



ANDHRA PRADESH POLLUTION CONTROL BOARD
D.No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre,
Chalamavari Street, Kasturibaipet, Vijayawada – 520010.

Website :www.appcb.ap.nic.in

CONSENT ORDER FOR ESTABLISHMENT

Order No.65 /APPCB/CFE/RO-VSP/HO/2012

Dt. 26.04.2019

Sub: APPCB – CFE - **M/s. Coromandel International Ltd., (Formerly M/s. Coromandel Fertilizers Ltd, Sriharipuram, Malkapuram (PO), Visakhapatnam** – Consent for Establishment of the Board for Change of Product Mix under Sec.25 of Water (P & C of P) Act, 1974 and Under Sec.21 of Air (P&C of P) Act, 1981 - Issued - Reg.

- Ref: 1) EC order dt. 14.07.2017 issued by MoEF&CC, GoI, New Delhi.
 2) CFE order (Extn.) dt.12.09.2017.
 3) Industry's application received through OCMMS on 31.03.2019.
 4) RO's inspection report dt. 08.04.2019.
 5) CFE Committee meeting held on 09.04.2019.
 6) Industry's lrs.dt. 08.04.2019 & 10.04.2019.

1. In the reference 3rd cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for **Change of Product Mix** without increasing production capacity and pollution loads and to produce the products with installed capacities as mentioned below, with an additional investment of Rs.1.0 lakh.

Name of the Products and By-products	Name of the Products and By-products	Consented capacity as per CFE order 01.04.2008, 29.06.2010, 27.05.2015, 30.10.2015, 12.09.2017 & 17.07.2018	Proposed change of product mix	Total after change of product mix
1.	Complex Fertilizers	3900 TPD	4210 TPD*	4210 TPD*
2.	Customized Fertilizer plant	300 TPD		
3.	Water soluble fertilizer plant			
	Water Soluble Fertilizer (or)	10 TPD		
	Micronutrient mixtures (powder/ liquid/ granular) (or)	---		
	Chelated Micronutrients (powder/ liquid/ granular) (or)	---		
	Urea Phosphate (or)	---		
	Micronized / Nano Sulphur	---		
4.	H2SO4	2100 TPD	---	2100 TPD
5.	Bentonite Sulfur	100 TPD	(-10 TPD)	90 TPD
6.	Phosphoric Acid	1400 TPD	(-700 TPD)	700 TPD
7.	Fertilizer technology centre (pilot plant)-Complex Fertilizer	24.0 TPD	---	24.0 TPD

	By-Products:			
8.	Fertilizer technology centre – Phosphoric acid	0.83 TPD	---	0.83 TPD
9.	Sulpho Zinc & Sulpho boron	10 TPD	----	10 TPD
10.	Gypsum	7000 TPD	(-3773 TPD)	3227 TPD
11.	Hydroflorosilicic Acid	35 TPD	(-20 TPD)	15 TPD
12.	Bulk storage facilities at site		---	
13.	Ammonia (1X5000 MT + 1x 7500 MT)	12500 MT	---	12500 MT
14.	Sulphuric Acid (1 X 4000 MT + 3 X 2000 MT) 1 x 5000 MT	15000 MT	----	15000 MT
15.	Phosphoric acid (P ₂ O ₅)	7 X 610 MT + 20000 MT	(-20000 MT)	7 X 610 MT
16.	Molten sulphur	2 X 5000 MT	----	2 X 5000 MT
17.	LSHS	2 X 500 KL & 3 X 160 T	---	2 X 500 KL & 3 X 160 T
18.	Diesel	1 X 10 KL + 1 X 16 T	---	1 X 10 KL + 1 X 16 T
19.	Petrol	10 KL	----	10 KL
20.	Kerosene	1 X 50 KL	---	1 X 50 KL
21.	LPG	40 X 14.5 Kg	---	40 X 14.5 Kg
22.	Fertilizer Technology Centre (Water soluble Fertilizer pilot plant)	---	1.0 TPD	1.0 TPD

***The industry shall produce either individual fertilizers or combination of the fertilizers at any point of time without increase in the total permitted capacity of fertilizers 4210 TPD.**

- As per the application, the proposed activity is to be located within the existing Plant premises located at Sriharipuram, Malkapuram, Visakhapatnam with an area of 438 Acres.
- The above site was inspected by the Environmental Engineer and Asst. Environmental Engineer-II, Regional office, Visakhapatnam, A.P Pollution Control Board on 04.04.2019 and observed that the site is surrounded by

North : Vacant land followed by road connecting NH-5 & VPT.
South : Vacant land followed by road connecting Port road .
East : M/s. HPCL Visakh Refinery
West : M/s. Shravan Shipping handling unit & Mulagada Village.

