

GBL/SMR/MoEF&CC/2021-22/449.

Godavari Biorefineries Ltd Date: 28.05.2021

To, The Additional Principal Chief Conservator of Forests(C) Ministry of Environment, Forests & Climate Change, Bengaluru

Sub: Half yearly compliance report for the period of October 2020 to March 2021

-Regarding

Ref: File No12.1/633/2009-10/KAR/706

EC No. 1) F No, J 11011/191/2007-IA II(1) dated 9th April 2020

2) F No. J-11011/272/2009-IA II(1) dated 3rd Feb 2015

3) F No. J-11011/272/2009-IA II(1) dated 1st June 2011

4)F No. J-11011/272/2009-IA II(1) dated 7th July 2009

With reference to the above subject herewith we are submitting the half yearly compliance report for the period October 2020 to March 2021. The details are as follows

Seedar Co. Co. Co.	Description	Details
SI No		
1.	Name of the Industry	Godavari Biorefineries Limited
	*	(Distillery Division)
		Sameerwadi-587316
		Tal: Mudhol, Dist: Bagalkot
2.	Person Responsible	Shri. Suhas. U. Godage
		General Manager
3.	Email.ID	suhas@somaiya.com
4.	Phone No/ Mobile	08350-260081
		+917259009663
5.	Web site details	www.somaiya.com
6.	Environmental Clearance	F No, J 11011/191/2007-IA II(1) dated 9 th
	details	April 2020
		F No. J-11011/272/2009-IA II(1) dated 3 rd Feb
		2015
		F No. J-11011/272/2009-IA II(1) dated 1st June
		2011
		F No. J-11011/272/2009-IA II(1) dated 7 th July
		2009
7.	Working days (Days)	149.5

Works: P O Sameerwadi, Tal Mudhol, Dist Bagalkot, Karnataka State - 587 316. INDIA Tel: (91-08350) 260046/ 47/ 48 Fax: (91-08350) 260037 Gram: "SUGAR MILLS" Sameerwadi

Regd. Office: Somaiya Bhavan, 45/47, Mahatma Gandhi Road, Fort, Mumbai - 400 001 INDIA. Tel: (91-22) 2204 8272 / 2285 8430 Fax: (91-22) 2204 7297 www.somaiya.com



<u>Sub:</u> Expansion of distillery unit from 320 KLPD to 400 KLPD by M/s Godavari Biorefineries Lt (Distillery division) at Sy. No.16 & 17 of Saidapur Village, Sy. No. 45,46 of Handigund Village, Sy. No. 74 & 75 of Madbhavi Village Sameerwadi Village, Tehsil Mudhol, Bagalkot (Karnataka), Environmental Clearance -regarding

Specific Condition

Sl No	Conditions	Compliance
(i)	Necessary permission as mandated under the water (prevention and control of Pollution) Act, 1974 and the air (prevention and control of pollution) Act, 1981, as applicable from time to time, shall be obtained from the state pollution control Board as required.	Industry has obtained Consent for Establishment and Consent for Operation from state pollution control Board. The details are as follows, Consent for Establishment bearing no CTE 320695 dated 09 th October 2020 and Consent for operation bearing number AW 321590dated 12 th November 2020.
(ii)	As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premise. The reuse of treated effluent in gardening/ horticulture shall not be considered as ZLD.	The raw spentwash generation from the plant is varying from 1800 to 1900 KLD. All the spent wash volume is reduced in three stage evaporation and fed to Incineration boiler of 40 TPH capacity. Industry has provided two no's of condensate polishing unit 1.Biological treatment plant - cap-1650 KLD 2.RO plant - cap: 1680 KLD The spentless and process condensate generated from the process are as follows Spentless: 550 - 600 KLD Process condensate: 1600 -1700 KLD The process condensate generated from the evaporation and spentless from the process are treated in the biological treatment plant and recycled back to cooling tower as makeup.
(iii)	The spent wash after Biomethanation in the anaerobic digester shall compost with press mud. An area of 26 Acres shall be earmarked for compost yard. The compost shall be lined with HDPE sheets and construction of compost yard shall be as per the CPCB guidelines. The unit shall be using biocomposting method of Spent wash treatment technology along with multiple effect evaporaper (MEE) followed by incineration in the boiler to achieve zero liquid discharge. The total operating days of the plant will be 330 days.	Industry has earmarked an area of 26 RCC concerted area for the Biocomposting. The biocompost area is constructed as per the CPCB guidelines. Industry also provided three stage evaporation

