Allied Blenders & Distillers

ABD/RANGAPUR/DISTILLERY/TSPCB/2022-23/17

Date: 27.09.2022

To,

The Environmental Engineer,

Regional Office, Telangana State Pollution Control Board,

4th Floor, Collectorate Building, Nampally.

Hyderabad – 500001.

Subject: **M/s Allied Blenders and Distillers Private Limited Environmental Statement Form-V for FY 2021-2022- Submission - Regarding.**

Reference: **Consent and HW Authorization Order no. 210822768023, Dated 24.03.2021 and amendment Consent Order No. 210822768023/484, Dated: 08.12.2021 of Unit Survey No. 690/AA, 691/AA2, 692, Village- Rangapur, Mandal-Pebbair, District- Wanaparthy, State-Telangana - 509104.**

Dear Sir,

With reference to the above subject, we are herewith submitting the Environmental Statement Form-V for the for the period of April – 2021 to March - 2022. for the Distillery, Ranagpur plant.

Kindly acknowledge the receipt of the same.

Thanking you.

Yours faithfully,

M/s. Allied Blenders & Distilleries Private Limited.

Allied Blenders & Distillers Limited RANGAPUR

Sujit Kumar Srivastava

(Lead Distillery Operations)

STATE POLLUTION CONTROL BOARD-REGIONAL OFFICE HYDERABAD ★TELANGANA★

Inward No.....

29 SEP 2022

P. Dayakar

Enclosure: Form V

Environmental Statement

(Form-V)

2021-2022

For

Existing Grain Based Distillery from 150 KLPD along with Existing 6.5 MW Power Plant at Village - Rangapur, Mandal - Pebbair, District - Wanaparthy, State-Telangana Pin Code - 509104

M/S. Allied Blenders and Distillers Private Limited

Submitted to:

Regional office

Telangana State Pollution Control Board

Nampally, Hyderabad

September – 2022

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 Performa 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 Private Limited has given work permit to Dr.B.B.S.V.Seshagiri Rao to undertake the Environment Audit Studies for the year 2021-2022

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-South1
2. Mr. Sujit Srivastava – Lead Distillery Operation
3. Ms. Punam Mandape– Environmental Engineer
4. Dr.B.B.S.V.SeshagiriRao - EMS Lead Auditor

The Audit team audited the facility on 22.09.2022

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 dated. 24.03.2021 and amendment dated 08.12.2021 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 (150 x 365Days) 54,750 KLA
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 306.52 TPD.

ENA & By-Products Production details for the Month April 2021 to March 2022

Months	ENA in KL	Impure Sprit in KL	Fusel Oil in KL	CO2 in Metric Tons	DDGS in Metric Tons
Apr-21	3330.14	38.5	2	434.03	786.64
May-21	5315.98	51.1	3	346.68	1300.33
Jun-21	2728.70	29.03	1.6	646.07	723.52
Jul-21	3970.74	41.4	2.5	981	1055.6
Aug-21	3032.63	108.8	1.8	706.3	782.8
Sep-21	4786.8	157.9	3	880.4	1296
Oct-21	5550.3	106.9	3.1	1045.2	1374.6
Nov-21	4503.9	97.4	2.6	816.9	1134.8
Dec-21	5715.5	97.1	1.9	778.5	1405.6
Jan-22	3877.9	86.1	0.4	503.1	935.3
Feb-22	5019.1	87.1	0.4	502.8	1229.7
Mar-22	4862.1	106.1	0.6	901.2	1107.2
Total	**52693.79**	**1007.43**	**22.9**	**8542.18**	**13132.09**
Average	**146.37**	**2.80**	**0.06**	**23.73**	**36.48**

The Average Production of ENA & IS together total production per day is 146.37 KLD against CFO 150 KLD. 2.42% is less than the Permitted Production /Day. Avg. Electricity Production (Units) 2170631.33 Avg. Fusel oil produced as by Product is 0.06 KLD, Avg.CO_2 Produced as by Product is 23.73 TPD, & DDGS Produced as by produced is 36.48 TPD