- The Board, after careful scrutiny of the application, verification report of Regional Officer and recommendations of CFE committee, hereby issues **CONSENT FOR ESTABLISHMENT FOR CHANGE OF PRODUCT MIX** under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. **This order is issued to manufacture the products as mentioned at para (1) only.**

5. This Consent Order now issued is subject to the conditions mentioned in Annexure.
6. This order is issued from pollution control point of view only. Zoning and other regulations are not considered.
7. This order is valid for period of 7 years from the date of issue.

Encl: Annexure

**Bandla Siva
Sankar
Prasad**
CHAIRMAN

Digitally signed by Bandla Siva
Sankar Prasad
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To

**M/s. Coromandel International Ltd., (CPM)
(Formerly M/s. Coromandel Fertilizers Ltd,
Sriharipuram, Malkapuram (PO),
Visakhapatnam.
kumaresanm@coromandel.murugappa.com**

Copy to: 1. The JCEE, Z.O: Visakhapatnam for information and necessary action.
2. The E.E., R.O: Visakhapatnam for information and necessary action.

ANNEXURE

1. The proponent shall obtain Consent for Operation (CFO) from APPCB, as required Under Sec.25/26 of the Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P&C of P) Act, 1981, before commencement of the trial runs.
2. The applicant shall properly maintain separate energy meters for Effluent Treatment Plant (ETP) and Air pollution Control equipments to record energy consumed. An alternative electric power source sufficient to operate all pollution control systems shall be provided.
3. The industry shall properly maintain separate storm water drains. No effluents shall be discharged in to the storm water drains.

Water:

4. The source of water is GVMC & Sea drawl. The maximum permitted water consumption is as following after Change of Product Mix:

Sl. No.	Purpose	Consented capacity as per CFE order 01.04.2008, 29.06.2010, 27.05.2015, 30.10.2015, 12.09.2017 & 17.07.2018 (KLD)	Proposed change of product mix (KLD)	Total after change of product mix (KLD)
1	Process & Washes	10,350*	10,350*	10,350*
2	Industrial Cooling (Makeup) – fresh water			
3	Boiler Feed			
4	Domestic & other			
5	Customized fertilizer plant			
6	Industrial Cooling – Sea water.	84,600	84,600	84,600

*** Water consumption shall be restricted to 10,350 KLD as mentioned in the EC order dt. 14.07.2017.**

5. The maximum waste water generation shall not exceed the following after Change of Product Mix:

Sl. No.	Source	Consented capacity as per CFE order 01.04.2008, 29.06.2010, 27.05.2015, 30.10.2015, 12.09.2017 & 17.07.2018 (KLD)	Proposed change of product mix (KLD)	Total after change of product mix (KLD)
1.	Process & washings	1800	----	1800
2.	Cooling water blow down	81600	----	81600
3.	Domestic	530	----	530
	Total	83,930	---	83,930

ETP Details & Mode of Disposal:

Source of effluent	Treatment	Mode of final disposal
Process & washing effluents & Boiler/cooling tower blow downs, DM plant rejects	ETP consists of Equalization → Reaction tank 1 → Clariflocculator - 1 → Buffer tank → Reaction tank 2 → Clariflocculator - 2 → Reaction tanks 3 cum Neutralization tank → Holding tank → Reaction tank - 4 & filter press.	<ul style="list-style-type: none"> ➤ Both treated sewage water and process effluents shall be recycled / reused within factory premises to achieve Zero discharge except during the rainy season. ➤ In case of low load plant operations and during rainy season, the quantity of effluent generated from Phosphoric acid post enhancement is 1800 KLD which shall be treated in the existing ETP plant and discharged along with once through cooling blow down through Meghadrigedda surplus course that joins Bay of Bengal.
Dilution coolers - Once through cooling	---	Into Meghadrigedda surplus course that joins Bay of Bengal.
Domestic effluents	STP	Recycled / reused within the factory premises.