(iv)	Necessary authorization required under the hazardous and other wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the rules shall be strictly adhered to.	Industry has obtained the authorization for the management of Hazardous waste from Karnataka state pollution control Board bearing authorization number 307306 dated 18.08.2018 and valid upto 30 th June 2021 Authorization copy enclosed as Exhibit No-2
(v)	To control source and the fugitive emissions, stable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines	Industry has provided the RCC concrete roads inside the premises for the control fugitive emissions and takes utmost care to control fugitive emissions. Industry also installed cooling system for the molasses storage tanks to control the gaseous emissions during the summer season
(vi)	Odour shall be prevented at the source and effective odour management scheme shall be implemented.	The effluent spraying at biocompost is carried through mechanical spraying system to minimize the additional quantity. This will minimize the spillage of effluent in biocompost yard and is effective in minimizing the odour. The pressmud generated from the sugar unit transported through covered vehicles to minimize the odour losses.
(vii)	Total fresh water requirement shall not exceed 1000 m3/day proposed to be met from River Ghataprabha. Prior permission shall be obtained from the concerned regulatory authority/CCWA.	Industry ensures the fresh water consumption will not exceed 1000 m3/day. Water drawl permission obtained from water resources department, GOK is enclosed as Exhibit No-3.
(viii)	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.	The ethanol is stored in the MS steel tanks with proper roofing and dyke wall. The storage area is covered with fire hydrant system and chemical extinguisher is provided near tanks. Industry has obtained the PESO license and as per the guidelines the measures are taken for the storage of ethanol.
(ix)	Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.	The sludge of quantity 250-300 MT per annum generated from the primary ETP is utilized in the biocompost process and sold as manure.
(x)	The Company shall strictly comply with the rules and guidelines under Manufacture, Storage, and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the motor vehicle Act (MVA), 1989.	Noted and agreed for the condition.

(xi)	The Company shall undertake waste minimization measures as below:-	Industry ensures and undertakes all the waste minimization measures.
	 a. Metering and control of quantities if active ingredients to minimize waste. b. Reuse of by-products from the process as raw materials or as material substitutes in other processes. c. Use of automated filling to minimize spillage. d. Use of close Feed system into batch reactors. e. Venting equipment through vapour recovery system. f. Use of high pressure hoses for equipment cleaning to reduce waste water generation. 	Industry has installed the biological treatment plant as well as RO plant for the treatment of process condensate and spentless generated from the plant and the treated water recycled back to cooling tower to minimize the fresh water consumption. Industry utilizing the high pressure such as 400 -700 kg/cm2 for the cleaning of evaporator body tubes. Photographs of Hydrojet machine are enclosed as Exhibit No-4
(xii)	The green belt of 5-10 m width shall be developed in more than 33 % of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. selection of plant species shall be as per the CPCB guidelines in consultation with the state Forest Department.	Industry already developed the green belt area around 126 acres. Industry is developing the green belt along the plant periphery and along the road sides. The green belt photographs are enclosed as Exhibit No-5
(xiii)	As committed, funds allocation for the corporate Environment Responsibility (CER) shall be 1.5 % of the total project cost. Itemwise details along with time bound action plan shall be prepared and submitted to the Ministry of Regional office.	The expenditure details for the corporate social responsibility for the last three years are enclosed as Exhibit no-6.
(xiv)		Acoustic measures are provided for the 320 KVA DG set and chimney is also provided 6 mtrs above roof level. Chimney height of 81 mtrs is provided at Incineration boiler as per the extant regulations of CPCB. Photograph of 320 KVA DG set Chimney is enclosed as Exhibit No-7.
(xv)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	Industry has provided fire hydrant line inside and outside of the plant and taken all safety measures required during any emergency.
(xvi)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupation health check up of the employees is carried out regularly and records are maintained at Occupational health center located in the industry premises.
(xvii	There shall be adequate space inside the plant premises earmarked for parking to be allowed outside on public places.	Industry has earmarked an area of three acres as parking space for the tankers. Photograph of parking space is enclosed as Exhibit No-8

(xviii	Storage of raw materials shall be either	The raw material such as molasses is stored in
)	stored in silos or in covered areas to prevent	the steel tanks with proper roofing. Dyke wall
	dust pollution and other fugitive emission.	is provided surrounding the tanks to take care
		of any spillages.
		The coal is stored in coal storage shed. Bag
		filter is provided at coal crusher for
		minimizing the fugitive emissions.
		Photo graphs of coal yard, bag filter are
		enclosed as Exhibit No-9.
(xix)	Continues online (24x7) monitoring system for	Industry has installed online emission
	stack emissions shall be installed for,	monitoring system for flue gas PM
	measurement of flue gas discharge and the	measurement, flowmeters as well as PTZ
	pollutants concentration, and the data to be	camera are installed and are CPCB and KSPCB.
	transmitted to the CPCB and SPCB server. For	
	ZLD, the unit shall install web camera with	The Photo graphs of Online emission
	night vision capability and flow meters in the	monitoring and Flow meters are enclosed as
	channel/drain carrying effluent within the	Exhibit No-10
	premises. For continues discharge the unit	
	shall be install pH, TSS, BOD, COD, and flow	
	meter at the ETP outlet.	

