



**Allied Blenders  
& Distillers**

ABD/RANGAPUR/DISTILLERY/TSPCB/2021-22/14

Date: 28.09.2021

To

The Environmental Engineer,  
Regional Office, Telangana State Pollution Control Board,  
4<sup>th</sup> Floor, Collectorate Building, Nampally,  
Hyderabad – 500001.

**Subject:** Allied Blenders and Distilleries Pvt. Ltd – Environment Statement in Form- V  
(April'2020 - March' 2021) Submission - Regarding.

**Reference:** Consent Order No. 210822768023 Dated: 24.03.2021 valid upto 31.03.2026

Dear Sir,

With reference to the above subject, we are herewith submitting the Environment Statement in FORM – V for the period of April'2020 - March' 2021.

This is for your information and acknowledge the same.

Thanking you.

Yours Faithfully,

  
Sujit Kumar Srivastava

(Lead Distillery Operations)

Allied Blenders and Distilleries Pvt. Ltd.



Encl: Form V for 2020-2021

**Allied Blenders and Distillers Pvt. Ltd.,**

Distillery : Survey No : 692, Rangapur Village, Pebbair Mandal, Wanaparthy District, Telangana - 509 104.  
Bottling : Survey No : 700, Rangapur Village, Pebbair Mandal, Wanaparthy District, Telangana - 509 104.  
Office : Sreenivasam, H.No. 1-11-220/2, First Floor, Brundavan Colony, Begumpet, Hyderabad - 500 016.  
Website : www.abdindia.com info@abdindia.com CIN No. : U15511MH2008PTC187368

**Environmental Statement (FORM-V) for the year  
2020-2021**

**By**

**M/s Allied Blenders and Distilleries Pvt. Ltd.  
(Formerly Known as M/s Shasta Bio-Fuels Pvt. Ltd)**

**Submitted**

**To**

**Regional office  
Telangana State Pollution Control Board  
Nampally, Hyderabad.**



### ENVIRONMENT STATEMENT

An Environmental audit is a thorough self-examination of a Company's practices of pollution Control and environment protection. An "Audit" is now a legally defined activity which differs from the normal environmental reviews that were hitherto produced. The statutory audit expects evaluation of efforts for resource conservation during the period under review, but does not feel satisfied unless this is reflected positively in lowering of the manufacturing cost. The statutory audit therefore suggests that this be followed by an advanced environmental audit to follow the Rule 14, not merely in letter but also in spirit.

Environmental Audit (EA) was first notified under the Environment (Protection) Act, 1986, by the Ministry of Environment and Forests, Government of India. By an Amendment, in the year 1993, the term for the document has been revised from "Environment Audit Report" to "Environment Statement". Environment Statement has to be submitted by every person carrying on an industry operation or process requiring consent under section 25 of the water (Prevention and Control of Pollution) Act 1974 or under section 21 of the Air (Prevention and Control of Pollution) Act of 1981 or both or authorization under the Hazardous wastes (Management and Handling) Rules of 1989 issued under the environment (protection) Act of 1986.

The statement has to be submitted to the concerned pollution control board for the period ending on 31st March in Prescribed format by 30th September every year beginning from 1993.

The prescribed proforma has nine parts and covers items like water and raw material consumption, pollution discharged to environment per unit of output of the parameters specified in the consent, hazardous waste from pollution control facilities, solid waste from the process and from the pollution control facilities, impact of pollution abatement measures on the conservation of natural resources and on cost of production.

Realizing the necessity and recognizing the importance of Environment statement, M/s Allied Blenders and Distillers Pvt Ltd (formerly known as M/s Shasta Bio-Fuels Pvt. Ltd) has given work permit to Dr.B.B.S.V.Seshagiri Rao to undertake the Environment Audit Studies for the year 2020-2021



### STEPS IN ENVIRONMENTAL AUDITING

The activities in Environmental auditing are conducted in three main steps:

1. Pre-audit activities (home work)
2. Work at industry site (industry visit)
3. Post audit activities (work at site & home)

#### Audit team

The audit team is selected from officials of an organization and EMS consultant who have fair knowledge of Process and Tech-legal issues pertaining to the EHS.

1. Mr. Umasankar Padhi - Regional Manufacturing Head.
2. Mr. Sujit Srivastava - Distillery Head.
3. Ms. Punam Mandape- Environmental Engineer.
4. Dr.B.B.S.V.SeshagiriRao - EMS Lead Auditor.

