

# राष्ट्रीय केमिकल्स एण्ड फर्टिलाइजर्स लिमिटेड

(भारत सरकार का उपक्रम  
साथ बढ़ते समृद्धि की ओर)



# Rashtriya Chemicals & Fertilisers Limited

(Government of India Undertaking)  
Let us grow together

1342

ISO 9001-2008, ISO 14001-2004, OHSAS 18001-2007 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.rcfltd.com CIN L24110MH1978GOI020185

CIN L24110MH1978GOI020185

TH / 90 / RCF / Project / 10 / 2017

25<sup>th</sup> October 2017

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 10<sup>th</sup> February 2016, for the period from April 2017 – September -2017.

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

Dear Sir,

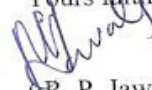
We submit herewith the compliance report for proposed Project titled "Installation of Gas Turbine Generator and Heat Recovery Steam Generator" under energy reduction scheme at Tehsil Alibag, District Raigad, Maharashtra by Rashtriya Chemicals & Fertilizers Ltd. MOEF & CC Memorandum No. F. No. J-11011/392/2014-IA-II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

पंजीकृत कार्यालय : प्रियदर्शिनी, ईस्टन एक्सप्रेस हायवे, सायन मुंबई - 400 022.  
REGD. Office : PRIYADARSHINI, EASTERN EXPRESS HIGHWAY, SION, MUMBAI-400 022.  
हम हिन्दी में पत्राचार का स्वागत करते हैं ।

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

Yours faithfully,



(R .P. Jawale )  
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 : for information please.

To,  
Mr. Lalit Bokolia,  
Additional Director,  
Ministry of Environment & Forests,  
Indira Paryavaran Bhavan, Aliganj, Jorgagh Road,  
New Delhi - 110 003.

# राष्ट्रीय केमिकल्स एण्ड फर्टिलाइजर्स लिमिटेड

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Additional Director,  
Ministry of Environment & Forests,  
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 10<sup>th</sup> February 2016, for the period from April 2017 – September -2017.

Ref: 1) MOEF Office Memorandum No. J-11011/392/2014-IA-II (I) dated 10<sup>th</sup> 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, Maharashtra by Rashtriya Chemicals & Fertilizers Ltd. MOEF & CC Memorandum No. F. No. J-11011/392/2014-IA-II (I) dated 10<sup>th</sup> February 2016 issued by Ministry of Environment, Forest & Climate Change, Govt. of India, New Delhi.

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 ।

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

Yours faithfully,



(R.P. Jawale)  
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

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Director ,  
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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 CHEMICAS 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 Alibagh, 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 <sup>o</sup> 52'38" East and latitude 18 <sup>o</sup> 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. R.P. Jawale , Executive Director ( Thal ) RCF Thal Vaishet Dist Raigad, Maharashtra Pin 402208 Phone No 02141238001 Fax No 02141 238206  Shri A. V. Lonkar General Manager ( Project ) RCF Thal -Vaishet Dist. Raigad Maharashtra Pin 402208 Phone No 02141238210 Fax No 02141 238091