A. General conditions:

Sl No	Conditions	Compliance
(i)	The project proponent shall obtain all other statutory/ necessary permissions / recommendations /NOCs prior to start of construction/operation of the project, which inter alia include, permissions/approvals under the forest (Conservation) Act, 1980; the wildlife (protections) Act,1972; the Coastal Regulation Zone Notification, 2019, as amended from time to time, and other Office memoranda/Circular issued by the Ministry of Environment, Forest and Climate Change from time to time, as applicable to the project.	
(ii)	The project proponent shall ensure compliance of 'National Emission standers', as applicable to the project, issued by the Ministry from time to time. The project proponent shall also abide by the rules/regulations issued by the CPCB/SPCB for control/abatement of pollution.	The Ambient Air Quality reports are enclosed
(iii)	The project authorities shall adhere to the stipulations made by the state pollution Control Board/Committee, Central Pollution Control Board, State Government and any other statutory authority.	
(iv)	The project proponent shall prepare a site specific conservation plan and wildlife management plan in case of the presence of	

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	schedule-1 species in the study area, as applicable to the project, and submit to Chief wild life warden for approval. The recommendations shall be implemented in consultation with the state Forest/Wildlife Department in a time bound manner.	
(v)	No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and climate change. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted & agreed
(vi)	The energy source for lighting purpose shall be preferably LED based, or advance having preference in energy conservation and environment betterment.	Industry already implemented LED based lighting system inside and outside the industry premises for the conservation of energy and betterment of environment. Photo graphs of LED based lighting system is enclosed as Exhibit No-12
(vii)	The locations of ambient air quality monitoring stations shall be decided in consultation with State Pollution Control Board (SPCB) and it shall be ensured that at least one station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Industry has located two ambient air quality monitoring stations in consultation with state pollution control board and monitoring throughout the year on monthly basis. The reports are submitted Regional office KSPCB Bagalkot. Ambient Air quality are enclosed as exhibit no-11.
(viii)	The National ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November, 2009 shall be followed.	
(ix)	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	around the plant premises and measures are taken to maintain the noise levels as per ambient air quality standards prescribed under Environment protection Act 1986 Rules,1989. The noise monitoring report enclosed as exhibit No-11
(x)	The Company shall harvest rain water from the roof tops of the buildings and storm water drains to recharge the ground water and to utilize the same for process requirements.	Industry has provided four numbers of rain water harvesting tanks inside and outside premises The Photo graphs of rain water harvesting tanks are enclosed as exhibit No-13

(xi)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall ne imparted.	Industry is having full pledged safety department consisting of safety manager, safety supervisors and safety guards. Safety Training programme are conducted periodically and training is provided to all departments. Industry has provided personal protective equipment (PPE) for all employees such as Helmets, masks, gumboots, hand gloves and safety google for the chemical handling staff.
(xii)	The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.	Industry abides by the condition. Onsite emergency plan is enclosed as exhibit no-14
(xiii)	The Company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented.	Industry is having full pledged Corporate Social Responsibility department and carrying out various programs such as Help a Child (for Poor farmers surrounding the industry), Medical camps, tailoring classes for women empowerment. CSR activity details is enclosed as Exhibit No-15.
(xiv)	The Company shall undertake eco- developmental measures including community welfare measures in the project area for overall improvement of the environment.	Industry abide by the condition.
(xv)		
(xvi)	The Company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so	Industry abides by the condition. The details are as follows Capital Cost : Rs 7935 lakhs Recurring Cost : water - Rs 28.65 lakhs Air - Rs 5.24 lakhs

	earmarked for environment management/pollution control measures shall not be diverted for any other purpose.	
(xvii)	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	Industry has submitted the Environment Clearance letters to local gram Panchayat and acknolgement copy of the same is enclosed as Exhibit No-16
(xviii)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental clearance conditions including result of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.	Industry is regularly submitting the six monthly compliance report through email to regional office MoEF&CC Bengaluru and hard copy sent to zonal office CPCB and state pollution control board. The compliance report is posted on the industry website. The last six monthly compliance is sent to regional office on 30 th November 2020
(xix)	The environmental statement for each financial year ending 31 st march in form-V as is mandated shall be submitted to the concerned State pollution Control Board as prescribed under the environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	Industry is regularly submitting the Environmental statement to state pollution control board before 31 st September every year.
(xx)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at website of the Ministry and at https://parivesh.nic.in/ . this shall advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	Industry circulated the accordance information of Environment Clearance in two local newspapers and copy of the same is enclosed as Exhibit No -17.