6. All the units of the ETP & STP systems shall be impervious to prevent ground water pollution. The ETP & STP systems shall be maintained properly to achieve the standards.
7. The effluents shall be treated to the marine coastal water discharge standards, as stipulated under Schedule VI of Environment (Protection) Rules, 1986, notified by Ministry of Environment and Forests, Government of India vide G.S.R.422 (E), dt.19.05.1993 and its amendments thereof.
8. The industry shall provide magnetic flow meters with totalisers at the inlet and outlet of ETP.
9. Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas. All pipe valves, sewers, drains shall be leak proof.

Air:

10. The Air pollution Control equipment shall be maintained properly and shall comply with the following for controlling air pollution after Change of Product Mix:

Sl. No	Details of Stack	Stacks – 1 & 2	Stack – 3	Stacks – 4 & 5	Stacks – 6 to 8	Stack 9	Stack – 10	Stack – 12
1.	Attached to	Sulphuric Acid Plant existing (1 & 2 Plants)	Phosphoric Acid Plant (Existing)	Rock Phosphate grinding units (Existing 2 Nos.)	Complex fertilizer plant Complex A, B & C-Trains	Customized fertilizer plant Drier (2 Nos.) & process coolers (2 Nos.) of customized fertilizer	Oil Fired boiler through 5 MW D.G. Set	Oil Fired Boiler
2.	Capacity	1700 TPD & 400 TPD*	700 TPD	40 TPD, 20 TPD	3900 TPD	300 TPD	48 TPH	2 x 1.5 TPH
3.	Stack height: m	69 & 50		45	37.8, 37.8 & 37.3	30	30.48	30.48
4.	Details of Air Pollution Control Equipment:	Alkali scrubber	Evaporator followed by series of barometric condensers	Bag filters	4 stage scrubbing system (for ammonia recovery and multi cyclone 6 Nos.) X 3 Nos.	Cyclones followed by wet scrubber	Cooler gases	-----

Sl. No	Details of Stack	Stack – 13	Stacks – 14 & 15	Stack 16	Stack – 17	Stack – 18	Stack – 19
1.	Attached to	Oil Fired Boiler	D.G. Sets	Phosphoric Acid Plant	Rock Phosphate grinding units	Coal fired Boiler and Back pressure turbine	Rock Phosphate grinding unit
2.	Capacity	31 TPH	6 MW & 4 MW	700 TPD	75 TPD	40 TPH and 5 MW	30 TPD
3.	Stack height: m	30.48	operating in an emergency condition	33 (same stack 16 is adequate to meet the requirement, no additional stack required)	45	56	30
4.	Details of Air Pollution Control Equipment:	----	Silencers & Acoustic enclosures	Evaporator followed by series of barometric condensers Fumes Scrubber	Bag filters	ESP	Bag filters

*** This includes 300 TPD in SAP-1 and 100 TPD in SAP-2 post debottlenecking without any requirement of increase in existing stack height.**

11. The industry shall properly maintain 400 MTPD evaporation system for Phosphoric Acid including Fluorine recovery system as stipulated in the EC order.
12. A sampling port with removable dummy of not less than 15 cm diameter shall be provided in the stack at a distance of 8 times the diameter of the stack from the nearest constraint such as bends etc. A platform with suitable ladder shall be provided below 1 meter of sampling port to accommodate three persons with instruments. A 15 AMP 250 V plug point shall be provided on the platform.
13. The industry shall properly maintain online pH measuring facility with auto recording system to the scrubbers provided to treat the process emissions.

14. The industry shall implement adequate measures to control all fugitive emissions from the plant.
15. The proponent shall ensure compliance of the National Ambient Air quality standards notified by MoEF, GoI vide notification No. GSR. 826 (E), dated. 16.11.2009 during construction and regular operational phase of the project at the periphery.

The generator shall be installed in a closed area with a silencer and suitable noise absorption systems. The ambient noise level shall not exceed 75 dB(A) during day time and 70 dB(A) during night time.