Spent wash, MEE & Effluent Water Details for the Month of April 2021 to March 2022

Month	MEE Feed (M3)	MEE CONDENSATE			MEE Syrup (M3)	Effluent Water			
		Qty. Generated (M3)	Qty. Treated (M3)	Qty. Used in Process (M3)		ETP Feed (M3)	Qty. Used for Ash Quenching (M3)	Qty. Used for Cooling Tower Make-up (M3)	RO Reject (M3)
Apr-21	13478	11240	11240	11240	2238	6596	1245	4990	361
May-21	20127	17691	17691	17691	2436	6317	1581	4279	457
Jun-21	11494	9982	9982	9982	1512	6052	713	5134	205
Jul-21	15740	13759	13759	13759	1981	7285	1454	5118	713
Aug-21	13636	11935	11935	11935	1701	7316	1581	4997	738
Sep-21	18448	15832	15832	15832	2625	7080	1960	4415	705
Oct-21	19856	17252	17252	17252	2604	7400	2702	3944	753
Nov-21	18040	15802	15802	15802	2238	7338	2134	4522	682
Dec-21	21258	18946	18946	18946	2312	7363	1033	5617	713
Jan-22	15268	13176	13176	13176	2042	7316	1422	5212	682
Feb-22	19109	16710	16710	16710	2399	6496	1895	4013	588
Mar-22	19514	16774.5	16774.5	16774.5	2739.5	6944	1822	4471	651
Total	**205968**	**179099.5**	**179099.5**	**179099.5**	**26827.5**	**83503**	**19542**	**56712**	**7248**
Average	**17164**	**14924.95**	**14924.95**	**14924.95**	**2235.62**	**6958.58**	**1628.5**	**4726**	**604**

WATER AUDIT

Water Consumption During details for the April 2021 to March 2022

Unit: KLM

Months	Cooling Tower makeup	Boiler Feed	DM & Softner	Domestic use	Process Use & CO_2 Plant	Total	Average
Apr-21	37725.7	11393	2655.3	279	18755	**70808**	**2360.26**
May-21	13310	6300	750.0	188	8020	**28568**	**952.26**
Jun-21	19640	9450	1450	282	12030	**42852**	**1428.4**
Jul-21	27750	9450	2550	282	12435	**52467**	**1748.9**
Aug-21	28930	8000	2535	295	12927	**52687**	**1756.23**
Sep-21	33960	10020	2430	279	18090	**64779**	**2159.3**
Oct-21	35588	10726	2356	285	18507	**67462**	**2248.73**
Nov-21	27420	9090	1860	273	15390	**54033**	**1801.1**
Dec-21	24986	9238	1922	282	15345	**51773**	**1725.76**
Jan-22	24428	6262	1581	276	10602	**43149**	**1438.3**
Feb-22	25396	8610	2436	249	13860	**50551**	**1805.39**
Mar-22	28020	8932	2520	279	12760	**52511**	**1750.36**

