

**ANDHRA PRADESH POLLUTION CONTROL BOARD**

D. No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre,
Chalamalavari Street, Kasturibaipet, Vijayawada - 520 010
Website: www.pcb.ap.gov.in

CONSENT ORDER FOR ESTABLISHMENT**Order No.65 /APPCB/CFE/RO-VSP/HO/2012****08/02/2020**

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 Expansion of Sulfuric acid plant** 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, Gol, New Delhi.
 2. CFE (CPM) order dt.26.04.2019 and its amendment order dt. 28.06.2019.
 3. Industry's CFE (Expansion) application received through AP OCMMS on 18.01.2020.
 4. RO's inspection report dt. 22.01.2020.
 5. CFE Committee meeting held on 28.01.2020.

1. In the reference 3rd cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for **expansion** for new Sulfuric acid plant of capacity 1500 MTPD without increase in complex fertilizer production with an additional investment of Rs.400 Crores.

Sl. No	Name of the Products and By-products	Consented quantity as per CFE (Exp) dt: 26.04.2019	Quantity after expansion
	Products		
1.	Complex Fertilizers (or)	4210 TPD	4210 TPD
2.	Customized Fertilizer plant (or)		
3.	Water soluble fertilizer plant		
	Water Soluble Fertilizer (or)		
	Micronutrient mixtures (powder/ liquid/ granular) (or)		
	Chelated Micronutrients (powder/ liquid/ granular) (or)		
	Urea Phosphate (or)		
	Micronized / Nano Sulphur		
4.	H2SO4	2100 TPD	3600 TPD
5.	Bentonite Sulfur	90 TPD	90 TPD
6.	Phosphoric Acid	1400 TPD	1400 TPD
7.	Fertilizer technology centre (pilot plant)-Complex Fertilizer	24 TPD	24 TPD
8.	Fertilizer technology centre – Phosphoric acid	0.83 TPD	0.83 TPD
9.	Sulpho Zinc & Sulpho boron	10.0 TPD	10.0 TPD
10	Fertilizer Technology Centre (Water soluble Fertilizer pilot plant)	1.0 TPD	1.0 TPD

	By-Products:		
10.	Gypsum	7000 TPD	7000 TPD
11.	Hydrofluorosilicic Acid	35 TPD	35 TPD
12.	Bulk storage facilities at site		
13.	Ammonia (1X5000 MT + 1x 7500 MT)	12,500 MT	12,500 MT
14.	Sulphuric Acid	15,000 MT	15,000 MT + 2 x 5000 MT + 2 X 12,500 MT + 1500 MT
15.	Phosphoric acid (P ₂ O ₅)	7 X 610 m ³ + 20,000 MT	7 X 610 m ³ + 20,000 MT
16.	Molten sulphur	2 X 5000 MT	2 X 5000 MT
17.	LSHS	2 X 500 KL 3 X 160 KL	2 X 500 KL 3 X 160 KL
18.	Diesel	1 X 10 KL + 1 X 16 KL	1 X 10 KL + 1 X 16 KL
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

2.As per the application, the proposed activity is to be located within the existing Plant premises located at Sriharipuram, Malkapuram, Visakhapatnam in an area of 320.0 acres. At present, the industry is producing 2100 MTPD (1 X 1700 MTPD and 1 X 400 MTPD) of sulphuric acid within the plant and importing the remaining 1500 MTPD to meet the present rate of phosphoric acid production 1000MTPD P₂O₅. The requirement of sulphuric acid will be 5000MTPD for consented phosphoric acid production of 1400 MTPD P₂O₅. Now, the industry proposed to establish a new sulphuric acid plant of 1500TPD within the existing premises with no increase in pollution load (SO₂-3150 kg/day approved by MoEF & CC & APPCB) and with no increase in fertilizer production capacity. The Sulphuric acid produced in the plant including expansion, shall be used for captive purpose only.

3. The above site was inspected by the Asst. Environmental Engineer, Regional office, Visakhapatnam, A.P Pollution Control Board on 21.01.2020 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. Shraavan shipping handling unit & Mulagada Village.

