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

1263

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 /12/2017

20th December 2017

To
Mr. Lalit Bokolia,
Additional Director,
Ministry of Environment ,Forests & Climate Change.
Indira Paryavaran Bhawan, Aliganj, Jorbagh Road ,
New Delhi – 110 003.

Sub : Submission of Six Monthly Compliance Report on Expansion by De-bottlenecking of Ammonia & Urea Plants of M/s Rashtriya Chemicals & Fertilizers Ltd, Thal Unit, for the period **June -2017 to November -2017.**

Ref : MOEF Office Memorandum No. J-11011/862/2008-IA-II (I) Dated: June 10, 2009.

Dear Sir,

We submit herewith the latest six monthly compliance report for the period June -2017 to November -2017 in respect of expansion by De-bottlenecking of Ammonia & Urea plants of RCF Thal unit. The office memorandum of Environment Clearance dated 10th June 2009 as referred above was issued by MOEF for the following project as mentioned below.

Products	Existing	After expansion
Ammonia	2 x 1500 MTPD	2 x 1750 MTPD
Urea	3 x 1724 MTPD	3 x 2040 MTPD

The expansion activity is carried out at existing site which is already in operation since 1985 and producing Urea & Ammonia using clean fuel like RIL and APM gas with all in-built pollution control facilities, Environmental protection, Environment monitoring and Safety management system at site.

Project activities for De-bottlenecking of Ammonia & Urea plant are completed. Compliance of conditions of Environmental Clearance is carried out with true spirit and we enclose point wise reply along with monitoring reports as per enclosed format.

Monitoring of Environmental parameters like Ambient Air, Stack emissions, liquid effluent, noise etc are conducted on regular basis for existing plants as per statutory norms and are enclosed in annexure along with point wise replies .

Thanking You.

Yours faithfully,

RR. Limaye 20/12/17

(R. R. Limaye)
DGM (Chemical.)

राष्ट्रीय केमिकल्स एण्ड फर्टिलाइजर्स लिमिटेड
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CIN L24110MH1978GOI020185

TH / 90 / RCF /12/2017 **20th December 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 Six Monthly Compliance Report on Expansion by De-bottlenecking of Ammonia & Urea Plants of M/s Rashtriya Chemicals & Fertilizers Ltd, Thal Unit, for the period **June -17 to November -2017** .

Ref : MOEF Office Memorandum No. J-11011/862/2008-IA-II (I) Dated: June 10, 2009.

Dear Sir,

We submit herewith the latest six monthly compliance report for the period June -17 to November -2017 in respect of expansion by De-bottlenecking of Ammonia & Urea plants of RCF Thal unit. The office memorandum of Environment Clearance dated 10th June 2009 as referred above was issued by MOEF for the following project as mentioned below.

Products	Existing	After expansion
Ammonia	2 x 1500 MTPD	2 x 1750 MTPD
Urea	3 x 1724 MTPD	3 x 2040 MTPD

The expansion activity is carried out at existing site which is already in operation since 1985 and producing Urea & Ammonia using clean fuel like RIL and APM gas with all in-built pollution control facilities, Environmental protection, Environment monitoring and Safety management system at site.

Project activities for De-bottlenecking of Ammonia & Urea plant has completed. Compliance of conditions of Environmental Clearance is carried out with true spirit and we enclose point wise reply along with monitoring reports as per enclosed format.

Monitoring of Environmental parameters like Ambient Air, Stack emissions, liquid effluent, noise etc are conducted on regular basis for existing plants as per statutory norms and are enclosed in annexure along with point wise replies .

Thanking You.

Yours faithfully,
RR. Limaye
(R. R. Limaye) 20/12/17
DGM (Chemical.)