Parameters	Units	Methods	Nov-21		Dec-21		Jan-22		Feb-22		March-22		Standards
			(ETP Inlet)	(ETP Outlet)	(ETP Inlet)	(ETP Outlet)	(ETP Inlet)	(ETP Outlet)	(ETP Inlet)	(ETP Outlet)	(ETP Inlet)	(ETP Outlet)	Inland Surface
pH	---	APHA 4500 H^+B	4.32	7.16	4.34	7.14	4.51	7.27	4.56	7.32	4.58	7.36	5.50 to 9.00
Total Suspended Solids at 105^0C	mg/L	APHA 2540 D	198	18	195	16	192	17	198	19	196	20	100
Total Dissolved Solids at 180^0C	mg/L	APHA 2540 C	1243	182	1238	180	1253	191	1268	49	1265	48	---
Chlorides as Cl^-	mg/L	APHA 4500 Cl^-C	361	12	358	13	361	15	369	17	367	18	---
Sulphates as SO_4^{2-}	mg/L	APHA 4500 SO_4^{2-} D	79	<10	77	<10	82	<10	84	<10	86	<10	---
Sulphide as S^{2-}	mg/L	APHA 4500 S^{2-} F	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---
Total Solids	mg/L	APHA 2540 B	1365	72	1362	72	1373	77	1378	75	1374	73	---
Phosphates as P	mg/L	APHA 4500 PC	8.5	<1	8.4	<1	8.9	<1	8.7	<1	8.6	<1	---
Chemical Oxygen Demand	mg/L	APHA 5220 B	3482	58	3486	32	3471	42	3482	68	3892	71	250
Biological Oxygen Demand	mg/L	IS 3025(P-44)	1045	17	1042	9.6	1041	12.6	1044	15	1167	21.3	30
Oil & Grease	mg/L	APHA 5520 B	1	<1.0	1.1	<1.0	1.3	<1.0	1.2	<1.0	1.3	<1.0	10
Nitrate Nitrogen as NO_3 N	mg/L	APHA 4500 NO_3-B	2.5	<1	2.4	<1	2.8	<1	2.6	<1	2.5	<1	50

Our ZLD Plant performance in terms of Pollution load reduction is as given below TDS reduction 87.9%, COD reduction 98.25 %, BOD reduction 98.47%

Waste Water Quality Monitoring

Sample of waste water was collected from the site for the assessment of impacts of the Plant on discharge point.

Parameters	Units	Methods	April-21 (ETP Inlet)	May-21 (ETP Inlet)	June-21 (ETP Inlet)	July-21 (ETP Inlet)	Aug-21 (ETP Inlet)	Sep-21 (ETP Inlet)	Oct-21 (ETP Inlet)	Standards Inland Surface
pH	---	APHA 4500 H^+B	6.42	6.72	6.78	6.94	7.42	6.68	6.72	5.50 to 9.00
Total Suspended Solids at 105°C	mg/L	APHA 2540 D	51	86	57	86	74	82	84	100
Total Dissolved Solids at 180°C	mg/L	APHA 2540 C	202	1524	1372	692	812	953	1530	---
Chlorides as Cl^-	mg/L	APHA 4500 Cl^- C	45.1	132	372	86	134	244	482	---
Sulphates as SO_4^{2-}	mg/L	APHA 4500 SO_4^{2-} D	24.3	39	78	38	42	72	84	---
Sulphide as S^{2-}	mg/L	APHA 4500 S^{2-} F	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---
Total Solids	mg/L	APHA 2540 B	242	1610	1429	778	886	1035	1714	---
Phosphates as P	mg/L	APHA 4500 PC	1.2	3.8	1.8	1.9	2.7	2.3	2.42	---
Chemical Oxygen Demand	mg/L	APHA 5220 B	111	124	86	132	92	87	3136	250
Biological Oxygen Demand	mg/L	IS 3025(P-44)	27.7	24	18	40	24	22	1142	30
Oil & Grease	mg/L	APHA 5520 B	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.6	10
Nitrate Nitrogen as NO_3 N	mg/L	APHA 4500 NO_3^-B	3.2	4.8	3.2	2.4	4.8	5.9	6.8	50

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:

Stack Connected to	-	Boiler
Fuel	-	Coal/Rice husk
Total Height	Meters	54
Sampling Height	Meters	24.5
Stack Diameter	Meters	2.3
Stack Cross Sectional Area	m^2	4.1526
Ambient Temp (Ta)	K	305
Stack Temperature (Ts)	K	378
Velocity	m/sec	8.17
Flow Rate	m^3/hr	122136

Avg. Waste water Generation and treatment /Day

Unit: KLD

Outlet No.	Outlets Description	Max. Daily Discharge KLD As per CFO	Max. Daily Discharge KLD Actual	Point of Disposal
1	Spent Wash	900	**572.13**	Multiple effect Evaporator to Concentrate the solids to30% and then to Decanter further to 90% Solids and Condensate water is re-used in the Process
2	RO-II Rejects	26.72	**20.13**	
3	Boiler Blow Down	56.0	**54.95**	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	75.0	**70.0**	
5	DM Plant & Softener regeneration	100.0	**90.0**	
6	CO2 Recovery Plant	10.0	**10.0**	
7	Domestic waste water	8.0	**7.0**	Septic Tank followed by Soak Pit

Water Consumption for process @3.20KL/KL product, Boiler feed 2.03KL/KL product, cooling tower feed is 6.20KL/KL of Product, DM water 0.47KL/KL of Product.