Solid / Hazardous Waste:

16. The industry shall comply with the following for disposal of Solid Waste after Change of Product Mix:

Sl. No	Name of the waste	Existing Quantity	Total after CPM	Mode of final disposal
1.	Acid residues (Tank bottom sludge)	45 TPA	45 TPA	Recycle back into phosphoric acid reactor.
2.	LSHS Sludge	10 TPA	10 TPA	TSDf, Dundigal, for incineration
3.	Sulphur muck (Sulphur sludge)	750 TPA	750 TPA	Recycle back into the process as a filler material in the granulation plant.
4.	Spent catalyst	65 TPA	65 TPA	Authorized reprocessors/ recyclers (or) TSDf, Parawada for secured land filling.
5.	Used lubricating oil/draind oil	50 KLPA	50 KLPA	Authorized reprocessors / recyclers.
6.	Detoxified Containers and container liners	700 Nos.	700 Nos.	After detoxification, it shall be disposed off to outside agencies.
7.	Scrubbing sludge	450 TPA	450 TPA	Reuse back in the process
8.	E Waste	1.0 TPA	1.0 TPA	Authorised e-waste recyclers
9.	Fly ash	25 TPD	25 TPD	To cement industries / brick manufacturing units

17. The following rules and regulations notified by the MoEF&CC, GoI shall be implemented.

- a) Hazardous waste and other wastes (Management and Transboundary Movement) Rules, 2016.
- b) Plastic Waste Management Rules, 2016.
- c) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.
- d) Fly Ash Notification, 2016.
- e) Batteries (Management & Handling) Rules, 2010.
- f) E-Waste (Management) Rules, 2016.
- g) Construction and Demolition waste Management Rules, 2016.

Other Conditions:

18. The industry shall comply with the following as committed vide Irs.dt. 08.04.2019 & 10.04.2019.

- a) There shall not be any change in waste water, solid waste and air pollution (emission loads (F, NH₃, & SPM) in the post change of product mix and to achieve this, the following measures are implemented in NPK plant in order to reduce the pollution loads:
- Improved pipe reactor technology with change in the design of internals for increased absorption of ammonia during reaction with Phosphoric acid, to reduce ammonia emissions from the reaction system.
 - Usage of increased proportion of evaporated (concentrated) Phosphoric acid having low Fluorine content along with weak Phosphoric acid, to reduce Fluorine input to Complex fertilizer plant and hence to reduce Fluorine emissions .
 - Usage of granulation aide to improve granule strength to reduce dust generation from the plant.
- b) As directed vide CFO order dt. 18.02.2019, the industry shall remove fresh gypsum from unlined area by January, 2020. As committed the industry shall construct HDPE lined pond in an additional 10 acres by October, 2019. There after the old and fresh Gypsum shall be stored on lined yard.
- c) The target of Green Visakha plantation of 2.25 lakh saplings shall be completed by 2021.
- d) Housekeeping shall be improved through closed transportation systems. Telescopic chute system shall be maintained properly to reduce fugitive emissions. Road sweeping machine shall be deployed for control of dust near Gypsum yard.

19. The industry shall comply with the following as stipulated in the CFE (Expn.) order dt.12.09.2017:

- Lined storage area for Gypsum shall be provided.
- Garland drains shall be provided so that there shall not be any flooding of rain water to outside.
- There shall not be increase in the permitted quantities of the products. The industry proposed to increase Sulphuric Acid production and Phosphoric Acid production to reduce their imports.
- Lining shall be provided to delay pond.
- The existing oil fired boilers of capacity 1 X 48 TPH and 1 X 31 TPH shall be kept as standby after expansion.

20. The industry submitted a copy of letter stating that the MoEF&CC, Gol, New Delhi vide Ir.dt.30.05.2018 addressed to M/s. Southern Petro Chemical Industries Corporation (SPIC) clarified that the intermediate product (Phosphoric Acid) is not covered under the purview of the EIA notification 2006, and as such there is no requirement of Environmental Clearance to the said project as stand alone.
21. The industry shall submit a report on recycling of treated effluent into the process to achieve zero discharge except during rainy season.
22. Green belt shall be developed all along the boundary & vacant spaces with tall growing trees with good canopy and it shall not be less than 33% of the total area.
23. Concealing the factual data or submission of fabricated data and failure to comply with any of the conditions mentioned in this order attracts action under the provisions of relevant pollution control Acts.
24. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec.27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to revoke the order, to review any or all the conditions imposed herein and to make such modifications as deemed fit and stipulate any additional conditions by the Board.
25. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules,1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of Water (Prevention and Control of Pollution)Act,1974 and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981.

Bandla Siva
Sankar
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Digitally signed by Bandla Siva Sankar Prasad
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CHAIRMAN

To

**M/s. Coromandel International Ltd., (CPM)
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