6.	<p>Salient features</p> <p>a) Of the project</p> <p>b) Of the Environmental management plans.</p> <p>c) Environment Management plan</p>	<p>a) Gas Turbine Generator 2 nos. of 32 MW capacity each.</p> <p>b) Heat Recovery Steam Generator 2nos. of 100 TPH capacity each.</p> <p>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.</p>
7.	<p>Break up of the project area</p> <p>a) Submergence area: forest &amp; non-Forest</p> <p>b) Others</p>	<p>a) Nil</p> <p>b) Within boundaries of existing plot.</p>
8.	<p>Break up of the project affected population with enumeration of those losing houses/dwelling units only agricultural land only Both dwelling units &amp; agricultural land &amp; landless laborers/artisans:</p> <p>a) SC, ST/Adivasi</p> <p>b) Others</p> <p>(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 &amp; year of survey)</p>	<p>Not applicable.</p> <p>This project is being installed within the existing factory premises, therefore no land acquisition is involved.</p>
9.	<p>Financial details:</p> <p>Projects cost as originally planned and subsequent revised estimates and the year of price reference.</p>	<p>Estimated Project cost was Rs. 362.82 crores. The revised Project cost is Rs. 494.0 crores. Year of reference is 2016.</p>
10.	<p>Forest land requirement</p> <p>a) The status of approval for diversion of forest land for non-forestry use</p> <p>b) The status of clearing felling</p> <p>c) The status of compensatory afforestation, if any</p> <p>d) Comments on the viability &amp; sustainability of</p>	<p>a) NA</p> <p>b) NA</p> <p>c) NA</p> <p>d) NA</p>



	compensatory afforestation program in the light actual field experience so far	
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)  b) Date of completion (Actual &/or planned)	The zero date of the project was 12 <sup>th</sup> February 2016. (Date of Letter of Intent issued to M/s. Thermax Ltd.) The date of commencing the land development work is 11 <sup>th</sup> March 2016. Civil and Mechanical erection work has been started.  The planned date of completion of project is 11 <sup>th</sup> December 2017.
13.	Reason for the delay. The project is yet to start.	NA

  
Signature of Head of the Unit

25<sup>th</sup> October 2017

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, Maharashtra by Rashtriya Chemicals & Fertilizers Ltd.” MOEF & CC Memorandum No. F. No. J-11011/392/2014-IA-II (I) dated 10<sup>th</sup> 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 will be provided to Gas Turbine Generator with Heat recovery steam generator (HRSG). Low NOx burners are designed to control NOx emissions.
ii)	As proposed, Specific energy consumption for the Fertilizer Plant shall be 5.446 Gcal/MT of Urea.	Specific energy consumption for the Fertilizer Plant is expected to be 5.446 Gcal/MT of Urea after successful implementation of the GTG / HRSG project
iii)	Efforts shall be made to bring down the water consumption up to 6 m3 per MT of Urea Production.	Water consumption is expected to be up to 6 m3 per MT of Urea Production after successful implementation of this project
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 data is uploaded on CPCB website. Possibility of installing on line monitoring Analyzer for Nitrate Nitrogen is being explored. The effluents from proposed project shall be pumped to existing ETP for treatment. The treated effluent passes through holding pond before getting discharged in to deep sea through Marine out fall line.
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 will be implemented.



**B. GENERAL CONDITIONS :**

<b>Sr. No.</b>	<b>CONDITIONS</b>	<b>COMPLIANCE</b>
<b>i)</b>	The project authorities shall strictly adhere to the stipulations made by the MPCB.	Agree to comply.
<b>ii)</b>	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.	Agree to comply.
<b>iii</b>	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.	Agree to comply wherever applicable.
<b>iv</b>	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.
<b>v</b>	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.
<b>vi</b>	Adequate funds shall be earmarked towards capital cost and recurring cost / annum for environment pollution control measures and shall be used to implement	Adequate funds are provided towards Capital and recurring expenditure for environment pollution control. Funds will be used for conditions stipulated by the Ministry of Environment & Forest and the State

	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. The funds so provided shall not be diverted for any other purposes.	Government. The funds so provided will not be diverted for any other purposes.
<b>vii</b>	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 will be submitted to Regional office of the Ministry and State Pollution Control Board. ( Monitoring data is enclosed in Annexure I -A/B/C to VI )
<b>Viii</b>	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 concerned Panchayat, Zila Parishad.  The clearance letter has also been posted on the web site of our company.
<b>ix</b>	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 <sub>2</sub> , NO <sub>x</sub> 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 <sub>2</sub> , NO <sub>x</sub> are monitored regularly and displayed at a convenient location near main gate of the company.
<b>x</b>	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated	The project proponent is submitting six monthly reports on the status of the compliance of the stipulated environmental conditions including results of the