20th December 2017

Six Monthly Compliance Report on Expansion project by De-bottlenecking of Ammonia –Urea Plants at RCF- THAL UNIT

MOEF Memo No. F. No. J-11011./862/2008-IA-II (I)

A) SPECIFIC CONDITIONS :

Sr. No.	CONDITIONS :	COMPLIANCE
i)	The project authority shall treat the industrial and domestic effluent as per the standards notified under Environmental (Protect) rules 1986 or prescribed by the Maharashtra Pollution Control Board whichever are stringent. The treated waste water shall be recycled / reused for irrigation/green belt development as for as possible before discharge into sea.	The Industrial effluent and Domestic effluent are treated as per the standards under Environment Protection Act 1986. Treatment is assured in existing ETP. The quality of treated effluent from existing ETP meeting MPCB norms are as mentioned in **Annexure I** prior to discharge to Sea through Marine Outfall System. The Domestic sewage effluent is used for gardening & Green Belt development within factory premises.
ii)	The permission for drawl of 53,200 KLD water from Amba / Kundalika River shall be obtained from the concerned department and a copy shall be submitted to the Ministry and its Regional Office at Bhopal within 3 months.	The permission for drawl of 90,000 KLD water from Amba / Kundalika River is obtained from Maharashtra Industrial Development Corporation. A copy of approval is submitted to the Ministry and its Regional Office at Bhopal as mentioned earlier.
iii)	The project authorities shall install efficient air pollution control system like extended bucket to Urea Prilling Tower, Low NOx burners to reformer, Ammonia stripper etc to control particulate and gaseous emissions from the plant to achieve the prescribed standards.	The efficient air pollution control system like advanced designed prilling bucket to Urea Prilling Tower, Low NOx burners for reformer, Ammonia stripper, Vent Absorber etc are installed to control particulate and gaseous emissions from the existing plant to achieve the prescribed standards including expansion project.
iv)	The gaseous emissions (SO_2, NOx, NH_3, urea dust) and particulate matter from various process units shall conform to the standards prescribed by the concerned authorities from time to time. Emission data shall be periodically monitored and reports submitted to Ministry's Regional Office, CPCB and SPCB.	The gaseous emissions (SO_2, NOx, NH_3, urea dust) and particulate matter from various process units conform to the standards prescribed. emission data is regularly monitored and reports are submitted to Ministry's regional office, CPCB & SPCB as enclosed **in Annexure II A,B,C.**

v)	Data on ambient air quality stack emission and fugitive emissions shall be uploaded on the company's website and also regularly submitted online to Ministry's Regional office at Bhopal, Maharashtra Pollution Control Board and Central Pollution Control Board as well as hard copy once in six months. Data on SPM, SO_2, NH_3, NOx and urea dust shall also be displayed prominently outside the premises at the appropriate place for the general public.	Data on ambient air quality is uploaded on the company's website and also regularly submitted to Ministry's Regional office at Bhopal along with compliance reports of previous projects, Maharashtra Pollution Control Board and Central Pollution Control Board with hard copy once in six months. Data on PM-10,PM-2.5, SO_2, NH_3, NOx and urea dust is displayed at the gate for the general public.
vi)	Spent catalysts shall be sold to authorized venders for its metal value. The other solids wastes shall be segregated and stored in the separate storage space and finally sold to the authorized venders.	There is no generation of additional quantity of Hazardous Waste catalyst due to the revamp. Existing spent catalyst are sold to approved recyclers. The other solids wastes are segregated, stored and sold out.
vii)	The company shall develop the green belt in at least 33% land area to mitigate the effect of fugitive emissions and noise as per the guidelines CPCB.	The company has developed the green belt in 35% land area to mitigate the effect of fugitive emissions and noise as per the guidelines CPCB. Factory Area 800.00 acres Experimental Farm 50.00 acres Lawns and Gardens 27.00 acres Area under afforestation 277.00 acres
viii)	The company shall implement all the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP) for fertilizer industries.	The company has implemented all the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP) for fertilizer industries. There is total compliance of all recommendations of CREP from Thal Unit.
ix)	Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the Factories Act.	Occupational health surveillance of the workers are carried out on a regular basis and records are maintained as per the Factories Act.
x)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project	There is no additional manpower requirement due to the revamp project. Provision is already made for existing plants. Facilities such as canteen, toilets, Safe drinking water, medical health care, crèche etc. are made for construction labour and contractor workers within the site.

