



CONSENT ORDER FOR ESTABLISHMENT

Order No. 316 /APPCB/CFE/RO-VJA/HO/2012

Dt: 01.12.2017

Sub: APPCB – CFE - **M/s. Crux Biotech India Private Ltd., S.Nos.529 (p), 530, 531 (p), 532 (p), 536 (p), 557 (p), 560 (p), 654 (p), Peddavaram (V), Nandigama Mandal, Krishna District** – Consent for Establishment of the Board for **expansion** 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 orders dt. 28-09-2017 issued by the MoEF & CC, GoI, New Delhi.
2) Industry's application received through AP Single Desk Portal on 07.11.2017.
3) R.O's inspection report dt. 10.11.2017.
4) Proponent's Ir.dt.20.11.2017
5) CFE Committee meeting held on 21.11.2017.

1. In the reference 2nd cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for **expansion** (with process modifications) as mentioned below, with an additional project cost of Rs. 0.10 Crore.

S. No.	Unit	Product	As per CFE order dt. 29.11.2012	After expansion
1	Distillery	Rectified Spirit /ENA/Ethanol	60 KLPD	75 KLPD
2	Power	Electricity	2.5 MW	2.5 MW
3	CO ₂ recovery plant	CO ₂ (by product)	45.6 TPD	55.2 TPD

2. As per the application, the above activity is to be located within the existing industry premises at S.Nos.529 (p), 530, 531 (p), 532 (p), 536 (p), 557 (p), 560 (p), 654 (p), Peddavaram (V), Nandigama Mandal, Krishna District in an area of 28.98 acres.
3. The above site was inspected by the Asst. Environmental Engineer - I, Regional office, Vijayawada, A.P Pollution Control Board, on 10.11.2017 and observed that the site is surrounded by

North : Agricultural dry lands
South : Donka followed by dry lands.
East : Donka followed by Agricultural dry lands,
West : Agricultural dry lands,

4. The Board, after careful scrutiny of the application, verification report of Regional Officer and recommendations of the CFE Committee, hereby issues **CONSENT FOR ESTABLISHMENT FOR EXPANSION** to the unit 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 Schedule 'A' and Schedule 'B'.

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 a period of 7 years from the date of issue.**

Encl: Schedule 'A'
Schedule 'B'

MEMBER SECRETARY

To

**M/s. Crux Biotech India Private Ltd., (Expn)
Peddavaram (V),
Nandigama Mandal,
Krishna District.
ravi_gog@hotmail.com**

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

SCHEDULE - A

1. Separate energy meters shall be provided for Effluent Treatment Plant (ETP) and Air pollution Control equipments to record energy consumed.
2. The proponent shall obtain Consents 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 activity.

SCHEDULE - B

Water:

1. The source of water is Bore wells / Krishna river water and the maximum permitted fresh water consumption is as following:

Sl. No	Purpose	As per CFE dt. 29.11.2012	After expansion
1.	Process water	43 KLD	43 KLD
2	Cooling water make up	85 KLD	85 KLD
3	DM Water for boiler make up and for ENA dilution	333 KLD	333 KLD
4	Waste water from Water Treatment Plant (WTP)	169 KLD	169 KLD
5	Make up water for CO2 recovery plant	2 KLD	2 KLD
6	Domestic	10 KLD	10 KLD
	TOTAL	642 KLD	642 KLD

2. The maximum waste water generation shall not exceed the following:

Sl. No.	Source	As per CFE order dt. 29.11.2012	After expansion
1	Process (Spent wash – Thin slop)	260 KLD	260 KLD
2	Boiler blow down	79 KLD	90 KLD
3	Cooling tower blow down	90 KLD	90 KLD (recycled)
4	Effluent from water treatment plant (Raw water treatment rejects)	169 KLD	79 KLD
5	Blow down from CO2 recovery plant	2 KLD	2 KLD (recycled)
6	Domestic	8 KLD	8 KLD
	TOTAL	608 KLD	437 KLD

Treatment & Disposal :

The existing ETP shall be used for treatment of the effluents even after expansion as there will be no additional waste water generation.

Source of effluent	Treatment	Mode of final disposal
Trade effluents (Process)	Decanter, Multiple Effect Evaporator and Drier	<ul style="list-style-type: none"> Spent wash after decantation to be evaporated in MEE. MEE concentrate to drier to produce Distillery Dried Grain Solids (DDGS). It is sold as cattle feed.
Boiler blow down, Cooling tower blow down, Raw water treatment rejects etc.	Biological ETP Consists of Neutralization tanks, anaerobic digestion, Moving bed bio reactor (MBBR), Tube settler, Dual media filter, ultra - filtration & RO system.	The treated waste water shall be utilized for cooling water make up, ash suppression and for on land for gardening within the premises to develop green belt.
Domestic	Septic tank	Soak pit.