(xxi)	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	e establishment from state pollution control board on 09 th October 2020 and Consent for operation on 12 th November 2020.
		Start of the project -28 th October 2020
(xxii)	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to the project.	Noted for compliance
PI D	lace: Sameerwadi ate : 29.05.2021	Yours faithfully For Godavari Biorefineries Limited
		had
		S.U. Godage General Manager
Copy to:		(SMR)
	Floor, Church Street, Bangalore-1.	
		9

ETP Photographs Exhibit No-1

Integrated Evaporation (Falling film type)



Ist Stage Evaporation (Falling Film



IInd stage Evaporation (Forced circulation)



Incineration Boiler -40 TPH



26 Acres of RCC Biocomposting Yard



Aerotiller Mixing Mahine



Bull Make Mixing Mchine



Condensate Polishing Unit (RO System)



Condensate Polishing Unit (Biological) System



Exhibit No-

Hazardous waste authorization from KSPCB

Form 2. [Rule 6(2)] Authorization maker Horardons & Other Wastes [Management & Transboundary Movement [Rules, 2016 Authorization No. 207306 Valid upto: 30006/2021 CThis document contains 3 pages excluding amexime.)

Authorization No. 307306 PCB ID: 10049 Date: 19006/2018 EVENUE SUSPECTION OF THE COUNTRY OF THE POLITICAL AUTHORISATION BY STATE POLITICAL AND OPERATORS OF DISPOSAL FACILITIES

Ref. 1. Authorization application submitted by the industry/organization on 14/06/2018 at Regional Office.

2. Inspection of the project site/organization by Regional Officer, Bagalkote on 66-06/2018

1. Number of authorization 307306 and date of issue 18/08/2018

2. Reference of applications when ward Date 14/06/2018

2. Reference of application No. 21208 Invance Date 18/06/2018

3. Director(Works) of Godavari Biorefineries Limited Obstailery Division) is hereby geneted an authorization based on the enclosed signed inspection report for Collections Reception Disposal or may other use of hazardous or other wastes or both on the premises situated at the location Address: 16,17 of Saidapur Village, Sameerwald Village, Tajaki Mushol, District: Bagalkot Details of Authorization:

Category of Hazardous Description of waste as per the Hazardous Waste Schedule LIL & IV of these rules

5.1-Used Spont OB

1. The authorization or its renewal shall be produced for inspection at the request of an Officer authorized by the Karmataka State Pollution Control Board.

3. The person authorized shall not rent, lend, self, transfer or otherwise transport the hazardous wastes and other wastes except what is permitted through this authorization and without obtaining prior permission of the KSPCLB.

4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the application between the person authorized shall constitute a breach of this authorization and without obtaining prior permission of the KSPCLB.

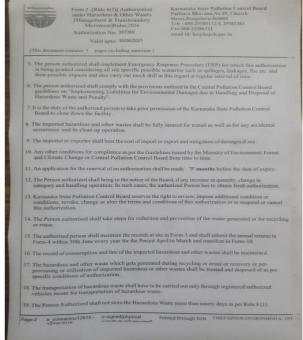
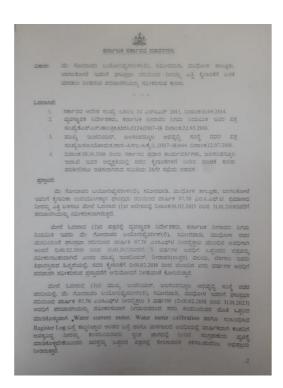
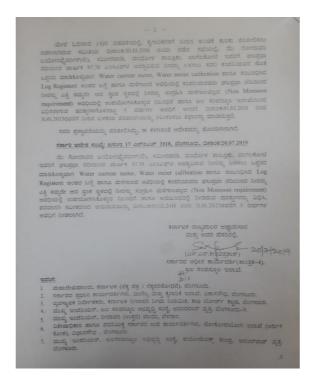




Exhibit No-

Water drawl permission from water resources department GOK.