	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.	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.
<b>xi</b>	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated shall be submitted to the concerned State Pollution control Board 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.	The environmental statement for financial year 2016-17 in Form-V is submitted on line to State Pollution control Board as prescribed under the Environmental (Protection) Rules, 1986. The status of compliance of environmental clearance conditions is being sent to respective Regional Offices of MoEF & CC.
<b>xii</b>	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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> . 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 has been issued in three local newspapers which are widely circulated in the region out of which one is in the vernacular language of the locality.
<b>xiii</b>	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 <sup>th</sup> March 2016 ( Work order issued to M/s. Thermax Ltd ) and final approval of the project from RCF Board is 28 <sup>th</sup> January 2016. The date of commencing the land development work is 11 <sup>th</sup> March 2016. The revised estimated cost of the project is 494.0 crores

## Annexure-IA

## RASHTRIYA CHEMICALS AND FERTILIZERS LTD.

## THAL UNIT

## STEAM GENERATION PLANT

April-2017 to September -2017

Sr. No.	MONTH	PARAMETERS	FIRST SAMPLE	SECOND SAMPLE
1	<b>APRIL</b>	TPM ( mg / m <sup>3</sup> SO <sub>2</sub> ( mg / m <sup>3</sup> ) SO <sub>2</sub> (PPM ) NO <sub>x</sub> (PPM )	29.43 10.68 4.08 28.2	28.46 11.26 4.30 29.1
2	<b>MAY</b>	TPM ( mg / m <sup>3</sup> SO <sub>2</sub> ( mg / m <sup>3</sup> ) SO <sub>2</sub> (PPM ) NO <sub>x</sub> (PPM )	28.73 11.26 4.26 28.9	29.32 11.39 4.35 27.4
3	<b>JUNE</b>	TPM ( mg / m <sup>3</sup> SO <sub>2</sub> ( mg / m <sup>3</sup> ) SO <sub>2</sub> (PPM ) NO <sub>x</sub> (PPM )	26.75 11.81 4.5 28.3	28.2 11.47 4.38 29.6
4	<b>JULY</b>	TPM ( mg / m <sup>3</sup> SO <sub>2</sub> ( mg / m <sup>3</sup> ) SO <sub>2</sub> (PPM ) NO <sub>x</sub> (PPM )	27.5 11.12 4.25 28.1	26.7 11.06 4.22 29.3
5	<b>AUGUST</b>	TPM ( mg / m <sup>3</sup> SO <sub>2</sub> ( mg / m <sup>3</sup> ) SO <sub>2</sub> (PPM ) NO <sub>x</sub> (PPM )	27.1 11.13 4.23 28.2	26.2 9.99 4.41 29.1
6	<b>SEPTEMBER</b>	TPM ( mg / m <sup>3</sup> SO <sub>2</sub> ( mg / m <sup>3</sup> ) SO <sub>2</sub> (PPM ) NO <sub>x</sub> (PPM )	26.4 10.34 4.17 27.3	25.1 10.3 3.9 26.8