The Audit team audited the facility on 22.09.2021



### PROJECT SETTING

The industry is located at Sy.Nos. 690/AA, 691/AA2 & 692, Rangapuram (V), Pebberu (M), Wanaparthy District and the TSPCB was issued CFO & HWA order to the industry vide order dt. 24.03.2021 to produce the following products with a validity period up to 31.03.2026.

Sr. No.	Products	Capacity
1	Rectified Spirit / Ethanol / ENA (Grain based – Maize / Jowar / Broken rice – 380 TPD)	150 KLD
2	Electricity	6.5 MW

The industry has complied with emissions limits for Boiler and DG set and also complied with all the rules and regulations specified in water (P&C) of P Act, 1974, Air (P&C) P Act, 1981 and Hazardous waste rules.

### MATERIAL AUDIT

Material Audit is very important component in Environment statement and is a basis for development of raw material balance of an industry for process highlighting the proposed utilization of raw materials during which reuse by product recovery and reduction of losses can be thought of. It is a useful mechanism to study the plant operations, check performance against design and to identify sources of raw materials loss which will be the basis for implementing the conservation measures. In the present case the main raw material used in the manufacture of broken rice/maize etc.

Precautionary steps may be taken to optimize the production of the ENA per Kg of Maize / Jowar / Broken rice. Necessary action may have to be initiated right from procurement, process Transportation Storage and in production.

Average consumption of broken rice/maize /maize 226.88 TPD.



Production details (April - 2020 to March - 2021)						
ENA Production details						
MONTH	Product		By Products			
	ENA PRODUCTION (KLM)	Electricity (MW)	IS PRODUCTION IN KLM	FUSEL OIL PRODUCTION IN KLD	CO2 Production in Tons/M	DDGS in Tons/M
Apr-20	667.197	246000	37.643	0.486	0	0
May-20	698.174	691000	20.749	0.389	291.26	327.79
Jun-20	3562.39	2169000	74.307	2.624	957.34	616.58
Jul-20	4281.687	2494000	91.792	2.624	954.39	797.39
Aug-20	2008.312	1019400	36.547	1.263	548.425	573.12
Sep-20	0	0	0	0.000	25.23	0
Oct-20	0	0	0	0.000	0	7.55
Nov-20	1033.38	823689	54.795	0.875	214.21	151.625
Dec-20	4032.752	2064819	105.794	2.915	705.045	1105.005
Jan-21	5653.431	2391568	74.639	3.013	796.865	1331.205
Feb-21	4616.592	2011469	57.035	2.624	485.395	1061.595
Mar-21	5034.463	2213423	64.421	2.818	601.84	1220.935
<b>Total</b>	<b>31588.378</b>	<b>16124368</b>	<b>617.722</b>	<b>19.630</b>	<b>5580</b>	<b>7192.795</b>

The Average Production of ENA & IS together total production per day is 107.35 KLD against CFO 150KLD. 28.44% is less than the Permitted Production /Day. Avg. Electricity Production (MW)53747.89. Avg. fusel oil produced as by Product is 0.0654KLD, Avg.CO2 Produced as by Product is 18.6TPD, & DDGS Produced as by produced is 23.97TPD



**WATER AUDIT**

Avg. Water Consumption/Day is as given below

Sr.No.	Purpose	Total water consumption	Recycled water used KLD	Water Consumption after ZLD system
1	Process	1073.4	490.5	582.9
2	Cooling tower make up	771.4	134.6	636.8
3	Boiler feed	249.79		249.79
4	DM & softener	70.84		70.84
5	CO2 Plant	6.43		6.43
6	Domestic	9.00		9.00
	<b>Total</b>	<b>2180.86</b>	<b>625.1</b>	<b>1555.76</b>

Avg. Waste water Generation and treatment /Day

Out let NO	Outlets Description	Max. Daily Discharge KLD	Point of Disposal
1	Process (Spent Wash	536.75	Multiple effect Evaporator to Concentrate the solids to 30% and then to Decanter further to 90% Solids and Condensate water is re-used in the Process
2	RO-II Rejects)	16.36	
3	Boiler Blow Down	40.03	Boiler blow down and Cooling Tower blow down, DM Plant & softener regeneration & CO2 Recovery Plant effluent are treated in the Zero liquid discharge system (ZLD) i.e UASB, Aeration-1&II, Clarifier, MGF, ACF, ultrafiltration followed by Ro-I&-II and MEE and treated water shall be re used in the Cooling tower make up
4	Cooling Tower Blow Down	33.66	
5	DM Plant & Softener regeneration	70.84	
6	CO2 Recovery Plant	6.43	
7	Domestic waste water	7.6	Septic Tank followed by Soak Pit



Water Consumption for process @5.42KL/KL product , Boiler feed 2.32KL/KL product, Cooling tower feed is 5.93KL/KL of Product, DM water 0.65KL/KL of Product & CO2 Plant is 0.059KL/KL of Product.

