

NFCL/ENV/CPCB/QR/01/2015

23<sup>rd</sup> October 2015

To,  
**The Member Convener,  
Central Pollution Control Board,  
South Zone Office,  
NISARGA BHAVAN,  
A – Block 1&2 floors,  
Thimmaiah Road,  
7<sup>th</sup> Cross Shivanagar (Opp. Pushpanjali Theatre)  
BANGALORE – 560 010.**

**Subject** : Format 'FB'- Quarterly Report for July 2015 - September 2015.

**Reference** : Your Letter No.F-03-05-01/ZOB/90-91

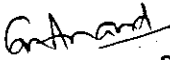
Sir,

With reference to your directives, the Quarterly Progress Report, in the prescribed format 'FB', for the quarter ending September 2015 is being forwarded. The relevant supporting documents are enclosed at Annexure - I and Annexure – II for your reference.

It may be noted that the plants have been designed to comply with MINAS levels and all the process plants as well as the treatment units are performing well.

Thanking you,

Yours faithfully,  
For NAGARJUNA FERTILIZERS AND CHEMICALS LIMITED

  
29/10/15  
**R. Raghavan**  
**Senior Vice President (Operations & Projects)**

**Enclosures:** Annexure – I : Details of water consumption and effluent generation  
Annexure – II : Details of Prill Tower Dust monitoring

Cc: Member Secretary, APPCB, Hyderabad,  
Member Secretary, CPCB, Delhi

Cc: MD  
Sr. Advisor  
AGM (Lab & Env.) / Manager (Env.)

Nagarjuna Road  
Kakinada - 533 003  
India.  
Phone : 2360390  
Grams : "NAAGFERTS"  
Fax : 0884 - 2365020 (Materials)  
0884 - 2362084 (Central)



Nagarjuna Fertilizers  
and Chemicals Limited

CIN: L24129AP2006PLC076238

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MINAS AND EMISSION STANDARDS IMPLEMENTATION IN  
FERTILIZER INDUSTRIES

Quarterly Progress Report, July 2015 - September 2015

1.0 Name of the industry : NAGARJUNA FERTILIZERS AND CHEMICALS LIMITED

2.0 Emissions :

2.1 Does the Industry meet the emissions standards? : Yes  
(Give analysis report)

2.2 If not, give the deviations from the standards : Not Applicable

2.3 What measures were under taken or propose to be implemented by the industry to comply with the standards?

Adequate measures were taken at the design stage itself to incorporate pollution treatment systems in both Unit-I & Unit-II, such as, dedusting system provided at the top of Urea prill towers, Urea dust recovery systems in Bagging Plant, Transfer House and at bottom of the Prilling Towers, Purge gas recovery unit in Ammonia plants, Hydrolyser in Urea plants, separate flare stacks for ammoniated and non ammoniated gases, ammonia absorption improved by scrubbing with water for medium pressure off gases leaving from Urea Plants.

2.4 Progress of implementation and proposed date of completing the execution to meet the Standards.

Commercial production commenced from 1<sup>st</sup> August, 1992 from Plant-I and 19<sup>th</sup> March, 1998 from Plant-II. Now, the plants are in continuous operation.

3.0 Liquid Effluents

3.1 Plant wise liquid effluent sources: Flow (m<sup>3</sup>/hr) quantity and concentration of pollutants

The offsite facilities are common for both Plant-I and Plant-II including the back up Effluent Treatment Plant.

Please refer Annexure-I for average effluent quantity & quality for the quarter ending September 2015.

3.2 Does the industry meet MINAS or the Standards of the State Board? Both Standards

(Give analysis report)

Please refer Annexure-II for the Urea Dust analysis report for the quarter ending

September 2015.

**3.3** If not, give the deviations from the standards specified by the State Board.  
Not Applicable.

**3.4** What measures the industry had undertaken or proposed to be implemented to comply with the Standards?

We are fully complying with the statutory limits.

We obtained ISO 14001:1996 EMS in May 2000 from M/s BVQI and it was upgraded to ISO 14001:2004. This system ensures the continual improvement on Environment.

As a proactive measure we implemented Process Safety Management System (PSMS) since October 2007.

We are certified for RC 14001:2008 Responsible Care Management System since March 2012.

In the Unit II also, process condensate stripper, purge gas recovery unit and Disc Oil Separator are built in along with the process plants. In the Urea Plant, Deep Hydrolyser Stripper has been incorporated.

As the individual effluents are treated at the respective plant, existing backup ETP is sufficient to treat the effluents from Plant-II also.

**3.5** Process of implementation and proposed date of completing the work to meet the standards.

All the treatment plants have been built and commissioned along with the process plants and upgrading / improving them as per recent developments. The treatment plants are working satisfactorily.

**4.0** Comments of the concerned State Board:


NFC L Received combined Air, Water Consents and Hazardous Wastes Authorization for Plant I, II, CDR and CFG Plant from APPCB Office, Hyderabad, on 09.12.2014. These Consents for Operation are valid up to 31.03.2017.