GENERAL CONDITIONS :

Sr. No.	CONDITIONS	COMPLIANCE
i)	The project authorities shall strictly adhere to the stipulations of the SPCB/state government or any statutory body.	Compliance assured
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.	Any expansion at the site is carried out with due approval of MOEF and the same will be maintained in future.
iii)	At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	It is ensured that at no time the emissions are exceeding the prescribed limits. Clean fuel like APM/PMT and RIL gas are used. The plant is having advanced Process Control & In - built Pollution Control system . Urea plant and ammonia plant. Emissions are discharged with all safety precautions through tall stacks and through hot flare stacks .
iv)	The locations of ambient air quality monitoring stations shall be reviewed in consultation with the State Pollution Control Board (SPCB) and additional stations shall be installed, if required, in the downwind direction as well as where maximum ground level concentrations are anticipated.	Complied. Four Ambient Air Monitoring stations to monitor the ambient air quality for SO2, NOx, NH3 SPM are already installed, in addition to this PM-10, PM-2.5, CO & Ozone Analyzers are installed with advance communication system at the existing site for the present large scale operations. Besides this, ambient air quality is monitored at 7 villages. Quality of Ambient air is indicated in **Annexure III A,B.**
v)	Dedicated scrubbers and stacks of appropriate height as per the Central Pollution Control Board guidelines shall be provided to control the emissions from various vents. The scrubbed water shall be sent to ETP for further treatment.	The process itself is with complete recycle system. The emissions during upset conditions from this plant are flared through tall flare stacks and vented through tall stacks with proper control systems. Effluent from the revamp activities is sent to existing ETP for further treatment.

Sr. No.	CONDITIONS	COMPLIANCE
vi)	The company shall undertake following Waste Minimization measures. ➢ Metering and control of quantities of active ingredients to minimize waste. ➢ Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. ➢ Use of "Closed Feed" system into batch reactors. ➢ Venting equipment through vapour recovery system. ➢ Use of high pressure hoses for equipment cleaning to reduce wastewater generation.	Thal unit has undertaken same recommendations and Waste Minimization measures for existing plants which is in practice for some of the applicable waste minimization measures in revamp project also**.**
vii)	Fugitive emissions in the work zone environment, product, and raw materials storage area shall be regularly monitored. The emissions shall conform to the limits imposed by the State Pollution Control Boards/Central Pollution Control Board.	Fugitive emissions at work place are monitored which conforms to stipulated standard as enclosed in **Annexure – V.**
viii)	The project authorities shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000 and Hazardous Waste (Management and Handling) Rules, 1989, as amended from time to time. Authorization from the SPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.	Compliance assured.
ix)	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 and surrounding area of the factory are kept well within the standards by providing noise control measures as enclosed in **Annexure – IV A & B.**
x)	The company shall develop rain water harvesting structures to harvest the run off water for recharge of ground water.	Ashpond is developed for the Rain Water Harvesting facility in the factory premises.