Waste water Generation from Process is 3.90KL/KL of Product,

From Boiler blow down is 0.375KL/KL of Product

From cooling tower blow down is 0.47KL/KL of Product,

From DM Plant 0.614KL /KL of Product,

From CO2Plant 0.068KL/KL of Product

After treatment recycled water used @4.84KL/KL of Product against the CFO amendment Order for recycling water 7.7KL/KL of ENA and fresh water consumption is 11.98 KL of KL of ENA Product against the CFO 15.99KL of fresh water consumption per KL of ENA.

Stack Connected to	--	1500 kVA D.G. Set.
Stack Height	Meters	12.0
Stack Diameter	Meters	0.25
Stack Cross Sectional Area	Sq. m	0.049
Temperature	K	379
Velocity	m/s	9.7
Flow Rate	m^3/hr	6970

Stack Emissions attached to 1500 kVA DG set Month of April 2021 to March 2022

Month	PM (mg/Nm3)	Oxides of Nitrogen (mg/Nm3)	Sulphur Dioxide (mg/Nm3)
CPCB Guidelines as per GSR 771 (E)	**<115 mg/Nm^3**	**<600 mg/Nm^3**	**<800 mg/Nm^3**
Method	IS-11255 (Part-1): 1985	IS-11255 (Part-7): 2005	IS-11255 (Part-2): 1985
Apr-21	19	43	67
May-21	26	41	72
Jun-21	19	48	79
Jul-21	24	50	72
Aug-21	17	43	62
Sep-21	39	43	72
Oct-21	42	44	53
Nov-21	40	45	51
Dec-21	38	43	52
Jan-22	41	45	50
Feb-22	43	46	52
Mar-22	45	47	53
Average	**33**	**45**	**61**

SPM levels are 71.5% less than the standard limit

SO2 levels are 92.5% less than the Standard limit

NOx levels are 92.3% less than the Standard limit

Stack Emissions attached to 50 TPH Boiler Month of April 2021 to March 2022

Months	SPM mg/Nm^3	SO2 mg/Nm^3	NOx mg/Nm^3
CPCB Guideline as per CFO	**<115**	**<600**	**<800**
Method	IS-11255 (Part-1): 1985	IS-11255 (Part-7): 2005	IS-11255 (Part-2): 1985
Apr-21	38	95	120
May-21	38	90	125
Jun-21	37	95	118
Jul-21	39	98	125
Aug-21	36	80	115
Sep-21	45	85	120
Oct-21	48	90	125
Nov-21	54	88	120
Dec-21	38	90	115
Jan-22	42	85	118
Feb-22	64	93	114
Mar-22	54	95	112
Average	**44.4**	**90.3**	**118.9**

Avg. SPM levels are 61.38% less than the Standard limit

Avg. SO2 levels are 84.94% less than the Standard limit

Avg. NOx levels are 85.13% less than the Standard limit

7. Avg.NOx–Near Main Gate area is 33.27µgm/m3 and 44.45% less the Standard limit
8. Avg.NOx-Near Distillery area is 32.08µgm/m3 and 46.53% less the Standard limit