3. The existing Effluent Treatment Plant (ETP) shall be operated regularly in order to meet the standards. All the units of the ETP shall be impervious and shall be constructed 1m above the ground level to prevent ground water pollution.
4. The industry shall achieve Zero effluent discharge. There shall not be any discharge outside the industry premises or into River Krishna under any circumstances.
5. **The industry shall store spent wash in closed tanks with a capacity of 2-3 days. Under any circumstances the industry shall not store spent wash in lagoons.**
6. Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes mentioned below:
 - a) Industrial cooling, boiler feed.
 - b) Domestic purposes.
 - c) Processing, whereby water gets polluted and pollutants are easily bio-degradable.
 - d) Processing, whereby water gets polluted and the pollutants are not easily bio-degradable.
7. The industry shall provide concrete drains near processing sections such that the spillages, leakages are collected and connected to ETP for further treatment.
8. The industry shall provide separate storm water drains along the periphery of the site such that the in plant rain water is collected in collection tank and shall be connected to ETP. Under no circumstances effluent / storm water shall be discharged from the plant premises.
9. **Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up within a week. Sampling and trend analysis monitoring must be made on quarterly basis and report shall be submitted to the Regional Office concerned.**
10. The industry shall provide digital flow meters with totalisers at inlet of WTP, MEE feed, ETP inlet and outlet separately for measuring effluent generation, treatment and recycled.
11. **The industry shall install online effluent quality monitoring system at the outlet of ETP and shall be networked to APPCB and CPCB server for website display.**

Air:

12. The Air pollution Control equipment of existing Boiler & DG sets shall be operated effectively to comply with the following for controlling air pollution:

Sl. No	Details of Stack	Stack 1	Stack 2
a)	Attached to	Boiler	D.G. Set
b)	Capacity	25 TPH Boiler	1250 KVA
c)	Name of the Fuel	Coal / Biomass	Diesel
d)	Stack height above ground (m.)	45 m	3 m
e)	Air Pollution Control Equipment	Bag Filter & Cyclomax (Standby)	Silencer
f)	Standards	50 mg/Nm ³	

13. The proponent shall comply with the following for controlling Fugitive emissions:
 - a. Raw material unloading areas shall be provided with dust suppression system.
 - b. All material transfer points shall be provided with dust extraction system with bag filters.
 - c. All the conveyors are shall be covered to prevent the fly off of fugitive dust.
 - d. All internal roads are shall be made pucca to prevent the fugitive dust to vehicular movement.
14. The proponent shall ensure compliance of the National Ambient Air quality standards notified by MOE&F, GOI vide notification No. GSR 826(E), dated. 16.11.2009 during construction and regular operational phase of the project.

15. The industry shall take appropriate measures to control odour nuisance in the surroundings and the measures taken shall be reported to Concerned Regional office of APPCB before applying for CFO.
16. **The industry shall provide continuous online stack monitoring system and shall be networked to APPCB and CPCB server for website display.**
17. Ambient Air Quality monitoring stations shall be setup in the down wind direction as well as where maximum ground level concentration of PM_{2.5}, PM₁₀ SO₂, NO_x & HCl (methane & non-methane) are anticipated in consultation with concerned Regional Office.
18. 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.
19. 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 Waste:

20. The proponent shall comply with the following:

S. No	Source of solid waste	Quantity		Method of disposal
		As per CFE order dt. 29.11.2012	After expansion	
a)	DDGS	53 TPD	58 TPD	Sale out as cattle / poultry / fish feed.
b)	Boiler ash	27 TPD (with 100% biomass) or 45 TPD(with 100% coal)		To brick manufacturers when biomass is used as fuel. To brick manufacturers / cement plants when coal is used as fuel.
c)	Waste lube oil	0.4 KLPA		APPCB authorized Re-processors / recyclers/ used as lubricant with in the premises.

21. The following rules and regulations notified by the MoE&F, GoI shall be implemented.
 - a) Hazardous waste and other wastes (Management and Transboundary Movement) Rules, 2016.
 - b) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
 - c) Fly Ash Notification, 2016.
 - d) Batteries (Management & Handling) Rules, 2010.
 - e) E-Waste (Management) Rules, 2016.
 - f) Construction and Demolition waste Management Rules, 2016.

Other Conditions:

22. **The proponent shall install CO₂ recovery plant within the year 2018-19 as submitted vide Ir. dt. 20.11.2017.**
23. Green belt with minimum area of 9.60 acres i.e., 33% of total area shall be developed in the vacant places and along the boundary of the industry.
24. The proponent shall ensure that there shall not be any change in the process technology and scope of working without prior approval from the Board.
25. Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order and attract action under the provisions of relevant pollution control Acts.

26. Notwithstanding anything contained in this conditional 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, review any or all the conditions imposed herein and to make such alternation as deemed fit and stipulate any additional conditions or revoke the order in the interest of environment protection.
27. Any person aggrieved with this order 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 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.

MEMBER SECRETARY

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