Surroundings of the proposed Sulfuric Acid Plant within the premises:

North : vacant land
South : internal road
East : Gypsum handling area
West : Urea godowns.

4. The Board, after careful scrutiny of the application, verification report of Regional Officer and recommendations of CFE committee, hereby issues **CONSENT FOR ESTABLISHMENT FOR EXPANSION OF SULPHURIC ACID PLANT** 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

**VIVEK YADAV IAS, MS(VY), O/o MEMBER SECRETARY-APPCB
MEMBER SECRETARY**

To

**M/s. Coromandel International Ltd.,
(Exp H₂SO₄ plant)
(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. The maximum permitted water consumption is as following after expansion of Sulphuric acid plant:

Sl.no	Purpose	Consented quantity as per CFE (Exp) dt: 26.04.2019 (KLD)	Proposed Quantity (Expansion)	Quantity after expansion (KLD)
1.	Process & Washes	10,350 (After expansion)	1800	10,350*
2.	Industrial Cooling (Makeup) – fresh water			
4.	Boiler Feed			
5.	Domestic & other			
6.	Customized fertilizer plant			
	Subtotal (1)	10,350*	1800	10,350*
7.	Industrial Cooling – Sea water.	84,600	---	84,600
	Grand total	94,950	1800 KLD	94,950

*** 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 expansion of Sulphuric acid plant:

Sl. No	Effluents	Consented quantity as per CFE (Exp) dated 26.04.2019 (KLD)	Proposed Quantity (Expansion)	Quantity after expansion (KLD)
1.	Process & washings	1800	---	1800
2.	Cooling water blow down	81,600	---	81,600
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 sea.
Dilution coolers - Once through cooling	---	Into Meghadrigedda surplus course which joins Sea
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. Process effluents shall be recycled / reused within factory premises to achieve zero discharge except during the rainy season, as stipulated in Specific condition no. (ix) of EC order dt. 14.07.2017.
8. During rainy season, the treated waste water shall conform to the water discharge standards, as stipulated in condition no.2 of Schedule-B of CFO order dt. 19.03.2018.
9. The industry shall provide magnetic flow meters with totalisers at the inlet and outlet of ETP.
10. 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:

11. The Air pollution Control equipment shall be maintained properly and shall comply with the following for controlling air pollution after expansion of Sulphuric acid plant:

Sl. No	Details of Stack	Attached to	Capacity	Stack height (Meters)	Details of Air Pollution Control Equipment
1.	Stack – 1	Sulphuric Acid Plant (Old)	1700 TPD	69	Alkali scrubber
2.	Stack – 2	Sulphuric Acid Plant (New)	400 TPD	50	Alkali scrubber
3.	Stack – 3	Phosphoric Acid Plant	700 TPD	33	Evaporator followed by series of barometric condensers
4.	Stack – 4	Rock Phosphate Grinding unit (Old Ball Mill)	40 TPH	45	Bag filters
5.	Stack – 5	Rock Phosphate Grinding unit (New Ball Mill)	20 TPH	45	Bag filters
6.	Stack – 6 to 8	Complex fertilizer Plant Complex A-Train Complex B-Train Complex C-Train	3900 TPD	37.8 37.8 37.3	4 stage scrubbing system (for ammonia recovery and multi cyclone 6 Nos.) X 3 Nos.
7.	Stack – 9	Customized fertilizer plant Drier (2 Nos.) & process coolers (2 Nos.) of customized fertilizer	300 TPD	30	Cyclones followed by wet scrubber
8.	Stack – 10	Oil Fired boiler through 5 MW T.G. Set	48 TPH	30.48	Cooler gases
9	Stack – 11	Oil Fired Boiler	31 TPH	30.48	-----
10	Stack – 12	Oil Fired Boiler	1.5 TPH	30.48	-----
11	Stack – 13	D.G. Set*	6 MW	operating in an emergency condition	Acoustic enclosures
12	Stack – 14	D.G. Set*	4MW		
13	Stack-15	Phosphoric Acid Plant	700 TPD	33	Evaporator followed by

					series of barometric condensers fumes scrubber
14	Stack 16	Rock Phosphate grinding Units	75 TPH	45	Bag Filters
15	Stack 17	Coal Fired Boiler & Back pressure Turbine	40 TPH & 5 MW	56	ESP
16	Stack-18	Rock Phosphate grinding unit	30 TPH	30	Bag filters