xi)	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment. The eco-development plan should be submitted to the SPCB within three months of receipt of this letter for approval.	The unit has undertaken eco-development measures by planting 1,60,000 trees, nurseries, lawns and gardens including farmer training, community welfare scheme, Awareness training programs on Greenery development, Greenbelt development program, Installation of Agricultural research centre, Mangrove development plan , afforestation in nearby hills etc and same efforts are made for eco-development.
xii)	The project proponent shall also comply with all the environmental protection measures and safeguards proposed in the EIA/EMP report.	The recommendation made in Risk assessments for environmental safeguard are implemented in existing plants and will be extended to the project .
xiii)	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	There is established Environment Management Cell with full fledged laboratory facilities to carry out Environmental Management and monitoring functions.
xiv)	The project authorities shall earmark adequate funds to implement the conditions stipulated by the Ministry of Environment and Forests 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 purpose.	Adequate resources are provided to implement the conditions. Capital Cost on existing pollution control systems Rs 57 Crores and Revenue Expenditure for 2016-2017 is approximately Rs. 8.5 Crores.
xv)	The implementation of the project vis-à-vis environmental action plans shall be monitored by the concerned Regional Office of the Ministry/SPCB / CPCB. A six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the Company.	Expansion by De-bottlenecking of Ammonia and Urea plant is completed. Six monthly Compliance status report is assured.
xvi)	State Pollution Control Board should display a copy of the clearance letter at the Regional office, Gram Panchayat, District Industry Centre and Collector's office/ Tehsildar`s Office for 30 days.	The copy of Clearance letter sent for display at Regional office, State Pollution Control Board and other locations as directed with in 30 days which was already informed to the Ministry after receipt of MOEF Clearance.
xvii)	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 of the Ministry.	Press advertisement was given within seven days from the date of issue of the clearance letter, in three local newspapers which are widely circulated in the region out of which one is in the vernacular language of the locality concerned. The same was informed to MOEF.
xviii)	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 start of the project.	The date of financial closure was 29.5.2009. The zero date for the Thal Ammonia project was 20th March 2009. Project Cost is approx Rs 488.0 Crores reference year being 2009.

Annexure-I

Rashtriya Chemicals & Fertilizers Ltd, Thal Unit

LIQUID EFFLUENT DISCHARGE TO SEA AFTER TREATMENT

June 2017 – November 2017

PARAMETERS / MONTH	JUN	JUL	AUG	SEP	OCT	NOV	MPCB LIMIT
pH	7.7	8.1	7.6	7.9	8.1	7.8	6.5 - 9.0
Free Ammonia	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	
Ammonical Nitrogem	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	50
T.K.N.	32.4	35.20	31.6	34.2	35.6	32.8	100
Nitrate Nitrogen	46.7	49.30	47.2	48.7	54.2	47.2	10
Total Suspended Solids	3.1	3.2	2.9	3.1	3.3	2.9	100
Oil & Grease	56.8	61.20	58.6	57.8	58.8	62.4	Less than 10
Dissovled Oxygen	3.3	3.1	3.0	3.4	3.2	2.8	
COD	6.0	5.9	5.9	6.1	6.0	5.9	250
BOD	83.4	78.60	82.4	79.6	78.7	76.3	100
Cadmium	28.2	26.40	27.2	26.2	25.8	26.3	0.2
Nickel	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	0.2
Hexavalent Chromium	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	0.1
Cyanide	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	0.2
Phosphate	2.8	3.0	3.3	2.8	3.1	2.9	5.0
Temperature	27	26	26	26	26	27	-

* All figures are in mg/lt. Except pH & Temp.

Annexure-II A

Rashtriya Chemicals & Fertilizers Ltd, Thal Unit

STEAM GENERATION PLANT

June 2017 –November 2017

Sr. No.	MONTH	PARAMETERS	FIRST SAMPLE	SECOND SAMPLE
1.	JUNE	TPM (mg / m^3 SO_2 (mg / m^3) SO_2 (PPM) NOx (PPM)	26.75 11.81 4.5 28.3	28.2 11.47 4.38 29.6
2.	JULY	TPM (mg / m^3 SO_2 (mg / m^3) SO_2 (PPM) NOx (PPM)	27.5 11.12 4.25 28.1	26.7 11.06 4.22 29.3
3.	AUGUST	TPM (mg / m^3 SO_2 (mg / m^3) SO_2 (PPM) NOx (PPM)	27.1 11.13 4.23 28.2	26.2 9.99 4.41 29.1
4.	SEPTEMBER	TPM (mg / m^3 SO_2 (mg / m^3) SO_2 (PPM) NOx (PPM)	26.4 10.34 4.17 27.3	25.1 10.3 3.9 26.8
5.	OCTOBER	TPM (mg / m^3 SO_2 (mg / m^3) SO_2 (PPM) NOx (PPM)	28.4 10.12 4.38 26.5	28.91 11.25 4.3 26.4
6.	NOVEMBER	TPM (mg / m^3 SO_2 (mg / m^3) SO_2 (PPM) NOx (PPM)	26.35 10.81 4.1 28.7	28.7 11.58 4.4 27.2