Waste water Generation from Process is 5KL/KL of Product,

From Boiler blow down is 0.372KL/KL of Product

From cooling tower blow down is 0.31KL/KL of Product,

From DM Plant 0.65KL /KL of Product,

From CO2Plant 0.059KL/KL of Product

Total water intake @20.31KL/KL of Product , after treatment recycled water used @5.82KL/KL of Product and 14.49KL of fresh water is required for per KL of ENA Product.

### ENVIRONMENTAL QUALITY

The basic aim of Environmental Quality Audit is to make industry aware of the benefits and promote low and non-waste technological methods of production which help in minimizing generation of residuals and thereby preserving environmental quality. Proper operation and maintenance practices also help in reducing emissions from the industry to arrest Environmental Quality deterioration. Environmental Quality is visualized through the following components:

1. Waste water
2. Air Quality
3. Noise
4. Solid Wastes





**AIR QUALITY**

The various air pollutants generated from the industry are grouped as under:

1. Chimney of Coal fired Boiler (50TPH)
2. Stack diameter 1.83 (m), Stack cross sectional area (sq. m)2.63,Exit velocity of flue gases (m/sec) 9.42, Flow rate (cum/hr) 89,188.

**MONTH WISE BOILER STACK EMISSIONS**

FOR THE YEAR 2020-21

Month & Year	SPM mg/NM3	SO2 mg/NM3	NOx mg/NM3
April-20	38.10	178	87
May-20	36.45	145	83
June-20	38.15	187	94
July-20	37.12	170	99
Aug20	38.45	181	92
Sept-20	0	0	0
Oct-20	0	0	0
Nov-20	30.70	116	82
Dec-20	31.91	119	88
Jan-2021	35.54	142	90
Feb-2021	34.29	131	84
Mar-2021	37.50	161	92

Avg.SPM levels are 68.8% less than the Standard limit

Avg.SO2 levels are 74.5% less than the Standard limit

Avg.NoX levels are 89.1% less than the Standard limit



**STACK EMISSIONS FROM GENSETS**

For the year 2020-21

Month & Year	SPM mg/Nm3	SO2 mg/Nm3	NOx mg/Nm3
April-20	66	130	240
May-20	59	109	209
June-20	45	156	266
July-20	74	143	265
Aug20	0	0	0
Sept-20	0	0	0
Oct-20	55	134	260
Nov-20	61	109	274
Dec-20	54	150	287
Jan-2021	55	107	215
Feb-2021	61	111	244
Mar-2021	71	142	281

SPM levels are 47.73% less than the standard limit

SO2 levels are 78.48% less than the Standard limit

NOx levels are 15.3% less than the Standard limit



**AMBIENT AIR QUALITY**

Ambient air quality survey was also carried out to know the general atmosphere conditions prevailing in the vicinity of the industry. Three permanent points were located and monitored regularly every month. The results show that there is not much of a difference in both the conditions as can be seen from the results are given below indicates low concentration of SPM, SO<sub>2</sub> and NO<sub>x</sub> compared to ambient air quality standards. Fugitive emissions were also tested every month from various dust generating points and the dust concentration was found to be within the stipulated limits.

**AMBIENT AIR QUALITY**  
**2020-21**

Ambient air quality												
Month	Near Main Gate				ETP area				Near Stores			
	PM10	PM2.5	SO2	NOX	PM10	PM2.5	SO2	NOX	PM10	PM2.5	SO2	NOX
April-20	65	25.2	13.5	24	9.2	6.1	18.5	20.1	48	18.5	14.3	24
May-20	58	28.4	15.2	27	11.5	5.8	22.5	24.5	52	19.2	14.2	24
June-20	63	26.5	16.8	24	12.5	6.9	24.5	23.5	49	20.5	15.5	26
July-20	68	24.5	15.4	26	10.5	7.5	25.3	22.6	53	24.2	16.8	28
Aug-20	64	28.2	15.8	29	9.2	7.6	30.2	28.1	55	20.1	17.1	24
Sep-20	Plant not in operation September and Oct-2020											
Oct-20	0	0	0	0	0	0	0	0	0	0	0	0
Nov-20	52	27.8	14.2	26	8.35	6.12	5.17	22.07	43	17.6	12.7	23
Dec-20	53	25.4	16.8	29	7.23	6.28	21.27	11.13	42	20.7	13.7	25
Jan-21	67	30.2	15.6	27	11.87	7.52	38.89	27.01	52	28.2	13.4	24
Feb-21	70	32.7	17.2	29	6.95	4.87	34.78	10.08	58	20.5	15.7	26
Mar-21	68	30.7	16.2	27	7.3	6.87	32.78	11.08	60	21.5	16.7	25