New stack as per CFE expansion :

17	Stack-19	Sulphuric Acid Plant	1500 TPD	60 m.	Alkali scrubber
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12. The industry shall properly maintain 400 MTPD evaporation system for Phosphoric Acid including Fluorine recovery system as stipulated in the EC order.
13. 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.
14. The industry shall properly maintain online pH measuring facility with auto recording system to the scrubbers provided to treat the process emissions.
15. The industry shall implement adequate measures to control all fugitive emissions from the plant.
16. 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:

17. The industry shall comply with the following for disposal of Solid Waste after expansion of Sulphuric acid plant:

S N o	Name of the Hazardous waste	Quantity As per CFE (Exp) dt: 26.04.2019	Proposed Quantity (Expansion)	Mode of Disposal
1	Acid residues (Tank bottom sludge)	45 TPA	---	Recycled into phosphoric acid reactor.
2	LSHS Sludge	10 TPA	---	TSDF, for incineration
3	Sulphur muck (Sulphur sludge)	750 TPA	550 TPA	Recycled into the process as a filler material in the granulation plant.
4	Spent catalyst	65 TPA	50 TPA	Authorized reprocessors recyclers (or) TSDF, Parawada for secured land fill.
5	Used lubricating oil/drained oil	50 KLPA	---	To authorized Re-processors / Recyclers / to the Cement industries for co-processing in the kiln.
6	Detoxified Containers and container liners	700 Nos.	---	To authorized agencies, after complete detoxification for re-use/ recycle.
7	Scrubbing sludge	450 TPA	---	Reuse back in the process
8	E Waste	25 TPA	---	Authorised e-waste recyclers / dismantlers.
9	Fly ash	25 TPD	---	To cement industries / brick manufacturing units

18. 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.
- i) Solid Waste Management Rules, 2016.
- j) The Public Liability Insurance Act, 1991 and its amendments thereof.

Other Conditions:

19. The industry shall comply with the following:

- The industry shall comply with all the conditions stipulated in the CFO order within a year.
- The industry shall control the leakages in the Rock Phosphate feeding area by April, 2020.
- Setting up new Sulphuric acid plant with State-of-Art technology and to achieve SO₂ emission of 0.75 Kg SO₂ / MT of acid (100%)
- Reduction of SO₂ emission in Sulphuric acid plant -1 from 1 Kg SO₂ /MT of acid to 0.8 Kg SO₂ /MT of acid through addition of high Vanadium content catalyst in 5th bed of the converter and higher loading of catalyst into the converter
- Using low sulphur coal of 0.50% sulphur content against 0.7% in coal fired boiler.
- Addition of lime stone powder into the coal fired boiler for improved absorption of SO₂ from 50% (as per earlier consideration), to 80%.

20. The industry shall submit compliance to the conditions stipulated in the EC and CFE orders to the concerned Regional Officer of APPCB every six months and shall upload the same at APPCB website viz., https://pcb.ap.gov.in/UI/Submission_Compliance_of_EC_CFE_CFO_Direction.aspx

21. The industry submitted a copy of letter stating that the MoEF&CC, GoI, 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. Similarly, in this case also EC is not required as Sulphuric acid is one of the raw materials / intermediates for manufacture of Chemical fertilizer.

22. The industry shall submit a report on recycling of treated effluent into the process to achieve zero discharge except during rainy season.

23. 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.

24. Concealing the factual data or submission of false information / 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.

25. 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.
26. 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.

**VIVEK YADAV IAS, MS(VY), O/o MEMBER SECRETARY-APPCB
MEMBER SECRETARY**

To

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