMBER 2023	56.05	55.17	54.77	53.2	55.1	55.12	54.82

* All figures are in dBA

24/5/24
25-11-2023



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2023

Unique Application Number

MPCB-ENVIRONMENT_STATEMENT-0000062372

Submitted Date

30-09-2023

PART A

Company Information

Company Name

Rashtriya Chemicals and Fertilizers Limited,
Thal Unit

Application UAN number

MPCB-CONSENT-0000063614

Address

RCF LTD, THAL, TALUKA -ALIBAG, RAIGAD,
MAHARASHTRA

Plot no

Survey No. 2

Taluka

Alibag

Village

800 ACRES

Capital Investment (In lakhs)

174775.011

Scale

L.S.I

City

Raigad

Pincode

402209

Person Name

Sanjeev Narahar Haraliker

Designation

General Manager (ETP) I/c

Telephone Number

9423822666

Fax Number

02141238206

Email

snharaliker@rcfltd.com

Region

SRO-Raigad II

Industry Category

Red

Industry Type

R52 Fertilizer(basic) (excluding
formulation)

Last Environmental statement submitted online

yes

Consent Number

Format1.0/CAC/UAN
No.0000155177/CR/2303002209

Consent Issue Date

2023-03-28

Consent Valid Upto

2027-12-31

Establishment Year

1984

Date of last environment statement submitted

Sep 29 2022 12:00:00:000AM

Industry Category Primary (STC Code) & Secondary (STC Code)

Product Information

Product Name

Heavy Water Plant (Classified)

Consent Quantity

110

Actual Quantity

0

UOM

MT/A

Di-methyl Formamide & Formic Acid Plant

12500

0

MT/A

Methyl Amine Plant

11400

11175

MT/A

Di-methyl Acetamide Plant

5000

1942

MT/A

Power (Turbo-generator) - Consent quantity MWH (2x15MW)

262800

3876.43

Mwh

Ammonia

1314000

1218700

MT/A

Neem Coated Urea	2233800	1880000	MT/A
Argon	18980	5198	MT/A
Carbon Monoxide Plant	28800	0	CMD
Steam Generation	4818000	1407217	MT/A
Power (Gas Turbine Generator) - MWH(2x32MW)	560640	357175.092	Mwh
Steam Generation (HRSG)	1752000	1070970	MT/A

By-product Information

By Product Name	Consent Quantity	Actual Quantity	UOM
Nil	0	0	MT/A

Part-B (Water & Raw Material Consumption)

1) Water Consumption in m3/day

Water Consumption for Process	Consent Quantity in m3/day	Actual Quantity in m3/day	
	800.00	328.76	
Cooling	54200.00	37488.44	
Domestic	10000.00	6281.98	
All others	0.00	0.00	
Total	65000.00	44099.18	

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Trade Effluent	12000	7472	CMD
Domestic effluent	143	90	CMD

2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)

Name of Products (Production)	During the Previous financial Year	During the current Financial year	UOM
Heavy Water Plant : Classified	0	0	Ton/Ton
Ammonia Plant	4.350	4.09	Ton/Ton
Steam Generation Plant	2.958	3.05	Ton/Ton
Di-methyl Formamide & Formic Acid	0	0	Ton/Ton
Methyl Amines Plant (MAP)	8.095	7.40	Ton/Ton
Di-methyl Acetamide (DMAC)	3.635	2.76	Ton/Ton
Urea plant	2.156	2.03	Ton/Ton
Argon	12.410	3.68	Ton/Ton
Carbon Monoxide Plant (CO)	0	0	Ton/Ton

3) Raw Material Consumption (Consumption of raw material per unit of product)

Name of Raw Materials	During the Previous financial Year	During the current Financial year	UOM
Methanol - MAP	1.496	1.47	Ton/Ton
Sulfuric Acid	0.000356	0.00038	Ton/Ton
Acetic Acid	0.726	0.719	Ton/Ton

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
Natural Gas - unit MMSCMD	4.9	3.76	SCM/Day

Part-C

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

[A] Water

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour	Percentage of variation from prescribed standards with reasons		
	Quantity	Concentration	%variation	Standard	Reason
pH	0	7.62	NIL	6.5-9.0	NA
Ammonical Nitrogen	143.54	19.21	Nil	50 mg/lit	NA
Total Kjeldhal Nitrogen	214.89	28.76	Nil	75 mg/lit	NA
Nitrate Nitrogen	11.96	1.60	Nil	20 mg/lit	NA
Suspended Solids	369.86	49.50	Nil	100 mg/lit	NA
Oil & Grease	33.03	4.42	Nil	10 mg/lit	NA
COD	826.93	110.7	Nil	250 mg/lit	NA
BOD	193.38	25.88	Nil	100 mg/lit	NA
Phosphate (as P)	11.28	1.51	Nil	5 mg/lit	NA
Free Ammonical Nitrogen	11.43	1.53	Nil	2.0 mg/lit	NA
Cyanide	0	0	Nil	0.1 mg/lit	NA
Vanadium (as V)	0	0	Nil	0.2 mg/lit	NA
Arsenic	0	0	Nil	0.2 mg/lit	NA
Fluoride	0	0	Nil	10 mg/lit	NA
Hexavalent Chromium as Cr	0	0	Nil	0.1 mg/lit	NA
Total Chromium as Cr	0	0	Nil	2 mg/lit	NA
Mercury	0	0	Nil	0.01 mg/lit	NA
Lead	0	0	Nil	2 mg/lit	NA
Copper	0	0	Nil	3 mg/lit	NA
Nickel	0	0	Nil	5 mg/lit	NA
Bio- Assay test on fish shall show 90% survival in 96 hours in 100% effluent	0	92.83	-----	-----	NA
Sodium	128.82	17.24	Nil	60%	NA