- 1.Avg.PM10 um/m<sup>3</sup>–Near Main Gate is 62.8um/m<sup>3</sup> and 37.2% less than the Standard limit
- 2.Avg.PM10um/m<sup>3</sup>- Near ETP area is 9.46um/m<sup>3</sup> and 90.54% less than the Standard limit
- 3.Avg.PM10um/m<sup>3</sup> -Near Stores area is 51.2um/m<sup>3</sup> and 48.8% less than the Standard limit.



4. Avg. PM<sub>2.5</sub> μm/m<sup>3</sup> - Near Main Gate is 27.96 μm/m<sup>3</sup> and 53.4% less than the Standard limit.
5. Avg. PM<sub>2.5</sub> μm/m<sup>3</sup> Near ETP is 6.55 μm/m<sup>3</sup> and 89.08% less than the standard limit.
6. Avg. PM<sub>2.5</sub> μm/m<sup>3</sup> Near Stores area is 10.25 and 82.91% less than the standard limit.
7. Avg. SO<sub>2</sub> μm/m<sup>3</sup> Near Main Gate is 15.67 μm/m<sup>3</sup> and 80.41% less than the Standard limit.
8. Avg. SO<sub>2</sub> μm/m<sup>3</sup> Near ETP area is 25.38 μm/m<sup>3</sup> and 57.75% less than the Standard limit
9. Avg. SO<sub>2</sub> μm/m<sup>3</sup> Near Stores area is 15.01 μm/m<sup>3</sup> and 81.23% less than the Standard limit.
10. Avg. NO<sub>x</sub> μm/m<sup>3</sup> - Near Main Gate area is 51.2 μm/m<sup>3</sup> and 36% less the Standard limit
11. Avg. NO<sub>x</sub> μm/m<sup>3</sup> - Near ETP area is 20.01 μm/m<sup>3</sup> and 74.98% less the Standard limit
12. Avg. NO<sub>x</sub> μm/m<sup>3</sup> - Near Stores area is 24.9 μm/m<sup>3</sup> and 68.87% less the Standard limit.

### ENVIRONMENTAL QUALITY AUDIT

Ambient Air Quality monitoring was carried out to assess the status of existing air quality within the industries complex as well as nearby vegetation area. Three air pollution parameters namely SPM, SO<sub>2</sub> and NO<sub>x</sub> were measured during the survey. In order to assess the stack emissions, stack monitoring was carried out from a chimney of coal fired boilers as well from diesel generating sets. Monitoring and analysis of water and waste water discharges from disposal points were carried out. Work zone monitoring was carried out to know exposure concentrations. Noise levels were measured after identifying critical noise zones. Existing facilities for handling/disposal of solid waste were evaluated critically.



### ENVIRONMENT QUALITY MANAGEMENT

The importance of Environmental Quality Audit is to make the industry aware of its usefulness and to promote new methods or process which will reduce or eliminate the discharge of various residues which find its way in the form of pollutants like wastewater, solid waste or noise and thereby preserving environmental quality.

Proper operation and maintenance practices also help in reducing emissions from the industry to avoid environmental quality deterioration.

There are four components in environmental quality audit namely,

Water pollution

Air pollution

Solid Waste

Noise



**FORM V****ENVIRONMENTAL AUDIT REPORT FOR THE FINANCIAL YEAR****ENDING 31<sup>st</sup> MARCH 2021****PART -A**

1 Name and address of the owner/ Occupier of the industry operation or process	: Mr. Umasankar Padi. Regional Manufacturing Head M/s Allied Blenders and Distilleries Pvt. Ltd (Formerly Known as Shasta bio-fuels Pvt. Ltd.) Sy.Nos.690/AA,691/AA2&692, Rangapuram (V), Pebberu (M), Wanaparthy District.
2. Category	: Red Category
3. List of Products	: 1. Rectified Spirit /Ethanol / ENA-150KLD 2.Power Plant @6.5MW
4. Date of the last Environmental Audit report submitted & Acknowledged by	: 29.09.2020 TSPCB.
5. Date of Submission	: 29.09.2020