## Annexure-IB

## RASHTRIYA CHEMICALS AND FERTILIZERS LTD.

## THAL UNIT

## AMMONIA PLANT

April-2017 to September -2017

SR. No.	MONTH	PARAMETERS	AUXILIARY BOILER				REFORMER STACK			
			First Sample		Second Sample		First Sample		Second Sample	
			Line - I	Line -II	Line - I	Line-II	Line - I	Line-II	Line - I	Line-II
1	<b>April</b>	TPM ( mg / m <sup>3</sup> )	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO <sub>2</sub> ( mg / m <sup>3</sup> )	3.2	3.5	3.5	4.2	4.7	4.4	4.7	4.2
		NOx ( mg / m <sup>3</sup> )	37.45	38.67	36.83	39.42	36.8	39.4	38.7	39.6
2	<b>May</b>	TPM ( mg / m <sup>3</sup> )	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO <sub>2</sub> ( mg / m <sup>3</sup> )	3.3	3.6	3.2	3.5	4.5	4.2	4.3	4.6
		NOx ( mg / m <sup>3</sup> )	35.14	38.58	33.74	36.2	37.2	39.5	35.2	37.1
3	<b>JUNE</b>	TPM ( mg / m <sup>3</sup> )	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO <sub>2</sub> ( mg / m <sup>3</sup> )	3.7	3.4	3.5	3.7	4.1	4.4	4.5	4.7
		NOx ( mg / m <sup>3</sup> )	35.17	34.87	31.25	36.82	37.8	36.8	33.8	36.3
4	<b>JULY</b>	TPM ( mg / m <sup>3</sup> )	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO <sub>2</sub> ( mg / m <sup>3</sup> )	3.6	3.4	3.7	3.6	4.3	4.8	4.5	4.7
		NOx ( mg / m <sup>3</sup> )	33.91	35.73	35.18	34.13	35.1	37.8	33.7	36.2
5	<b>AUGUST</b>	TPM ( mg / m <sup>3</sup> )	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO <sub>2</sub> ( mg / m <sup>3</sup> )	3.5	3.3	4.3	4.6	3.6	3.4	4.1	3.9
		NOx ( mg / m <sup>3</sup> )	37.23	35.18	34.2	35.6	37.91	36.15	32.9	31.7
6	<b>SEPTEMBER</b>	TPM ( mg / m <sup>3</sup> )	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO <sub>2</sub> ( mg / m <sup>3</sup> )	3.7	3.6	3.9	3.7	4.2	4.0	4.3	4.1
		NOx ( mg / m <sup>3</sup> )	36.29	37.74	38.7	36.2	30.71	32.03	31.65	30.92

**Annexure-IC**  
**RASHTRIYA CHEMICALS AND FERTILIZERS LTD.**  
**THAL UNIT**  
**UREA PLANT**  
**April-2017 to September -2017**

Sr. No.	MONTH	PARAMETERS	Prilling Tower					
			First Sample			Second Sample		
			11	21	31	11	21	31
1	APRIL	TPM ( mg / m <sup>3</sup> )	16.8	17.9	18.6	16.3	17.5	17.9
		TPM (PPM )	14.16	15.09	15.51	14.2	14.75	15.09
		NH <sub>3</sub> ( ppm )	39.4	40.6	41.9	40.7	42.1	40.6
2	MAY	TPM ( mg / m <sup>3</sup> )	16.9	17.8	19.3	17.2	17.6	18.5
		TPM (PPM )	14.25	15.01	16.27	14.5	14.84	15.6
		NH <sub>3</sub> ( ppm )	40.3	43.7	42.5	39.5	42.3	42.1
3	JUNE	TPM ( mg / m <sup>3</sup> )	18.1	17.9	18.6	17.8	17.3	18.1
		TPM (PPM )	15.26	15.09	15.68	15.0	14.58	15.26
		NH <sub>3</sub> ( ppm )	40.7	41.6	43.9	37.2	40.6	43.4
4	JULY	TPM ( mg / m <sup>3</sup> )	17.9	18.14	17.45	17.3	17.7	16.3
		TPM (PPM )	15.17	15.29	14.71	14.58	14.92	13.74
		NH <sub>3</sub> ( ppm )	38.5	39.1	42.8	37.2	37.4	40.6
5	AUGUST	TPM ( mg / m <sup>3</sup> )	17.2	17.2	17.0	15.5	16.1	15.3
		TPM (PPM )	14.5	14.57	14.3	13.0	13.5	12.8
		NH <sub>3</sub> ( ppm )	38.9	37.4	41.9	36.4	37.1	39.7
6	SEPTEMBER	TPM ( mg / m <sup>3</sup> )	14.7	15.19	14.93	15.16	15.3	14.25
		TPM (PPM )	12.39	12.80	12.58	12.78	12.96	12.01
		NH <sub>3</sub> ( ppm )	37.2	40.9	36.8	39.6	37.2	37.5