Consent for Air - APPCB/VSP/KKD/10300/HO/CFO/2014 – 602, dated 28-11-2014

Consent for Water - APPCB/VSP/KKD/10300/HO/CFO/2014 – 602, dated 28-11-2014

HW Auth. No. - APPCB/VSP/KKD/10300/HO/CFO/2014 – 602, dated 28-11-2014

Signature:

 29/10/15

 **Name: R. Raghavan**  
**Senior Vice President (Operations & Projects)**  
Address: Nagarjuna Fertilizers and Chemicals Limited  
Nagarjuna Road  
KAKINADA- 533 003  
Andhra Pradesh

**STACK EMISSION:**

Sampling and analysis done by: Industry/Consultant to industry/State Board/Central Board

Process/Plant	Stack/Prilling	Parameters	Date of sampling/analysis
<b>Prilling Tower:</b>			
Unit-I	102 Meters	Particulate matter mg/Nm <sup>3</sup>	See Annexure II
Unit-II	102 Meters	Particulate matter mg/Nm <sup>3</sup>	See Annexure II
<b>Sulphuric Acid Plant</b>			
Unit-I		(1) Sulphur Dioxide (Kg/Te 100 % H <sub>2</sub> SO <sub>4</sub> )	Not Applicable
DCDA/SCSA		(2) Acid mist (mg/Nm <sup>3</sup> )	Not Applicable
Unit-II		(3) Sulphur Dioxide (Kg/Te 100 % H <sub>2</sub> SO <sub>4</sub> )	Not Applicable
DCDA/SCSA		(4) Acid mist (mg/Nm <sup>3</sup> )	Not Applicable
<b>Nitric Acid Plant:</b>			
Unit-I		NO <sub>x</sub> (Kg/Te if dilute HNO <sub>3</sub> )	Not Applicable
Unit-II		NO <sub>x</sub> (Kg/Te if dilute HNO <sub>3</sub> )	Not Applicable
Acidulation of rock Phosphate		Total Fluoride as F(mg/Nm <sup>3</sup> )	Not Applicable
Rock phosphate grinding		Particulate matter (mg/Nm <sup>3</sup> )	Not Applicable
<b>Complex (NPK) Plants:</b>			
(a) Reaction		Particulate matter (mg/Nm <sup>3</sup> )	Not Applicable
		Ammonia (mg/Nm <sup>3</sup> )	Not Applicable
(b) Granulation, drying		Particulate matter (mg/Nm <sup>3</sup> )	Not Applicable
		Ammonia (mg/Nm <sup>3</sup> )	Not Applicable
(c) Steam Generation Plant		Particulate matter (mg/Nm <sup>3</sup> )	Not Applicable
(d) Captive power plant		Particulate matter (mg/Nm <sup>3</sup> )	

Annexure-I

For the Quarter, July 2015 - September 2015  
 Water Consumption by the Complex: 849 m<sup>3</sup>/hr (including rain water) for both Plant-I and Plant-II  
 Effluents sampling and Analysis done by: Industry

Sl. No	Effluents	Quantity (Normal) m <sup>3</sup> /hr	pH	TDS ppm	TSS ppm	Ammonical Nitrogen as 'N' ppm	Oil ppm	TKN ppm	Conductivity µmhos/cm	Silica ppm	Phosphates ppm	Sulphates ppm	Chlorides ppm
1.	Filter back wash and raw water clarifier	0.0*	7.2	204	45	--	--	--	--	--	--	--	--
2.	Cooling Tower blow down	48.0	7.0	1886	61	3.0	--	11.0	2299	--	7.3	328	418
3.	Boiler blow down	0.0*	9.2	--	--	--	--	--	--	0.17	--	--	--
4.	Oily effluents	3.0	--	--	44	94	30.0 to 42.0	--	--	--	--	--	--
5.	Neutralised regeneration effluents from DM Plant & Condensate polishing unit	27.0	3.4 to 11.2	2015	38	6.6	--	13.2	--	--	--	--	--
6.	Floor washing and rain (NH <sub>3</sub> & Urea)	9.0**	--	--	--	--	--	--	--	--	--	--	--
7.	Sewage Treatment Plant (for Canteen effluent and Technical Building sewage) outlet#	7.1	7.0	--	41	--	8.0	--	--	--	--	--	--
8.	Total =	94.1											

\* Modifications were carried out in the plant to recycle filter back wash from sand filters in Pre Treatment Plant to raw water reservoir. Boiler blow down is used as CT makeup and hence the effluents from both these areas are nil.

\*\* Normally no flow. # Sewage Treatment Plant for our Canteen Effluent and Technical Building sewage.

UREA PRILL TOWER DUST ANALYSIS (mg/Nm<sup>3</sup>)

Date	Plant-I	Date	Plant-II
07.07.15	23.2	07.07.15	21.5
14.07.15	24.4	14.07.15	20.8
21.07.15	22.6	21.07.15	20.2
28.07.15	24.9	28.07.15	23.1
04.08.15	21.4	04.08.15	20.9
11.08.15	18.9	11.08.15	19.5
18.08.15	25.2	18.08.15	23.8
25.08.15	19.8	25.08.15	26.0
01.09.15	20.3	01.09.15	21.5
08.09.15	23.6	08.09.15	20.8
15.09.15	26.4	15.09.15	24.1
22.09.15	24.1	22.09.15	25.8
29.09.15	20.9	29.09.15	27.1