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NAGARJUNA GROUP
Nagarjuna Fertilizers
and Chemicals Limited

NFCL/ENV/CPCB/QR/01/2017

27th April 2017

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

Subject : Format 'FB'- Quarterly Report for January 2017 – March 2017

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 March 2017 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

G V S Anand
Senior General Manager (Operations)

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
DGM (Lab & Env.) / Manager (Env.)

FORMAT: 'FB'

MINAS AND EMISSION STANDARDS IMPLEMENTATION IN FERTILIZER INDUSTRIES

Quarterly Progress Report, January 2017 – March 2017

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 1st August, 1992 from Plant-I and from 19th March, 1998 from Plant-II. Both the plants are in operation now.

3.0 Liquid Effluents

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

All the offsite facilities including the Effluent Treatment Plant are common for both Plant-I and Plant-II. Please refer Annexure-I for data pertaining to average effluent quantity & quality for the quarter ending March 2017.

3.2 Does the industry meet MINAS or the Standards of the State Board? Both Standards?
(Give analysis report)

Yes, NFCL meets the standards specified by statutory bodies. Please refer Annexure-II for the Urea Dust analysis report for the quarter ending March 2017.

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?

NFCL complies with the standards specified by statutory authorities.

NFCL was awarded the ISO 14001:1996 (EMS) certification in May 2000 by M/s BVQI. It was subsequently upgraded to ISO 14001:2004 later. This system ensures the continual improvement on Environment.

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

NFCL is also certified with RC 14001:2008 (Responsible Care Management System) since March 2012.

In Unit II; Deep Hydrolyser Stripper, Process Condensate Stripper, Purge Gas Recovery Unit and Disc Oil Separator have been commissioned, as pollution control equipments, along with other equipment in the process plants.

As the individual effluents are treated in the respective plant, ETP is sufficient to treat the untreated effluents, if any, from both plants.

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 upgraded / improved as per the technological developments. The treatment plants are working satisfactorily.

4.0 Comments of the concerned State Board:

NFCL Received extension of validity period of 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 31.03.2022.

NFCL Received authorization for generation, segregation and safe disposal of Bio-Medical Waste under Bio-Medical Waste Management Rule valid upto to 31.03.2022.

Signature:

Name: G V S Anand
Senior General Manager (Operations)
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
Prilling Tower:			
Unit-I	102 Meters	Particulate matter mg/Nm^3	Refer Annexure II
Unit-II	102 Meters	Particulate matter mg/Nm^3	Refer Annexure II
Sulphuric Acid Plant			
Unit-I		(1) Sulphur Dioxide (Kg/Te 100 % H_2SO_4)	Not Applicable
DCDA/SCSA		(2) Acid mist (mg/Nm^3)	Not Applicable
Unit-II		(3) Sulphur Dioxide (Kg/Te 100 % H_2SO_4)	Not Applicable
DCDA/SCSA		(4) Acid mist (mg/Nm^3)	Not Applicable
Nitric Acid Plant:			
Unit-I		NOx (Kg/Te if dilute HNO_3)	Not Applicable
Unit-II		NOx (Kg/Te if dilute HNO_3)	Not Applicable
Acidulation of rock Phosphate		Total Fluoride as F(mg/Nm^3)	Not Applicable
Rock phosphate grinding		Particulate matter (mg/Nm^3)	Not Applicable
Complex (NPK) Plants:			
(a) Reaction		Particulate matter (mg/Nm^3)	Not Applicable
		Ammonia (mg/Nm^3)	Not Applicable
(b) Granulation, drying		Particulate matter (mg/Nm^3)	Not Applicable
		Ammonia (mg/Nm^3)	Not Applicable
(c) Steam Generation Plant		Particulate matter (mg/Nm^3)	Not Applicable
(d) Captive power plant		Particulate matter (mg/Nm^3)	

UREA PRILL TOWER DUST ANALYSIS (mg/Nm^3)

January 2017			
Date	**Plant-I**	**Date**	**Plant-II**
03.01.17	16.6	03.01.17	Under S/D
10.01.17	Under S/D	10.01.17	24.9
17.01.17	25.4	17.01.17	18.7
24.01.17	22.6	24.01.17	25.1
31.01.17	19.7	31.01.17	17.8
February 2017			
Date	**Plant-I**	**Date**	**Plant-II**
07.02.17	21.9	07.02.17	22.8
14.02.17	19.8	14.02.17	Under S/D
21.02.17	23.5	21.02.17	Under S/D
28.02.17	18.4	28.02.17	Under S/D
March 2017			
Date	**Plant-I**	**Date**	**Plant-II**
07.03.17	19.9	07.03.17	23.4
14.03.17	22.5	14.03.17	24.6
21.03.17	21.9	21.03.17	18.5
28.03.17	20.8	28.03.17	19.7

For the Quarter, January 2017 – March 2017
Water Consumption by the Complex: 878 m^3/hr for both Plant-I and Plant-II
Effluents sampling and Analysis done by: Industry

Sl. No	Effluents	Quantity (Normal) m^3/hr	pH	TDS ppm	TSS ppm	Ammo-nical Nitrogen ppm	Oil ppm	TKN ppm	Condu-ctivity µmhos/ cm	Silica ppm	Phos-phates ppm	Sul-phates ppm	Chlo-rides ppm
1.	Filter back wash and raw water clarifier	0.0 *	7.5	213	41	--	--	--	--	--	--	--	--
2.	Cooling Tower blow down	58.0	7.2	1998	42	1.0	--	2.0	2325	--	7.8	537	314
3.	Boiler blow down	0.0 *	9.1	--	--	--	--	--	--	0.29	--	--	--
4.	Oily effluents	2.0	--	--	41	230	30.0 to 42.0	--	--	--	--	--	--
5.	Neutralised regeneration effluents from DM Plant & Condensate polishing unit	20.0	2.9 to 11.2	3416	39	11.0	--	22	--	--	--	--	--
6.	Floor washing and rain (NH_3 & Urea)	6.0 **	--	--	--	--	--	--	--	--	--	--	--
7.	Sewage Treatment Plant (for Canteen effluent and Technical Building sewage) outlet#	5.0	7.2	--	28	--	7.5	--	--	--	--	--	--
8.	Total =	91.0											

* 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.