Annexure-II B

Rashtriya Chemicals & Fertilizers Ltd, Thal Unit

AMMONIA PLANT

June 2017 –November 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.	JUNE	TPM (mg / m^3)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO_2 (mg / m^3)	3.7	3.4	3.5	3.7	4.1	4.4	4.5	4.7
		NOx (mg / m^3)	35.17	34.87	31.25	36.82	37.8	36.8	33.8	36.3
2.	JULY	TPM (mg / m^3)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO_2 (mg / m^3)	3.6	3.4	3.7	3.6	4.3	4.8	4.5	4.7
		NOx (mg / m^3)	33.91	35.73	35.18	34.13	35.1	37.8	33.7	36.2
3.	AUGUST	TPM (mg / m^3)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO_2 (mg / m^3)	3.5	3.3	4.3	4.6	3.6	3.4	4.1	3.9
		NOx (mg / m^3)	37.23	35.18	34.2	35.6	37.91	36.15	32.9	31.7
4.	SEPTEMBER	TPM (mg / m^3)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO_2 (mg / m^3)	3.7	3.6	3.9	3.7	4.2	4.0	4.3	4.1
		NOx (mg / m^3)	36.29	37.74	38.7	36.2	30.71	32.03	31.65	30.92
5	OCTOBER	TPM (mg / m^3)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO_2 (mg / m^3)	3.4	3.5	3.0	3.3	4.4	3.7	4.2	4.5
		NOx (mg / m^3)	35.6	36.7	36.1	35.4	31.8	33.5	38.1	37.4
6	NOVEMBER	TPM (mg / m^3)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		SO_2 (mg / m^3)	3.2	3.1	3.2	2.9	4.1	4.3	3.8	4.0
		NOx (mg / m^3)	38.5	37.6	36.2	35.8	36.5	34.8	37.2	33.1

Annexure-II C

Rashtriya Chemicals & Fertilizers Ltd, Thal Unit

UREA PLANT

June 2017 –November 2017

Sr. No.	MONTH	PARAMETERS	Prilling Tower					
			First Sample			Second Sample		
			11	21	31	11	21	31
1.	JUNE	**TPM (mg / m^3)**	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_3 (ppm)	40.7	41.6	43.9	37.2	40.6	43.4
2.	JULY	**TPM (mg / m^3)**	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_3 (ppm)	38.5	39.1	42.8	37.2	37.4	40.6
3.	AUGUST	**TPM (mg / m^3)**	17.2	16.3	17.0	15.5	16.1	15.3
		TPM (PPM)	14.5	13.91	14.3	13.0	13.5	12.8
		NH_3 (ppm)	38.9	42.9	41.9	36.4	37.1	39.7
4.	SEPTEMBER	**TPM (mg / m^3)**	14.7	15.19	14.93	15.16	14.3	14.25
		TPM (PPM)	12.39	12.80	12.58	12.78	19.56	12.01
		NH_3 (ppm)	37.2	40.9	36.8	39.6	45.1	37.5
5.	OCTOBER	**TPM (mg / m^3)**	13.7	15.8	14.3	17.1	16.5	17.8
		TPM (PPM)	11.55	13.32	12.06	14.42	13.9	15.0
		NH_3 (ppm)	35.4	38.2	37.5	38.6	37.2	40.7
6.	NOVEMBER	**TPM (mg / m^3)**	16.8	17.3	16.9	17.2	17.0	16.3
		TPM (PPM)	14.1	14.5	14.2	14.5	14.3	13.7
		NH_3 (ppm)	40.5	39.3	37.8	38.5	35.1	41.3