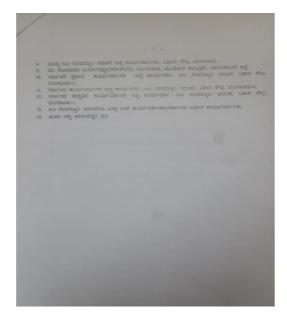


Exhibit No-4

High Pressure Hydro jet machines





Greenbelt area Exhibit No-5





Exhibit No-6

CSR expenditure of GBL Sameerwadi from 2016-17 to 2019-20

								Rupees in lakhs
			2016-17	2017-18	2018-19	2019-20	Total	Rs. in Lacs
Cr No	CSR Project or Activity Identified	Name of the place of the activity	Expendi tures	Expendi tures	Expendi tures	Expendi tures	Expendit ures	Amount spent Direct or through implementing agency
31. IVO	con Project of Activity Identified	of the activity	tures	tures	tures	tures	uics	agency
1	Help a child scholarships	GBL operational area	12.09	12.92	12.00	55.00	92.01	Somaiya Trust / Direct
							-	
2	Support to rural schools	GBL operational area	75.88	61.66	54.92	-	192.46	Somaiya Trust / Direct
3	Pre- primary schools / Anganwadi centers	GBL operational area	3.58	2.46	2.34	-	8.38	Direct
							-	
4	Women empowerment / Training centers	GBL operational area	5.49	3.18	2.74	-	11.41	Direct
							-	
5	Health care / Medical camps	GBL operational area	2.96	0.40		-	3.36	Direct
6	Sports / cultural programmes	GBL operational area	9.20	9.20		-	18.40	Direct
							-	
7	Drinking water supply & others	GBL operational area	30.55	58.02	62.05	-	150.62	Direct
		Total	139.75	147.84	134.05	55.00	476.64	

Exhibit No-7

320 KVA DG set Chimney



Exhibit No-8

Parking space for the tankers





Exhibit No-9

Coal Storage Shed



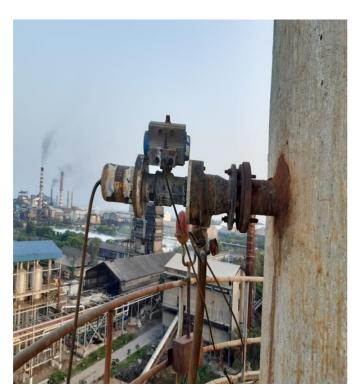
ESP Ash Collection Xylo

Bag Filter for Coal mill

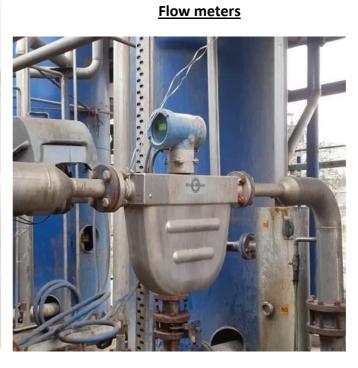




Exhibit No-10
Online emission Monitoring Sensor







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Exhibit No-11

Boiler Stack monitoring results:-

Month & Year	Stack No-3, 40 TPH Incineration boiler						
		Stack ID- 1.7 mtr, Height – 81 mtr					
		Fuel: Concentrated	Spentwash & Co	al, Fuel Ratio: 80): 20		
	Flue gas	Flue gas Outlet	Particulate	SO2	NOX		
	velocity	temp	matter(SPM)	mg/nm3	mg/Nm3		
	(m/Sec)	deg C	mg/Nm3				
Nov.2020	12.5	146	83	46	32		
Dec.2020	12.2	148	82	45	30		
Jan2021	1.4	143	79	43	31		
Feb.2021	12.1	14	60	44	30		

Ambient Air quality monitoring details:

Month & Year	Location	Wind direction	Parameters				
	Sampling station		PM _{2.5} μg/m ³	PM ₁₀ µg/m³	NO _x µg/m³	SO ₂ µg/m ³	
Nov.2020	Near distillery gate	Easterly	29	75	14	12.00	
	Near BTP plant	Easterly	25	69	12.00	10.00	
Dec.2020	Near distillery gate	Easterly	28	73	14	12	
	Near BTP plant		25	68	10	8	
Jan.2021	Near distillery gate	Easterly	27	74	12	10	

	Near BTP plant		25	69	10	8
Feb.2021	Near distillery gate	Easterly	28	75	12	10
	Near BTP plant		27	71	14	1

Electrostatic Precipitator Meter reading :

		٠.	
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Sl No	Month	Working	Initial	Final reading	Total	KWH			
		days	Reading		MWH				
1	October 2020	2.0	1166.390	1182.240	16.450	16450			
2	November.2020	29.3	1182.240	1221.290	39.050	39050			
3	December.2020	30.7	1221.290	1259.043	37.753	37753			
4	January.2021	30.9	1259.043	1293.490	34.447	34447			
5	February.2021	27.2	1293.490	1326.583	33.093	33093			
6	March. 2021	29.4	1326.583	1355.325	28.742	28742			
	Total	149.5			189.535	189535			
	Average unit consumption: 189535 / 149.5 = 1267.79 KWH								