**PART B**

Avg. Water Consumption/Day is as given below

Sr. No.	Purpose	Total water consumption	Recycled water used KLD	Water Consumption after ZLD system
1	Process	1073.4	490.5	582.9
2	Cooling tower make up	771.4	134.6	636.8
3	Boiler feed	249.79		249.79
4	DM & softener	70.84		70.84
5	CO2 Plant	6.43		6.43
6	Domestic	9.00		9.00
	<b>Total</b>	<b>2180.86</b>	<b>625.1</b>	<b>1555.76</b>

**WATER CONSUMPTION PER UNIT OF PRODUCT**

NAME OF PRODUCTS	DURING THE PREVIOUS FINANCIAL YEAR KL/T of Product 2019-2020	DURING THE CURRENT FINANCIAL YEAR KL/T Product 2020-21
Rectified Spirit /Ethanol / ENA	17.46KL/KL of Product	14.49KL/KL of Product



**RAW MATERIALS CONSUMPTION**

Name of the Raw Material	Raw Materials consumption 2019-2020	Raw Materials consumption 2020-21
Maize / Jowar / Broken rice	2.13T/KL	2.11T/KL

**PART C**  
**POLLUTION GENERATED**  
**(PARAMETERS AS SPECIFIED IN THE CURRENT ISSUES)**

Avg. Waste water Generation and treatment /Day

Out let NO	Outlets Description	Max. Daily Discharge KLD	Point of Disposal
1	Process (Spent Wash	536.75	Multiple effect Evaporator to Concentrate the solids to 30% and then to Decanter further to 90% Solids and Condensate water is re-used in the Process
2	RO-II Rejects)	16.36	
3	Boiler Blow Down	40.03	Boiler blow down and Cooling Tower blow down, DM Plant & softener regeneration & CO2 Recovery Plant effluent are treated in the Zero liquid discharge system(ZLD) i.e UASB, Aeration-1&II, Clarifier, MGF, ACF, ultrafiltration followed by Ro-I&-II and MEE and treated water shall be re used in the Cooling tower make up
4	Cooling Tower Blow Down	33.66	
5	DM Plant & Softener regeneration	70.84	
6	CO2 Recovery Plant	6.43	
7	Domestic waste water	7.6	Septic Tank followed by Soak Pit





Water Consumption for process @5.42KL/KL product , Boiler feed 2.32KL/KL product, Cooling tower feed is 5.93KL/KL of Product, DM water 0.65KL/KL of Product & CO2 Plant is 0.059KL/KL of Product.

Waste water Generation from Process is 5KL/KL of Product,  
From Boiler blow down is 0.372KL/KL of Product  
From cooling tower blow down is 0.31KL/KL of Product,  
From DM Plant 0.65KL /KL of Product,  
From CO2Plant 0.059KL/KL of Product

Total water intake @20.31KL/KL of Product , after treatment recycled water used @5.82KL/KL of Product and 14.49KL of fresh water is required for per KL of ENA Product.

### ENVIRONMENTAL QUALITY

The basic aim of Environmental Quality Audit is to make industry aware of the benefits and promote low and non-waste technological methods of production which help in minimizing generation of air Pollutants.

### AIR POLLUTION Boiler Stack EMISSIONS

Month & Year	SPM mg/Nm3	SO2 mg/Nm3	NOx mg/Nm3
April-20	38.10	178	87
May-20	36.45	145	83
June-20	38.15	187	94
July-20	37.12	170	99
Aug20	38.45	181	92
Sept-20	0	0	0
Oct-20	0	0	0
Nov-20	30.70	116	82
Dec-20	31.91	119	88
Jan-2021	35.54	142	90
Feb-2021	34.29	131	84
Mar-2021	37.50	161	92



Avg.SPM levels are 68.8% less than the Standard limit

Avg.SO2 levels are 74.5% less than the Standard limit

Avg.NoX levels are 89.1% less than the Standard limit

1. The industry has installed ESP to control atmospheric emissions and efficiency of the ESP is 99.5%.

### STACK EMISSIONS FROM GENSETS

For the year 2020-21

Month & Year	SPM mg/Nm <sup>3</sup>	SO <sub>2</sub> mg/Nm <sup>3</sup>	NO <sub>x</sub> mg/Nm <sup>3</sup>
April-20	66	130	240
May-20	59	109	209
June-20	45	156	266
July-20	74	143	265
Aug-20	0	0	0
Sept-20	0	0	0
Oct-20	55	134	260
Nov-20	61	109	274
Dec-20	54	150	287
Jan-2021	55	107	215
Feb-2021	61	111	244
Mar-2021	71	142	281