Annexure-III A

Rashtriya Chemicals & Fertilizers Ltd, Thal Unit

R.C.F. THAL *VILLAGE AIR QUALITY DATA*

June 2017 –November 2076

MONTH	Parameters	Agarsure	Kihim	Vaishet	Lonare	Satirge	Tudal	Alibaug
June 2017	PM10	59.1	46.9	64	50.4	44.1	63.5	54.8
	PM 2.5	29.8	22.0	33.4	23.1	21.4	30.8	26.1
	SO2	26.4	18.7	31.0	17.3	22.6	25.0	24.0
	NOx	27.4	24.3	35.7	23.6	28.8	28.0	25.2
	NH3	38.2	42.1	50.8	34.2	39.9	45.5	35.5
July 2017	PM10	27.3	18.6	33.3	23.8	23.2	26.0	24.4
	PM 2.5	11.8	10.2	18.2	12.2	10.9	12.6	13.0
	SO2	13.5	12.3	25.3	9.2	11.9	14.3	13.5
	NOx	14.9	21.0	26.5	10.6	20.8	23.2	15.2
	NH3	27.4	26.4	35.9	17.8	25.9	28.5	23.6
August 2017	PM10	32.5	21.6	39.3	29.1	28.7	36.4	33.7
	PM 2.5	16.4	10.8	20.1	14.8	13.5	18.3	15.3
	SO2	17.1	15.4	23.0	11.8	12.6	18.7	13.0
	NOx	18.9	21.8	30.2	14.4	22.0	25.9	17.2
	NH3	30.2	29.0	39.5	23.2	32.4	36.2	27.0
September 2017	PM10	39.7	30.2	45.0	41.0	41.3	41.9	43.0
	PM 2.5	21	18.2	26.0	24.0	27.0	19.8	21.0
	SO2	14.9	12.36	17.0	8.16	13.2	15.53	13.5
	NOx	25.03	25.9	28.96	23.66	24.7	26.8	22.86
	NH3	32.63	32.56	37.16	37.3	36.23	34.5	33.23
October 2017	PM10	43.7	37.4	49.4	47.2	45.4	42.6	45.3
	PM 2.5	22.5	20.2	24.4	25.1	26.7	23.5	23.2
	SO2	15.8	14.2	18.5	12.1	16.4	14.8	14.3
	NOx	27.0	25.3	26.5	24.4	26.5	27.5	22.1
	NH3	31.0	31.7	34.2	35.4	33.2	33.7	33.8
November 2017	PM10	50.56	44.63	50.57	52.53	47.5	45.7	53.0
	PM 2.5	27.6	22.1	24.7	26.7	25.9	23.8	24.9
	SO2	13.97	14.75	15.33	14.21	14.64	14.75	16.2
	NOx	24.59	24.64	25.5	24.5	24.96	26.0	22.53
	NH3	33.06	31.5	34.73	31.13	30.87	33.76	32.6

Annexure-III B

Rashtriya Chemicals & Fertilizers Ltd, Thal Unit

AMBIENT AIR DATA

June 2017 –November 2017

MONTH	SO_2	AMMONIA	NO_X	PM – 10	P M – 2.5
JUNE	25.4	82.4	41.7	63.2	32.3
JULY	22.4	79.3	38.4	58.7	31.9
AUGUST	19.8	82.3	35.9	54.3	28.5
SEPTEMBER	21.4	80.5	31.4	52.4	24.8
OCTOBER	19.4	82.3	30.7	51.8	22.4
NOVEMBER	18.5	74.8	29.4	48.3	23.2
N.A.A.Q. STANDARDS µgm / m^3	**80**	**400**	**80**	**100**	**60**

* VALUES FOR SO2, NH3, NOX, SPM, PM-10, PM-2.5 ARE IN µ gm / m^3

Annexure-IV-A

Rashtriya Chemicals & Fertilizers Ltd, Thal Unit

NOISE MONITORING

June 2017 –November 2017

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

Station	June	July	Aug	Sep	Oct	Nov
Near Material Gate	64.3	66.03	67.73	66.53	62.3	65.8
Near Lonare Village	59.8	60.5	60.9	61.73	59.9	60.7
RCF Main Gate	63.2	64.33	65.03	65.2	62.4	65.6
Vaishet Village	62.3	61.36	60.09	61.77	63.2	62.0
Tudal Village	59.8	61.03	60.96	60.6	58.3	59.9
Navgaon Village (Rail gate)	60.4	61.3	62.73	60.57	57.9	58.4
Boris Village	60.7	60.36	62.13	61.37	60.6	60.2