❖ Effluent Sample Analysis report: Biomethanated Spent wash

SI No	Parameter	Unit		Res	ults		Test method
			1	2	3	4	
			28.11.20	31.12.21	26.01.21	27.02.21	
1	pН		7.87	7.82	8.29	8.29	IS: 3025(P-11)1983
2	Alkalinity	mg/lit	8092	8010	8370	8290	IS: 3025(P-23)1986
3	Volatile acids	mg/lit	3640	3670	3822	3692	APHA 22 nd edition2012,5056C
4	COD	mg/lit	41926	40233	35593	35840	IS: 3025(P-58) 2006
5	BOD	mg/lit	5680	5530	5290	5210	IS: 3025(P-44)1993
6	Total solids	mg/lit	77610	72490	69550	70150	APHA 22 nd edition2012,2540 B
7	Total Volatile solids	mg/lit	41830	41170	38170	38960	APHA 22 nd edition2012, 240- E,G
8.	Total Inorganic	mg/lit	35780	3130	31380	31190	APHA 22 nd edition2012, 2540 C

		solids						
(9.	Chlorides	mg/lit	6755	6358	6219	6290	IS: 3025(P-32)1988
-	10.	Sulphates	mg/lit	5137	4760	465	4720	IS: 3025(P-24)1986
-	11.	Potash	mg/lit	13900	13300	11300	11700	IS: 3025(P-45)1993
-	11.	Potash	mg/lit	13900	13300	11300	11700	IS: 3025(P-45)1993

❖ Trade sample Analysis report: Raw Spent wash sample

Sl No	Parameter	Unit		Re	esult		Test method
			1	2	3	4	
			28.11.20	31.12.20	26.01.21	27.02.21	
1	pH		2.11	3.46	2.56	2.94	IS: 3025(P-11)1983
2	COD	mg/lit	87091	44468	50847	65041	IS: 3025(P-58) 2006
3	BOD	mg/lit	36180	19310	21410	27290	IS: 3025(P-44)1993
4	Total solids	mg/lit	105250	63840	71590	84710	APHA 22 nd edition2012,2540 B
5	Total Volatile solids	mg/lit	46290	9550	32240	35360	APHA 22 nd edition2012, 240- E,C
6.	Total Inorganic solids	mg/lit	58960	34290	39350	49350	APHA 22 nd edition2012, 2540 C
7.	Chlorides	mg/lit	9040	2631	2845	7995	IS: 3025(P-32)1988
8.	Sulphate	mg/lit	4531	3146	3971	6228	IS: 3025(P-24)1986
9.	Potash	mg/lit	15700	8600	9300	11400	IS: 3025(P-45)1993

❖ Tade sample Analysis report: Spent wash sample after 1st Stage Evaporation

Sl No	Parameter	Unit		Res	ults		Test method
			1	2	3	4	
			28.11.20	31.12.20	26.01.21	27.02.1	
1	рН		2.03	3.39	2.53	2.90	IS: 3025(P-11)1983
2	COD	mg/lit	145938	80146	114407	120650	IS: 3025(P-58) 2006
3	BOD	mg/lit	64930	38360	49520	53890	IS: 3025(P-44)1993
4	Total solids	mg/lit	178120	106530	137160	151750	APHA 22 ^{na} edition2012,2540 B
5	Total Volatile solids	mg/lit	85340	48790	64790	69120	APHA 22 nd edition2012, 240- E,G
6.	Total Inorganic solids	mg/lit	92780	57740	72370	82630	APHA 22 nd edition2012, 2540 C
7.	Chlorides	mg/lit	12958	6250	5130	9772	IS: 3025(P-32)1988
8.	Sulphate	mg/lit	8530	4184	6238	8537	IS: 3025(P-24)1986
9.	Potash	mg/lit	16400	9200	13700	15100	IS: 3025(P-45)1993

❖ Trade sample Analysis report: Spentwash sample after IInd Stage Evaporation

SI No	Parameter	Unit	Results			Test method
			1	2	3	
			28.11.20	31.12.0	26.01.21	
1	pН		2.91	3.30	2.49	IS: 3025(P-11)1983
2	COD	mg/lit	555955	252562	625423	IS: 3025(P-58) 2006
3	BOD	mg/lit	240680	116130	257620	IS: 3025(P-44)1993
4	Total solids	mg/lit	594790	290810	671790	APHA 22 nd edition2012,2540 B
5	Total Volatile solids	mg/lit	448240	189540	359970	APHA 22 nd edition2012, 240- E,G
6.	Total Inorganic solids	mg/lit	146550	101270	311820	APHA 22 nd edition2012, 2540 C
7.	Chlorides	mg/lit	34842	15165	25102	IS: 3025(P-32)1988
8.	Sulphate	mg/lit	28612	9430	18658	IS: 3025(P-24)1986
9.	Potash	mg/lit	46800	22700	29300	IS: 3025(P-45)1993

Noise Level Measurement Report: Date of measurement: 27.11.2020

Sl	Location	Sampling time	dB(A) Leq
No			
1	Distillery main gate	Day	57.3
		Night	52.8
2.	BTP Plant	Day	68.0
		Night	65.9
3.	Incineration Boiler	Day	71.8
		Night	68.5
4.	Compost yard	Day	64.7
		Night	53.2
5.	Distillery Time Office	Day	58.5
		Night	55.1