Ambient Noise Quality for Year 2021-22

Month	Day time Unit: dB(A)									
	Milling Section	Fermentation Area	Security Area	Boiler-DCS	Boiler Turbine Hall	ETP Area	WTP Area	Dryer Section	CO2 Plant	Near DG Set
Apr-21	70.6	68.9	67.3	69.2	71.8	67.5	68.1	70.8	69.9	70.5
May-21	70.2	68.3	67.2	68.5	69.8	65.6	68.1	70.3	69.7	70.4
Jun-21	70.7	69.5	68.2	69.4	68.2	67.3	67.5	70.8	70.2	70.1
Jul-21	70.2	69.4	65.8	68.7	70.5	67.3	68.7	70.2	68.5	70
Aug-21	70.5	68.3	67.7	70.8	69.8	0	0	69.7	68.6	0
Sep-21	70.2	69.4	65.2	69.8	68.7	-	-	69.3	69.2	-
Oct-21	70.6	69.8	62.7	66.4	70.8	69.3	69.7	68.9	69.5	68.5
Nov-21	71.2	70.3	63.4	67.5	70.5	70.6	70.8	70.2	68.9	69.1
Dec-21	71.6	70.1	63.8	67.8	70.4	70.8	70.6	70.6	70.1	69.5
Jan-22	72.9	70.8	64.5	68.5	71.6	69.2	69.8	70.1	71.1	70.8
Feb-22	72	70.6	64.2	67.8	71.7	68.7	69.4	70.3	71	70.5
Mar-22	72.3	70.9	65	67.0	71.8	68.7	68.7	70.8	69.6	70.0
Average	**71.08**	**69.69**	**65.41**	**68.45**	**70.46**	**57.08**	**57.61**	**70.16**	**69.69**	**58.28**
	Night Time Unit: dB(A)									
Apr-21	67.5	66	59.2	59.4	68.7	63.9	60.4	64.3	63	62.5
May-21	64.2	63.7	56.3	59.6	58.5	60.2	61.8	62.3	62.5	64.4
Jun-21	62.6	60.8	54.7	57.3	59.6	56.2	54.3	56.2	60.8	61.5
Jul-21	64.8	63.5	58.2	58.5	65.3	60.7	58.6	61.5	60.2	61.7
Aug-21	63.7	64.9	62.5	63.2	60.4	0	0	60.3	63.8	0
Sep-21	60.4	61.7	59.6	60.5	57.8	-	-	57.2	59.6	-
Oct-21	65.7	63.2	53	55.3	65.6	61.4	61.2	55.4	63.1	62.2
Nov-21	66.5	64.1	54.5	56.7	66.1	62.6	62.8	57.2	63.9	63.1
Dec-21	66.2	64.6	55.4	56.5	66.4	62.6	62.3	57.7	63.6	63.5
Jan-22	67.1	65.4	56.2	55.9	68.2	63.5	61.9	58.8	64	62.1
Feb-22	67.5	65.1	53.1	55	68.2	63.4	61.6	58.5	64.5	62.7
Mar-22	68.0	65.6	54	56.2	68.6	64.3	62.4	58.7	64.3	64.6
Average	**65.35**	**64.05.**	**56.39**	**57.84**	**64.45**	**51.56**	**50.60**	**59.0**	**62.77**	**52.35**

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 PM10, PM2.5, SO_2 and NO_x 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 for Year 2021-22

Units: µgm/m3

Month	Near Main Gate				Near Distillation			
	PM10	PM2.5	SO2	NOX	PM10	PM2.5	SO2	NOX
NAAQS	**100**	**60**	**80**	**80**	**100**	**60**	**80**	**80**
Apr-21	69	31.7	16.8	29	51	28	12.9	23
May-21	68	35.2	25	14.3	62	30.7	16.8	28
Jun-21	62	31.5	16.7	28	54	27.6	14.2	23
Jul-21	65	34.2	15.8	27	57	30.8	10.2	23
Aug-21	69	36.8	17.9	29	62	29.1	11.3	29
Sep-21	61	34.3	15.8	27	54	27.6	13.2	23
Oct-21	65	35.6	36	28	52	29.4	34	25
Nov-21	65	33	17	28	50	26	22	31
Dec-21	63	34	34	29	51	28	32	26
Jan-22	66	35	36	27	52	27	30	25
Feb-22	68	37	34	26	50	25	32	25
Mar-22	67	35	33	27	51	26	35	24
Average	**74**	**39.44**	**31.5**	**33.27**	**62.16**	**33.0**	**28.63**	**32.08**