SPM levels are 47.73% less than the standard limit

SO<sub>2</sub> levels are 78.48% less than the Standard limit

NO<sub>x</sub> levels are 15.3% less than the Standard limit



**AMBIENT AIR QUALITY  
2020-21**

Unit: ug/m<sup>3</sup>

Ambient air quality												
Month	Near Main Gate				ETP area				Near Stores			
	PM10	PM2.5	SO2	NOX	PM10	PM2.5	SO2	NOX	PM10	PM2.5	SO2	NOX
April-20	65	25.2	13.5	24	9.2	6.1	18.5	20.1	48	18.5	14.3	24
May-20	58	28.4	15.2	27	11.5	5.8	22.5	24.5	52	19.2	14.2	24
June-20	63	26.5	16.8	24	12.5	6.9	24.5	23.5	49	20.5	15.5	26
July-20	68	24.5	15.4	26	10.5	7.5	25.3	22.6	53	24.2	16.8	28
Aug-20	64	28.2	15.8	29	9.2	7.6	30.2	28.1	55	20.1	17.1	24
Sep-20	Plant not in operation September and Oct-2020											
Oct-20	0	0	0	0	0	0	0	0	0	0	0	0
Nov-20	52	27.8	14.2	26	8.35	6.12	5.17	22.07	43	17.6	12.7	23
Dec-20	53	25.4	16.8	29	7.23	6.28	21.27	11.13	42	20.7	13.7	25
Jan-21	67	30.2	15.6	27	11.87	7.52	38.89	27.01	52	28.2	13.4	24
Feb-21	70	32.7	17.2	29	6.95	4.87	34.78	10.08	58	20.5	15.7	26
Mar-21	68	30.7	16.2	27	7.3	6.87	32.78	11.08	60	21.5	16.7	25

1. Avg. PM10 ug/m<sup>3</sup>—Near Main Gate is 62.8um/m<sup>3</sup> and 37.2% less than the Standard limit
2. Avg. PM10 ug/m<sup>3</sup>- Near ETP area is 9.46um/m<sup>3</sup> and 90.54% less than the Standard limit
3. Avg. PM10 ug/m<sup>3</sup> -Near Stores area is 51.2um/m<sup>3</sup> and 48.8% less than the Standard limit.



4. Avg. PM<sub>2.5</sub> ug/m<sup>3</sup>-Near Main Gate is 27.96ug/m<sup>3</sup> and 53.4% less than the Standard limit.
5. Avg.PM<sub>2.5</sub> ug/m<sup>3</sup> Near ETP is 6.55ug/m<sup>3</sup> and 89.08% less than the standard limit.
6. Avg.PM<sub>2.5</sub> ug/m<sup>3</sup> Near Stores area is 10.25 and 82.91% less than the standard limit.
7. Avg.SO<sub>2</sub> ug/m<sup>3</sup> Near Main Gate is 15.67ug/m<sup>3</sup> and 80.41% less than the Standard limit.
8. Avg.SO<sub>2</sub> ug/m<sup>3</sup> Near ETP area is 25.38ug/m<sup>3</sup> and 57.75% less than the Standard limit
9. Avg. SO<sub>2</sub> ug/m<sup>3</sup> Near Stores area is 15.01ug/m<sup>3</sup> and 81.23% less than the Standard limit.
10. Avg. NO<sub>x</sub> ug/m<sup>3</sup> -Near Main Gate area is 51.2um/m<sup>3</sup> and 36% less the Standard limit
- 11.Avg.No<sub>x</sub> ug/m<sup>3</sup> - Near ETP area is 20.01um/m<sup>3</sup> and 74.98% less the Standard limit
- 12.Avg.No<sub>x</sub> ug/m<sup>3</sup>- Near Stores area is 24.9um/m<sup>3</sup> and 68.87% less the Standard limit.



**PART D****HAZARDOUS WASTES****AS SPECIFIED HAZARDOUS WASTES/MANAGEMENT AND HANDLING RULES**

<b>Hazardous Waste</b>	<b>Total Qty. 2019-2020</b>	<b>Total Qty. 2020-21</b>
From Process	NIL	NIL
From Pollution Control Equipment	NIL	NIL
Waste oil	100LPA	1600LPA

**PART E****SOLID WASTES**

<i>Boiler Ash</i>		
<b>COAL ASH</b>	<b>Total Qty. 2019-2020</b>	<b>Total Qty. 2020-21</b>
	4481.525 MT/Yr	2358.49 MT/Yr



**PART F**

PLEASE SPECIFY THE CHARACTERISTICS IN TERMS OF CONCENTRATIONS AND QUANTITY OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICES ADOPTED FOR BOTH CATEGORIES OF WASTES.

