Inspection Report Format for computerized allocation of inspections

1.	A. Name of the Industry	M/s Crux Biotech India Private Ltd.,
	B. Address of the Industry	S.Nos.529 (p), 530, 531 (p), 532 (p), 536 (p), 557 (p), 560 (p), 654 (p), Peddavaram (V), Nandigama Mandal, Krishna District
	C. E-mail	rajiv.pal@cruxbiotech.com
	D. Mobile	7729996123
	E. Telephone	---
2.	Date of Inspection	12.06.2020
3.	Name and Designation of the person contacted	Sri Rajiv Pal, DGM
4.	Line of Activity	Distillery
5.	Status of Operation	Industry not in operation from 29.05.2020 due to excess stock of ENA.
6.	Status of consent under the Water & Air Acts & HW Authorization	CFO order issued vide order dated: 25.02.2016 valid up to 31.01.2021 (for 60 KLPD capacity). CFO order issued vide order dated: 29.01.2018 valid up to 31.01.2021 (For expansion of 15 KLPD).
7.	a. Name of the Product (S) and by-products manufactured with quantity	

Sl. No	Product	Quantity
1	Rectified Spirit /ENA/Ethanol using grain as raw material	75 KLPD
2	Electricity	2.0 MW
3	Carbon Dioxide	45.6 TPD

The production details for the last six months is submitted below:

Month	ENA Production Qty in Kl
Dec-19	1841.005
Jan-20	2052.967
Feb-20	1129.112
Mar-20	2056.735
Apr-20	0
May-20	695.598
Consented	**2250**

	b. Comments on whether the products are permitted products and production is within the permitted capacity	The industry is manufacturing consented products within consented capacities.
8.	a. Details of water consumption and flow meter readings.	As per the CFO order, the water consumption details are as follows:

S No.	Purpose	Quantity (KLD)
1.	Process water	43
2.	Cooling water make up	85
3.	DM Water for boiler make up and for ENA dilution	333
4.	Waste water from Water	169

	Treatment Plant (WTP)	
5.	Make up water for CO2 recovery plant	2
6.	Domestic	10
	Total	642

The water consumption details for the last six months is submitted below:

S No	Month	Quantity(KL)
1.	Dec-19	16983.58
2.	Jan-20	19429.81
3.	Feb-20	10499.51
4.	Mar-20	18157.54
5.	Apr-20	0
6.	May-20	6678.55
Consented Quantity		**19260**

b. Flow meter readings

The industry has provided flow meters at the inlet drawing water from Krishna.

10. a. Details of effluent generation and flow meter readings.

As per the CFO order, the waste water generation details are as follows:

Out let No.	Source	Max Daily Discharge After Expansion as per CFE order dated 01.12.2017	Point of Disposal
1.	Process (Spent wash — Thin slop)	260	Spent wash — Thin slop after decantation shall be evaporated in MEE. Condensate shall be recycled for liquefaction Concentrate to DDGS drier and shall maintain zero liquid discharge
2.	Boiler blow down	90	After treatment in_ETP, shall be utilized for cooling water make up, ash suppression and for on land for gardening within the premises to develop greenbelt.
3.	Cooling tower blow down	90 (recycled)	
4.	Effluent from water treatment plant (Raw water treatment rejects)	79	
5	Blow down from CO2 recovery plant	2 (recycled)	
6	Domestic	8	Septic tank followed by soak pit.
		437	

<table>
<tr><td></td><td>b. Flow meter readings</td><td>The wastewater generation details for the last six months is submitted below:
<table><tr><th>S No</th><th>Month</th><th>ETP Kl</th><th>MEE Kl</th></tr><tr><td>1.</td><td>Dec-19</td><td>2694</td><td>6515.901</td></tr><tr><td>2.</td><td>Jan-20</td><td>2976</td><td>7292.8</td></tr><tr><td>3.</td><td>Feb-20</td><td>2202</td><td>3589.19</td></tr><tr><td>4.</td><td>Mar-20</td><td>2761</td><td>6320.98</td></tr><tr><td>5.</td><td>Apr-20</td><td>0</td><td>0</td></tr><tr><td>6.</td><td>May-20</td><td>1027</td><td>2516.7</td></tr></table>
The industry has provided flow meters at ETP and MEE and is maintaining log records.</td></tr>
<tr><td>11.</td><td>a. Details of effluent Treatment Systems and disposal.

b. Compliance with standards stipulated based on Board data /online monitoring systems:</td><td>Decanter, Multiple Effect Evaporator and Drier.

Biological ETP consists of Neuralisation tanks, anaerobic digestion, moving bed bio reactor (MBBR), Tube settler, Dual media filter, Ultra filtration & Two stage RO system.

The industry is not in operation.</td></tr>
<tr><td>12.</td><td>a. Details of sources of air pollution and control equipment and systems

b. Compliance with standards stipulated based on Board data / Monitoring systems.</td><td><table><tr><th>S. No.</th><th>Description of chimney</th><th>Control equipment provided</th></tr><tr><td>1.</td><td>Attached to 1 X 25 TPH coal fired Boiler</td><td>Bag Filter & Cyclomax</td></tr><tr><td>2.</td><td>Attached to 1 X 1250 KVA DG Set</td><td>Silencer</td></tr></table>
The industry is not in operation.</td></tr>
<tr><td>13.</td><td>Details of solid and hazardous waste generation, storage and disposal.</td><td>As per CFO Order, the hazardous waste details are as follows:</td></tr>
</table>

Non-Hazardous Solid Waste details :

S. No.	Name of the waste	Quantity	Disposal Option
1.	DDGS from MEE (with 90% solids)	58 TPD	To be sold out as cattle / poultry / fish feed
2.	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.

The industry is disposing Distillery Dried Grains Solids (DDGS) as cattle/fish feed and boiler ash disposed to brick manufacturers.

15.	Furnish details of any deviation / Non – Compliance observed from consent / authorization / directions.	1. The industry was not in operation from 29.03.2020 to 17.05.2020 due to lock down. 2. Again the industry is not in operation from 29.05.2020 due to excess stock of ENA and likely to start production after 20.06.2020.

16.	Other relevant information regarding the industry, including complaints.	---
17.	Recommendations.	The compliance status may be verified while the industry is in operation.

Date : 15.06.2020

Name & Designation of Inspecting Officer : P. Ravindra Nadh
SEE, ZO, Visakhapatnam

Place : Visakhapatnam

Signature of Inspecting Officers