1. Avg.PM10-Near Main Gate is 74µgm/m3 and 26% less than the Standard limit
2. Avg.PM10-Near Distillery area is 62.16 µgm/m3 and 37.84% less than the Standard limit
3. Avg.PM2.5-Near Main Gate is 39.44µgm/m3 and 34.26% less than the Standard limit.
4. Avg.PM2.5-Near Distillery area is 33.0 µgm/m3 and 45% less than the standard limit.
5. Avg.SO2-Near Main Gate is 31.5µgm/m3 and 60.62% less than the Standard limit.
6. Avg.SO2-Near Distillery area is 28.63µgm/m3 and 64.21% less than the Standard limit.

FORM V for the year 2021-22

Environmental Statement for the financial year ending on 31st March on or before 30th of September every year.

PART -A

i.	Name and address of the owner/ Occupier of the industry operation or process	Mr. Umasankar Padhi Regional Manufacturing Head- South 1 M/s Allied Blenders and Distilleries Private Limited Sy.Nos.690/AA, 691/AA2 & 692 Rangapuram (V), Pebberu (M), Wanaparthy District.
ii.	Category	Red Category
iii.	List of Products	Rectified Spirit /Ethanol / ENA- 54750 KLA Power Plant -6.5MW
iv.	Year of Establishment	2011
v.	Date of the last Environmental Submitted	29.09.2021

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 PM10, PM2.5, SO_2 and NO_x 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

PART C

POLLUTION GENERATED

(Parameters as Specified in the Consent Issues)

- Water Consumption for process @3.20KL/KL product, Boiler feed 2.03KL/KL product, cooling tower feed is 6.20KL/KL of Product, DM water 0.47KL/KL of Product.
- Waste water Generation from Process is 3.90KL/KL of Product,
- From Boiler blow down is 0.375KL/KL of Product
- From cooling tower blow down is 0.47KL/KL of Product,
- From DM Plant 0.614KL /KL of Product,
- From CO2Plant 0.068KL/KL of Product
- Product against the CFO 15.99KL of fresh water consumption per KL of ENA. after treatment recycled water used @4.84KL/KL of Product against the CFO amendment Order for recycling water 7.7KL per KL of ENA and fresh water consumption is 11.98 KL of KL of ENA
- Our ZLD Plant performance in terms of Pollution load reduction is as given below TDS reduction 87.9%, COD reduction 98.25 %, BOD reduction 98.47%

PART B

Water and Raw Material Consumption

Avg. Water Consumption/Day for the FY 2021-2022 is as given below

Sr. No.	Purpose	Total water consumption-KLD
1	Process & CO2 Plant	468.66
2	Cooling tower make up	908.76
3	Boiler feed	298.53
4	DM & softener	69.57
6	Domestic	9.0
Total		**1754.52**

Water consumption 1754.52 m3/day

Water Consumption Per Unit of Product

Name of Products	During the Previous Financial Year KL/T Product 2020-2021	During the Current Financial Year KL/T Product 2021-2022
Rectified Spirit /Ethanol/ENA	14.49 KL/KL of Product	11.98 KL/KL of Product

Raw Materials Consumption

Name of the Raw Material	Raw Materials consumption 2020-21	Raw Materials consumption 2021-22
Maize / Jowar / Broken rice	2.11T/KL	2.094T/KL

PART G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production

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 Re Sustainability Limited recognized with MoEF&CC & NABL.

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 30 Acres land and the Unit and out of which 10.81 Acres of land greenbelt development is being done.