[B] Air (Stack)

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/NM3)	Percentage of variation from prescribed standards with reasons		
	Quantity	Concentration	%variation	Standard	Reason
Particulate Matter from Boiler stack	121.61	12.06	Nil	150 mg/nm3	NA

Nox from Boiler stack	74.72	7.41	Nil	50 ppm	NA
SO2 from Boiler stack	50.62	5.02	Nil	5 ppm	NA
TPM from Urea Prilling Tower	23.42	20.08	Nil	50 ppm	NA
NH3 from Urea Prilling Tower	27.22	23.34	Nil	50 ppm	NA
NOx from Reformer	78.56	7.35	Nil	50 ppm	NA
SO2 from Reformer	59.64	5.58	Nil	50 ppm	NA

Part-D

HAZARDOUS WASTES

1) From Process

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
18.1 Spent catalyst	429.28	63.78	MT/A
5.1 Used or spent oil	61.17	626.99	MT/A
Other Hazardous Waste	0	0.7	MT/A

2) From Pollution Control Facilities

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
35.3 Chemical sludge from waste water treatment	5	5	MT/A

Part-E

SOLID WASTES

1) From Process

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
Civil waste	17	14	MT/A
Metal scrap	157.7	38.8	MT/A
HDPE container / drums	0	0	Nos./Y
Metal drums	0	1132	Nos./Y
E-waste	0	0	MT/A

2) From Pollution Control Facilities

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
NIL	0	0	MT/A

3) Quantity Recycled or Re-utilized within the unit

Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0000	0000	Mtrs/Y
0	0000	0000	MT/A
0	0000	0000	MT/A
0	0000	0000	Nos./Y
0	0000	0000	MT/A

Part-F

Please specify the characteristics(in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

1) Hazardous Waste

Type of Hazardous Waste Generated	Qty of Hazardous Waste	UOM	Concentration of Hazardous Waste
5.1 Used or spent oil	626.99	MT/A	NA
18.1 Spent catalyst	63.78	MT/A	NA
35.3 Chemical sludge from waste water treatment	5	MT/A	NA

2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
Civil waste	14	MT/A	NA
Metal scrap	38.8	MT/A	NA
HDPE drums	0	Nos./Y	NA
Metal drums	1132	Nos./Y	NA
E-waste	0	MT/A	NA

Part-G

Impact of the pollution Control measures taken on conservation of natural resources and consequently on the cost of production.

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
Raw water, Natural Gas, Power	2021.53	123073	0	259261	3276	0

Part-H

Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution.

[A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
Installation of 3 nos. of Energy efficient motors against conventional motors in Urea Plant.	Reduction in Power consumption	6.39
Installation of 5 nos. of Energy efficient motors against conventional motors in Ammonia Plant..	Reduction in Power consumption	7.90
Installation of motor driven Nitrogen compressor inplace of Steam driven compressor in Argon plant.	Reduction in Power consumption	1925
Installation of 2 nos. of Hybrid powered roof ventilator in Product handling Plant.	Reduction in Natural resources	6.19
30 KWp Solar grid connected system installtion on water reservoir no.4	Reduction in Natural resources	15.24
Installation of 6 nos. solar pipe light on TG roof.	Reduction in Power consumption	2.76
O&M Effluent Treatment Plant & Monitoring System	Effluent Treatment and Pollution Control	72
Plantation,Greenery & horticulture	Improvement in Environment & Aesthetic	191.87
Maintainence & repair of Road in and around factory	Reduction in Fugitive emission	207

[B] Investment Proposed for next Year

<i>Detail of measures for Environmental Protection</i>	<i>Environmental Protection Measures</i>	<i>Capital Investment (Lacks)</i>
ETP Up-gradation scheme	ETP up-gradation project job in progress	1500

Part-I

Any other particulars for improving the quality of the environment.

Particulars

Saving due to in-built pollution control system is Rs. 0.559 Crores per day.

Name & Designation

SANJEEV NARAHAR HARALIKAR - General Manager (ETP) I/c , RCF THAL

UAN No:

MPCB-ENVIRONMENT_STATEMENT-0000062372

Submitted On:

30-09-2023