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1. **COAL ASH:** This is mainly produced from the boiler house and ash is disposed off by selling for brick making. The disposal quantity is about 2358.49 TPA during the year 2020-21
2. **Waste Oil:** waste oil generation @1600LPA and same is disposal to authorized recyclers.
3. **DDGS** Generation and Disposal is 74145.74TPA during the year 2020-21.
4. **CO2** by product Generation and Disposal is 5580TPA during the year 2020-21

**PART G**

IMPACT OF THE POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONTROL THE COST OF PRODUCTION.

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M/s. ABDPL has taken a number of pollution control measures with respect to Water, Air, Solid Waste and also in development of greenery within the factory premises.

**Waste water management:**

Influent and treated water quality monitoring are being done on regular basis and records are maintained in our laboratory in consultation with state pollution control board vendor M/S Ramkey Enviro Engineers Pvt. Ltd recognized with MoEF & CC.



**AIR POLLUTION**

The Unit has monitoring parameters on daily basis and maintained the laboratory record. The Unit has all parameters monitoring systems (Online monitoring of Stack emission and effluent water) noise level monitoring and AAQ monitoring done once in a month by state pollution control board approved laboratory and reports are enclosed. The Unit has online continuous stack emission and treated water meters are connected with State pollution control board's website and CPCB website

The various solid wastes as mentioned in PART F are disposed off by selling. The factory is very rich in greenery with various types of trees growing within the compound in a healthy manner.

The Unit has 5 first Aid stations at different locations in the Plant and 12 Trained & certified First Aiders. The Plant is covered in 20 Acres land and the Unit has 20 Acres land as green belt, So 50% of land developed as green belt.

The Unit has already obtained the permission for the withdrawal of water from Krishna River from the irrigation Department, Government of Telangana & Revenue Divisional office- Wanaparthy.

HENCE THERE IS NO SIGNIFICANT IMPACT SINCE MAJOR POLLUTANTS ARE NOT GENERATED.

**PART H****ADDITIONAL INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION  
INCLUDING ABATEMENT OF POLLUTION**  
-----**Investment under the Corporate Social Reasonability (CSR).**

1. Check dam for chityala vagu Rs.1500, 000/-.
2. Avenue plantation and other school works in Rangapur Rs.100, 000/-



**PART I****MISCELLANEOUS**

ANY OTHER PARTICULARS WITH RESPECT TO ENVIRONMENT PROTECTION AND ABATEMENT OF POLLUTION.

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The Unit is monitoring noise level by Ramkey Enviro Engineers Pvt. Ltd in consultation with state pollution control boards vendor M/S Ramkey Enviro Engineers Pvt. Ltd recognized with MoEF & CC, once in a month at 6 different locations within the premises. Housekeeping of the Unit is good and The Unit has integrated rain water harvesting system at our Bottling premises. The unit has adopted Zero liquid discharge system(ZLD) for treatment of waste water and same treated water is recycled and re-used in to Cooling tower make up and ash quenching purpose .

Noise levels data at various locations within the factory premises as follows,

1. Avg. Ambient Noise levels at CO2 plant area during Day time is 69.83 dB(A) (6.89% less than the Standard limit)
2. Avg. Ambient Noise levels at Boiler Turbine Hall during Day time is 70.58 dB(A) (5.89% less than the Standard limit)
3. Avg. Ambient Noise levels at Fermentation area during Day time is 67.02 dB(A) (10.64 % less than the Standard limit)
4. Avg. Ambient Noise levels at ETP area during Day time is 68.23 dB(A)(9.03% less than the Standard limit)
5. Avg. Ambient Noise levels at CO2 plant area during night time is 60.63 dB (A)(13.39% less than the standard limit)
6. Avg. Ambient Noise levels at Boiler Turbine Hall during the night time is 63.37dB(A)(9.47% less than the Standard limit)
7. Avg. Ambient Noise levels at Fermentation area during night time is 64.67 dB(A) (7.61% less than the Standard limit)





8. Avg. Ambient Noise levels at ETP area during night time is 60.90dB(A) (13% less than the Standard limit)

#### Treated water Parameters and Pollution loads

The treated water after RO-II the parameters as follows

1.pH-6.96, 2.TSS-58mg/lit, 3.TDS-254mg/lit, COD-90mg/lit and BOD-20mg/lit. the ZLD system performance in terms of reduction of pollution loads is TSS -73.63% reduction , TDS-85.88% , COD-96.32% and BOD 96.66%

#### Audit Observations:

1. The Average Production of ENA & IS together total production per day is 107.35 KLD against CFO 150KLD. And 28.44% is less than the Permitted Production /Day. Avg. Electricity Production (MW)53747.89. Avg. fusel oil produced as by Product is 0.0654KLD, Avg.CO2 Produced as by Product is 18.6TPD, & DDGS Produced as by produced is 23.97TPD .