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 D

HAZARDOUS WASTES

(as specified under Hazardous Wastes (Management and Handling) Rules, 2016)

Hazardous Waste	Total Qty. 2020-21	Total Qty. 2021-22
From Process	Nil	Nil
From Pollution Control Equipment	Nil	Nil
Waste oil	1600 LPA	4595 LPA

PART E

SOLID WASTES

Coal Ash From Boiler	Total Qty. 2020-21 TPA	Total Qty. 2021-22 TPA
	2358.49	9002.335

PART F

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

1. Coal Ash: This is mainly produced from the boiler house and ash is disposed of by selling for brick making. The disposal quantity is about 9002.335 TPA during the year 2021-22
2. Waste Oil: waste oil generation @4595LPA and same is disposal to authorized recyclers.
3. DDGS Generation and Disposal is 13041.96TPA during the year 2021-22.
4. CO2 by product Generation and Disposal is 8690.95TPA during the year 2021-22

PART I

Miscellaneous

Any other particulars for improving the quality of the environment.

The Unit is monitoring noise level by Re Sustainability Limited in consultation with State Pollution Control Boards Vendor M/S Re Sustainability Limited recognized with MoEF&CC, NABL 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 69.69 dB(A) (7.08% less than the Standard limit)
2. Avg. Ambient Noise levels at Boiler Turbine Hall during Day time is 70.46 dB(A) (6.05% less than the Standard limit)
3. Avg. Ambient Noise levels at Fermentation area during Day time is 69.69 dB(A) (7.08 % less than the Standard limit)
4. Avg. Ambient Noise levels at ETP area during Day time is 57.08 dB(A) (23.89% less than the Standard limit)
5. Avg. Ambient Noise levels at CO2 plant area during night time is 62.77 dB (A) (10.32% less than the standard limit)
6. Avg. Ambient Noise levels at Boiler Turbine Hall during the night time is 64.45dB(A) (7.92% less than the Standard limit)
7. Avg. Ambient Noise levels at Fermentation area during night time is 64.05 dB(A) (78.5% less than the Standard limit)
8. Avg. Ambient Noise levels at ETP area during night time is 51.56dB(A) (26.34% less than the Standard limit)

PART H

Additional measures/ investment proposal for environmental protection abatement of pollution, prevention of pollution.

Investment under the Corporate Social Reasonability (CSR) Details

Sr. No.	Financial Year	Purpose	Amount Contributed (Rs.)
1	2020-2021	Sanitizer to TS Govt	2,41,596
		Check dam and roads	25,00,000
		Education, Health and infrastructure	10,00,000
		Essential commodity kits to Migrant labour	2,00,000
		Power and water to the formers / per year	1,20,000
		Telangana CM Relief fund for fighting Covid -19 & Flood Relief	1,00,00,000
		Fertilizers to the formers / per year	2,50,000
		Singireddy Charitable Trust (Goshala)	92,383
		Nala clearing (JCB) / per year	50,000
2	2021-2022	Singireddy Charitable Trust (Goshala)	2,67,453
		Singireddy Charitable Trust (Goshala)	1,20,337
		Providing furniture in schools in Pebbair	10,00,000
		Construction of Road Dam from Amma Cheruvu to Rajanagaram	20,00,000
		Fertilizers to Farmer per Year	2,50,000
		Nala Cleaning with JCB per Year	48,000

Avg. NOx levels are 85.13% less than the Standard limit

5. DG Set Stack emissions:
   SPM levels are 71.5% less than the standard limit
   SO2 levels are 92.5% less than the Standard limit
   NOx levels are 92.3% less than the Standard limit

6. Ambient Air Quality:
   Avg.PM10-Near Main Gate is 74µgm/m3 and 26% less than the Standard limit
   Avg.PM10-Near Distillery area is 62.16 µgm/m3 and 37.84% less than the Standard limit
   Avg.PM2.5-Near Main Gate is 39.44µgm/m3 and 34.26% less than the Standard limit.
   Avg.PM2.5-Near Distillery area is 33.0 µgm/m3 and 45% less than the standard limit.
   Avg.SO2-Near Main Gate is 31.5µgm/m3 and 60.62% less than the Standard limit.
   Avg.SO2-Near Distillery area is 28.63µgm/m3 and 64.21% less than the Standard limit.
   Avg. NOx–Near Main Gate area is 33.27µgm/m3 and 44.45% less the Standard limit
   Avg. NOx-Near Distillery area is 32.08µgm/m3 and 46.53% less the Standard limit