** All figures are in db

ANNEXURE –IV-B

Rashtriya Chemicals & Fertilizers Ltd, Thal Unit

AMMONIA PLANT

NOISE SURVEY REPORT

June 2017 –November 2017

SN.	LOCATIONS	June 2017	Aug 2017	Oct 2017
A	AMMONIA LINE-I			
1	Passage betⁿ. HT& MT/LT Convertor	73.4	73.8	73.2
2	Primary Reformer near RG Blr. (North)	79.5	80.3	82.7
3	HT outlet flange.	81.2	80.3	78.8
4	Benfield Section near intercom pt.	80.7	81.9	83.2
5	Front end near FV-12	83.7	81.2	82.4
6	Comp. House Gr. Floor	91.4	92.6	92.8
7	At Compressor – i) PAC (Field / cabin)	91.3 / 60.7	91.8 / 59.3	91.2/ 60.2
	ii) ARC (Field/ Cabin)	89.3 /60.1	89.9 / 60.7	90.1 / 61.6
	iii) SGC (Field /Cabin)	86.9/ 59.3	88.5 / 61.1	88.4 /58.9
8	Synthesis section in front of B- 501	81.2	79.8	80.8
9	Near PGRU section	81.7	79.5	81.2
10	C.T area between TP-801A/B	84.3/85.2	87.4 / 87.8	85.2/86.2
B	**AMMONIA LINE -II**			
1	Passage betⁿ. HT& MT/LT Convert or	73.2	72.9	73.6
2	Primary Reformer near RG Blr. (North)	80.7	79.8	81.9
3	HT outlet flange.	79.2	80.6	78.6
4	Benfield Section near intercom pt.	80.5	81.2	81.4
5	Front end near FV-12	84.3	82.3	89.6
6	Comp. House Gr. Floor	91.9	90.8	90.8
7	At Compressor – i) PAC (Field / cabin)	89.2 / 59.7	90.4 /61.4	89.7 / 60.4
	ii) ARC (Field/ Cabin)	89.7 / 59.4	9.2 / 61.4	84.5 / 61.0
	iii) SGC (Field/ Cabin)	88.4/ 60.1	90.4/61.6	92.2/ 60.7
8	Synthesis section in front of B- 501	82.2	83.2	83.3
9	Near PGRU section	83.1	80.4	81.7
10	C.T area between TP-801A/B	90.1 / 81.2	91.7 / 85.2	89.2/83.2
C	**COMMON AREA.**			
1	ARC- III (field)	91.3	90.4	92.0
2	PAC-III (field/ cabin)	80.4/ 59.5	81.4 / 60.2	81.9 /60.1
3	IAC (field/cabin)	90.4 /60.2	84.3/ 60.2	87.1 / 60.4
4	Old Ammonia storage (dispatch pump)	78.2	78.3	79.3
5	Electrical Welfare Room	59.5	59.7	58.9

NOISE LEVEL (dB)

Note: - All the readings are taken from about 2 meter distance.

ANNEXURE –V

Rashtriya Chemicals & Fertilizers Ltd, Thal Unit

UREA PLANT

AMMONIA GAS EMMISSION SURVEY REPORT

June 2017 –November 2017

Sr. No.	LOCATION	June 2017	Aug 2017	Oct 2017
1	Near Ammonia feed pump	9 ppm	8 ppm	8 ppm
2	Near Ammonia booster pump	8 ppm	9 ppm	9 ppm
3	Near waste water storage tank	8 ppm	9 ppm	8 ppm
4	Near Ammonia storage tank	7 ppm	9 ppm	8 ppm
5	Near Carbamate Condenser	8 ppm	7 ppm	8 ppm
6	Near Hydrolizer feed pump	9 ppm	8 ppm	8 ppm