❖ Borewell Analysis report: Date of Sampling: 28.11.2020

SI No	Test parameter	Unit	M. S. Chinagundi Handigund	Ishwar R Terdal Bisnal Binal	Basavaraj Kenchappa Koligud Handigund	Test Method
			1	2	3	
1	Color	Hazen	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		6.95	7.10	7.39	IS: 3025(P-11)1983
4	Turbidity	NTU	0.1	0.1	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	180	170	140	IS: 3025(P-23) 1986
6	COD	mg/lit	26	25	22	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	< 4	< 4	< 4	IS: 3025(P-44)1993
8	TDS	mg/lit	460	490	390	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	115	102	69	IS: 3025(P-32)1988
10	Hardness	mg/lit	630	390	410	IS: 3025(P-21)1983
11	Calcium	mg/lit	192	115	125	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	37	25	24	IS: 3025(P-46)1994
13	Sodium	mg/lit	84.5	69.1	76.8	IS: 3025(P-45) 1993
14	Potassium	mg/lit	3.2	2.8	3.1	IS: 3025(P-44)1993
15	%sodium	%	22.43	27.63	28.71	By calculation
16	SAR		1.46	1.52	1.64	By calculation
17	RSC	meq/l	-9.08	-4.4	-5.45	By calculation
18	EC	µmhos/cm	810	700	740	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 28.11.2020

SI No	Test parameter	Unit	Satyappa Rachyappa Wali	Sidappa S Kuribagi, Handigund	Sujata Bhadrasheety Handigund	Test Method
			4	5	6	
1	Color	Hazen	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		7.20	6.86	7.24	IS: 3025(P-11)1983
4	Turbidity	NTU	0.1	0.4	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	154	240	210	IS: 3025(P-23) 1986
6	COD	mg/lit	26	37	30	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	< 4	< 4	< 4	IS: 3025(P-44)1993
8	TDS	mg/lit	410	1090	965	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	115	280	174	IS: 3025(P-32)1988
10	Hardness	mg/lit	492	1370	1038	IS: 3025(P-21)1983
11	Calcium	mg/lit	150	440	350	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	29	66	40	IS: 3025(P-46)1994
13	Sodium	mg/lit	90.5	102.5	90.6	IS: 3025(P-45) 1993
14	Potassium	mg/lit	3.9	5.3	4.1	IS: 3025(P-44)1993
15	%sodium	%	28.29	13.93	15.88	By calculation
16	SAR		1.77	1.2	1.22	By calculation
17	RSC	meq/l	-6.83	-22.7	-16.6	By calculation
18	EC	μmhos/cm	720	2140	1830	IS: 3025(P-14)1984

❖ Borewell Analysis report:

Date of Sampling: 28.11.2020

SI No	Test parameter	Unit	Bhimappa Gurupadappa Shirol	Girish R Kulkarni Handigund	Ulliappa Chanal Handigund	Test Method
			7	8	9	
1	Color	Hazen	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		6.98	7.80	7.58	IS: 3025(P-11)1983
4	Turbidity	NTU	0.1	0.6	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	160	258	210	IS: 3025(P-23) 1986
6	COD	mg/lit	32	34	31	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	< 4	< 4	< 4	IS: 3025(P-44)1993
8	TDS	mg/lit	650	1070	980	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	145	245	252	IS: 3025(P-32)1988
10	Hardness	mg/lit	810	1150	1244	IS: 3025(P-21)1983
11	Calcium	mg/lit	216	370	395	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	66	55	63	IS: 3025(P-46)1994
13	Sodium	mg/lit	101.2	119.3	97.1	IS: 3025(P-45) 1993
14	Potassium	mg/lit	4.8	6.2	4.8	IS: 3025(P-44)1993
15	%sodium	%	21.22	18.3	14.4	By calculation
16	SAR		1.54	1.53	1.19	By calculation
17	RSC	meq/l	-13.1	-17.9	-20.8	By calculation
18	EC	μmhos/cm	1270	2010	1940	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 28.11.2020

SI No	Test parameter	Unit	Sidappa K Biradi Bisnal	KIAAR culture lab	Nagappa Satyappa Banaj Bisnal	Test Method
			10	11	12	
1	Color	Hazen	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		7.55	7.50	7.17	IS: 3025(P-11)1983
4	Turbidity	NTU	0.1	0.1	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	165	178	160	IS: 3025(P-23) 1986
6	COD	mg/lit	28	25	32	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	< 4	< 4	< 4	IS: 3025(P-44)1993
8	TDS	mg/lit	438	460	610	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	91	105	124	IS: 3025(P-32)1988
10	Hardness	mg/lit	354	428	608	IS: 3025(P-21)1983
11	Calcium	mg/lit	110	130	141	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	19	25	62	IS: 3025(P-46)1994
13	Sodium	mg/lit	63.4	57.6	135.1	IS: 3025(P-45) 1993
14	Potassium	mg/lit	2.9	3.4	5.8	IS: 3025(P-44)1993
15	%sodium	%	27.89	22.49	32.35	By calculation
16	SAR		1.46	1.21	2.38	By calculation
17	RSC	meq/l	-3.78	-5.02	-9.01	By calculation
18	EC	μmhos/cm	640	770	1030	IS: 3025(P-14)1984