7. Noise levels data at various locations within the factory premises as follows,
   Avg. Ambient Noise levels at CO2 plant area during Day time is 69.69 dB(A) (7.08% less than the Standard limit)
   Avg. Ambient Noise levels at Boiler Turbine Hall during Day time is 70.46 dB(A) (6.05% less than the Standard limit)
   Avg. Ambient Noise levels at Fermentation area during Day time is 69.69 dB(A) (7.08 % less than the Standard limit)
   Avg. Ambient Noise levels at ETP area during Day time is 57.08 dB(A) (23.89% less than the Standard limit)
   Avg. Ambient Noise levels at CO2 plant area during night time is 62.77 dB (A) (10.32% less than the standard limit)
   Avg. Ambient Noise levels at Boiler Turbine Hall during the night time is 64.45dB(A) (7.92% less than the Standard limit)
   Avg. Ambient Noise levels at Fermentation area during night time is 64.05 dB(A) (78.5% less than the Standard limit)
   Avg. Ambient Noise levels at ETP area during night time is 51.56dB(A) (26.34% less than the Standard limit)

Treated water Parameters and Pollution loads

Our ZLD Plant performance in terms of Pollution load reduction is as given below TDS reduction 87.9%, COD reduction 98.25 %, BOD reduction 98.47%

Audit Observations:

1. Average Production of ENA & IS together total production per day is 146.37 KLD against CFO 150 KLD. 2.42% is less than the Permitted Production /Day. Avg. Electricity Production (Units) 2170631.33 Avg. Fusel oil produced as by Product is 0.06 KLD, Avg.CO_2 Produced as by Product is 23.73 TPD, & DDGS Produced as by produced is 36.48 TPD

2. Water Consumption for process @3.20KL/KL product, Boiler feed 2.03KL/KL product, cooling tower feed is 6.20KL/KL of Product, DM water 0.47KL/KL of Product.
   Waste water Generation from Process is 3.90KL/KL of Product,
   From Boiler blow down is 0.375KL/KL of Product
   From cooling tower blow down is 0.47KL/KL of Product,
   From DM Plant 0.614KL /KL of Product,
   From CO2 Plant 0.068KL/KL of Product
   Product against the CFO 15.99KL of fresh water consumption per KL of ENA. after treatment recycled water used @4.84KL/KL of Product against the CFO amendment Order for recycling water 7.7KL per KL of ENA and fresh water consumption is 11.98 KL of KL of ENA
   Our ZLD Plant performance in terms of Pollution load reduction is as given below TDS reduction 87.9%, COD reduction 98.25 %, BOD reduction 98.47%

2. Chimney of Coal fired Boiler (50 TPH) Stack diameter (1.83m), Stack cross sectional area (63 sq.m^2)., Exit velocity of flue gases (9.42 m/sec), Flow rate (89,188 cum/hr).

3. Coal Consumption is 0.112 Tones/KL of ENA Production Per Day.

4. Boiler Stack emissions:
   Avg. SPM levels are 61.38% less than the Standard limit
   Avg. SO2 levels are 84.94% less than the Standard limit

8. Coal, Husk & Briquettes Consumption for the year is 2021-22 is 6204.39 TPA

9. Coal ash generation and disposal to Brick manufacturing units during the year 2021-22 is 9002.335 TPA

10. Waste oil generation and disposal to authorized recyclers during the year 2021-22 is 4595 LPA

11. DDGS generation and disposal quantity during the year 2021-22 is 13089.98 TPA

12. CO2 generation and disposal quantity during the year 2021-22 is 8670.66 TPA

Dr. B. B. S. V. Seshagiri Rao

M.sc.(Env.Sci)., L.L.M., PGDEHS., Ph.D

Lead Auditor QMS & EMS