## Annexure-II

**RASHTRIYA CHEMICALS AND FERTILIZERS LTD.**  
**THAL UNIT**  
**AMBIENT AIR DATA**  
**April-2017 to September -2017**

<b>MONTH</b>	<b>SO<sub>2</sub></b>	<b>AMMONIA</b>	<b>NO<sub>x</sub></b>	<b>PM – 10</b>	<b>P M – 2.5</b>
<b>APRIL</b>	26.3	74.7	45.2	59.4	31.8
<b>MAY</b>	27.3	76.7	42.4	55.3	29.5
<b>JUNE</b>	25.4	82.4	41.7	63.2	32.3
<b>JULY</b>	22.4	79.3	38.4	58.7	31.9
<b>AUGUST</b>	19.8	82.3	35.9	54.3	28.5
<b>SEPTEMBER</b>	21.4	80.5	31.4	52.4	24.8
<b>N.A.A.Q. STANDARDS</b> <b>µgm / m<sup>3</sup></b>	<b>80</b>	<b>400</b>	<b>80</b>	<b>100</b>	<b>60</b>

\* VALUES FOR SO<sub>2</sub>, NH<sub>3</sub>, NO<sub>x</sub>, SPM, PM-10, PM-2.5 ARE IN µ gm / m<sup>3</sup>



Annexure-III

RASHTRIYA CHEMICALS AND FERTILIZERS LTD.  
THAL UNIT

WATER CONSUMPTION  
April-2017 to September -2017

	Industrial	Domestic	Total
<b>April – 17</b>	11,83,424	1,65,076	13,48,500
<b>May-17</b>	12,49,664	1,67,636	14,17,300
<b>June – 17</b>	11,96,184	1,57,516	13,53,700
<b>July – 17</b>	12,66,972	1,64,228	14,31,200
<b>Aug-17</b>	12,45,363	1,57,537	14,04,900
<b>Sep-17</b>	11,98,724	1,54,776	13,53,500

WATER CONSUMPTION IN m<sup>3</sup>

## Annexure-IV

**RASHTRIYA CHEMICALS AND FERTILIZERS LTD.**  
**THAL UNIT**  
**LIQUID EFFLUENT DISCHARGE TO SEA AFTER TREATMENT**

April-2017 to September -2017

PARAMETERS / MONTH	APR	MAY	JUN	JUL	AUG	SEP	MPCB LIMIT
pH	7.8	7.5	7.7	8.1	7.6	7.9	6.5 – 8.5
CYANIDE	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	0.2
FREE AMMONIA	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	4.0
AMMONIUM NITROGEN	36.4	33.5	32.4	35.20	31.6	34.2	50
T.K.N.	52.3	53.2	46.7	49.30	47.2	48.7	100
NITRATE NITROGEN	3.2	2.8	3.1	3.2	2.9	3.1	10
TOTAL SUS. SOLIDS	60.4	59.8	56.8	61.20	58.6	57.8	100
OIL AND GREASE	3.4	3.1	3.3	3.1	3.0	3.4	Less than 10
DISSOLVED OXYGEN	5.9	6.1	6.0	5.9	5.9	6.1	More Than 5.0
C.O.D.	79.4	69.3	83.4	78.60	82.4	79.6	250
B.O.D.	27.6	26.3	28.2	26.40	27.2	26.2	100
CADMIUM	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	0.2
ARSENIC.	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	0.2
CHROMIUM	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	0.1
PHOSPHATE	3.0	2.3	2.8	3.0	3.3	2.8	5.0
TEMPERATURE	28	28.0	27	26	26	26	-

\* All figures are in mg/ltr. Except Ph & Temp.