2. Water Consumption for process @5.42KL/KL product , Boiler feed 2.32KL/KL product, Cooling tower feed is 5.93KL/KL of Product, DM water 0.65KL/KL of Product & CO2 Plant is 0.059KL/KL of Product.

Waste water Generation from Process is 5KL/KL of Product,  
From Boiler blow down is 0.372KL/KL of Product  
From cooling tower blow down is 0.31KL/KL of Product,  
From DM Plant 0.65KL /KL of Product,  
From CO2Plant 0.059KL/KL of Product

Total water intake @20.31KL/KL of Product , after treatment recycled water used @5.82KL/KL of Product and 14.49KL of fresh water is required for per KL of ENA Product.



3. Chimney of Coal fired Boiler (50TPH) Stack diameter 1.83(m), Stack cross sectional area (sq.m)2.63,Exit velocity of flue gases (m/sec) 9.42, Flow rate (cum/hr) 89,188.

4. Coal Consumption is 1.184Tones/KL of ENA Production Per Day.

Boiler Stack emissions:

5.SPM levels are 68.8% less than the Standard limit  
Avg.SO<sub>2</sub> levels are 74.5% less than the Standard limit  
Avg.No<sub>x</sub> levels are 89.1% less than the Standard limit

6. DG Set Stack emissions:

SPM levels are 47.73% less than the standard limit  
SO<sub>2</sub> levels are 78.48% less than the Standard limit  
NO<sub>x</sub> levels are 15.3% less than the Standard limit

7.Ambient Air Quality:

1. Avg. PM<sub>10</sub>  $\mu\text{m}/\text{m}^3$ –Near Main Gate is 62.8 $\mu\text{m}/\text{m}^3$  and 37.2% less than the Standard limit
- 2.Avg. PM<sub>10</sub> $\mu\text{m}/\text{m}^3$ - Near ETP area is 9.46 $\mu\text{m}/\text{m}^3$  and 90.54% less than the Standard limit
3. Avg. PM<sub>10</sub> $\mu\text{m}/\text{m}^3$  -Near Stores area is 51.2 $\mu\text{m}/\text{m}^3$  and 48.8% less than the Standard limit.
4. Avg. PM<sub>2.5</sub> $\mu\text{m}/\text{m}^3$ -Near Main Gate is 27.96 $\mu\text{m}/\text{m}^3$  and 53.4% less than the Standard limit.
5. Avg.PM<sub>2.5</sub> $\mu\text{m}/\text{m}^3$  Near ETP is 6.55 $\mu\text{m}/\text{m}^3$  and 89.08% less than the standard limit.
6. Avg.PM<sub>2.5</sub> $\mu\text{m}/\text{m}^3$  Near Stores area is 10.25 and 82.91% less than the standard limit.
7. Avg.SO<sub>2</sub> $\mu\text{m}/\text{m}^3$  Near Main Gate is 15.67 $\mu\text{m}/\text{m}^3$  and 80.41% less than the Standard limit.
8. Avg.SO<sub>2</sub> $\mu\text{m}/\text{m}^3$  Near ETP area is 25.38 $\mu\text{m}/\text{m}^3$  and 57.75% less than the Standard limit



9. Avg. SO<sub>2</sub>um/m<sup>3</sup> Near Stores area is 15.01um/m<sup>3</sup> and 81.23% less than the Standard limit.
10. Avg. NO<sub>x</sub>um/m<sup>3</sup> -Near Main Gate area is 51.2um/m<sup>3</sup> and 36% less the Standard limit
11. Avg. No<sub>x</sub>um/m<sup>3</sup> - Near ETP area is 20.01um/m<sup>3</sup> and 74.98% less the Standard limit
12. Avg. No<sub>x</sub>um/m<sup>3</sup>- Near Stores area is 24.9um/m<sup>3</sup> and 68.87% less the Standard limit.
13. Plastic waste Generation and disposed during the year 2020-21 is 137.92Tones
14. Drums and Cons are Disposed during the year 2020-21 is 3873nos
15. Ventilations studies are carried with in the factory premises and found that results are within the limits.
16. Soil Analysis by M/s Ramkey Enviro, pH -7.7, E.C-umhos/cm-210, Nitrogen-31.7mg/kg , Bulk density -g/cc-1.50, M.C-8.41% , Potassium-(As K)-81.4mg/Kg, Sodium-287ppm, Calcium(As Ca) -567mg/kg.( Soil samples are Collected from depth of 45cm)

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