## Annexure- V

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

**R.C.F. THAL VILLAGE AIR QUALITY DATA-**  
**April-2017 to September -2017**

MONTH	Parameters	Agarsure	Kihim	Vaishet	Lonare	Satirge	Tudal	Alibaug
APRIL 2017	PM10	67.1	57.7	55.7	68.6	60.7	52.4	50.0
	PM 2.5	33.1	31.7	29.4	29.4	30.6	28.5	30.5
	SO2	10.6	12.6	16.1	14.0	13.3	14.1	13.0
	NOx	30.7	29.7	28.9	29.5	32.3	25.8	29.0
	NH3	34.3	34.4	37.1	33.7	31.8	35.4	32.3
May 2017	PM10	71.4	52.3	52.1	60.3	67.8	52.8	52.4
	PM 2.5	33.6	30.7	22.5	29.3	30.9	28.7	28.6
	SO2	15.1	12.4	12.5	13.5	15.3	12.8	11.8
	NOx	28.9	26.0	29.1	26.4	30.6	28.6	27.5
	NH3	36.2	31.5	35.2	31.9	30.8	32.6	32.3
June 2017	PM10	73.83	55.8	55.76	64.53	69.43	56.46	53.7
	PM 2.5	35.7	34.2	24.7	32.4	32.9	26.5	26.2
	SO2	13.99	13.69	13.26	14.48	11.81	13.04	13.08
	NOx	30.82	26.15	29.94	29.19	29.25	27.22	26.91
	NH3	33.03	34.27	32.94	33.96	32.14	35.31	32.36
July 2017	PM10	62.76	49.2	44.46	59.1	52.89	40.4	44.56
	PM 2.5	28.7	22.1	26.5	29.7	30.7	21.9	20.5
	SO2	10.85	10.32	10.01	11.55	10.94	9.49	7.87
	NOx	25.9	23.6	22.96	19.71	23.17	21.94	23.58
	NH3	29.21	25.40	28.95	26.35	27.76	29.3	24.93
August 2017	PM10	61.76	55.16	45.53	51.26	53.56	52.96	42.16
	PM 2.5	26.3	24.9	25.4	26.5	28.5	27.3	26.7
	SO2	11.08	12.2	11.53	11.75	11.49	12.38	8.6
	NOx	27.24	24.58	22.41	25.56	23.66	25.64	21.96
	NH3	32.61	25.64	25.42	25.14	34.34	26.88	27.44
September 2017	PM10	53.6	46.4	38.9	49.3	43.47	44.9	38.77
	PM 2.5	22.5	21.6	20.3	24.6	26.3	26.5	23.2
	SO2	9.48	9.96	7.53	10.05	10.28	8.43	10.52
	NOx	26.65	29.72	24.9	23.36	25.04	31.25	23.11
	NH3	31.37	31.7	29.01	28.49	30.70	32.83	32.85

Annexure-VI

RASHTRIYA CHEMICALS AND FERTILIZERS LTD.  
THAL UNIT

Ambient Noise Level data at the Boundary and the 7 nearby Villages.  
April-2017 to September -2017

<b>Station</b>	<b>Apr</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep</b>
<b>Near Material Gate</b>	66.5	66.87	64.3	66.03	67.73	66.53
<b>Near Lonare Village</b>	60.7	61.9	59.8	60.5	60.9	61.73
<b>RCF Main Gate</b>	66.2	65.23	63.2	64.33	65.03	65.2
<b>Vaishet Village</b>	61.6	61.7	62.3	61.36	60.09	61.77
<b>Tudal Village</b>	60.9	61.2	59.8	61.03	60.96	60.6
<b>Navgaon Village ( Rail gate )</b>	61.0	61.8	60.4	61.3	62.73	60.57
<b>Boris Village</b>	61.4	61.9	60.7	60.36	62.13	61.37

\*\* All figures are in db