❖ Piezometer Station Analysis report: date 28.11.2020

SI No	Test parameter	Unit	Piezomet er Station No-1	Piezomet er Station No-2	Piezome ter Station No-3	Piezome ter Station No-4	Piezometer Station No- 5
1	Color	Hazen	Found dry	Found dry	Found dry	Found dry	Found dry
2	Odor				u.,	a. y	
3	рН		-				
4	Turbidity	NTU	-				
5	Total Alkalinity	mg/lit	-				
6	COD	mg/lit	-				
7	BOD(3days @270 C	mg/lit	-				
8	TDS	mg/lit	-				
9	Chlorides	mg/lit	-				
10	Hardness	mg/lit	-				
11	Calcium	mg/lit	-				
12	Magnesium	mg/lit	-				
13	Sodium	mg/lit	-				
14	Potassium	mg/lit	-				
15	%sodium	%	-				
16	SAR		-				
17	RSC	meq/l	-				
18	EC	μmhos/cm	-				

❖ Borewell Analysis report: Date of Sampling: 31.122020

SI No	Test parameter	Unit	Test Borewell No-3	Test Borewell No-4	Mayappa Sanadi Kappalguddi	Test Method
			1	2	3	
1	Color	Hazen	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		7.11	7.33	7.55	IS: 3025(P-11)1983
4	Turbidity	NTU	0.1	0.1	1.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	162	165	240	IS: 3025(P-23) 1986
6	COD	mg/lit	19	30	37	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	<4	<4	<4	IS: 3025(P-44)1993
8	TDS	mg/lit	538	870	1170	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	115	295	260	IS: 3025(P-32)1988
10	Hardness	mg/lit	252	665	1120	IS: 3025(P-21)1983
11	Calcium	mg/lit	76	230	590	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	15	22	87	IS: 3025(P-46)1994
13	Sodium	mg/lit	71.9	93.7	90.2	IS: 3025(P-45) 1993
14	Potassium	mg/lit	2.6	4.8	4.5	IS: 3025(P-44)1993
15	%sodium	%	38.03	23.3	9.65	By calculation
16	SAR		1.97	1.58	0.91	By calculation
17	RSC	meq/l	-1.81	-10.03	-31.95	By calculation
18	EC	µmhos/cm	889	1520	1871	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 31.122020

SI No	Test parameter	Unit	Mahadev Ajjapagaol Kappalgudd i	Bhimappa R Uddapaga ol Kappalgo ddi	Bharmappa H Sanadi Kappalgudd di	Parmahans G. Bhangi Kappalguddi	Test Method
			4	5	6	7	
1	Color	Hazen	<5	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		7.73	7.39	7.53	7.60	IS: 3025(P-11)1983
4	Turbidity	NTU	1.2	1.7	1.7	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	340	310	350	170	IS: 3025(P-23) 1986
6	COD	mg/lit	42	41	25	15	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	6	<4	<4	<4	IS: 3025(P-44)1993
8	TDS	mg/lit	1430	1290	1170	510	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	315	308	282	129	IS: 3025(P-32)1988
10	Hardness	mg/lit	1740	1470	1320	590	IS: 3025(P-21)1983
11	Calcium	mg/lit	590	514	479	206	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	65	45	30	18	IS: 3025(P-46)1994
13	Sodium	mg/lit	163.8	108.2	105.3	78.2	IS: 3025(P-45) 1993
14	Potassium	mg/lit	7.3	2.7	6.1	4.9	IS: 3025(P-44)1993
15	%sodium	%	16.91	13.78	14.71	22.24	By calculation
16	SAR		1.7	1.22	1.26	1.4	By calculation
17	RSC	meq/l	-28.11	-23.25	-19.45	-8.4	By calculation
18	EC	µmhos/cm	2144	1990	1895	94	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 26.01.2021

SI No	Test parameter	Unit	Girish R Kulkarni Handigund	Ulleppa S Chanal Handigund	Basvaraj K Koligud Handigund	Sujata Bhardra shetty Handigund	Test Method
			1	2	3	4	
1	Color	Hazen	<5	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	pН		8.10	7.63	7.42	7.38	IS: 3025(P-11)1983
4	Turbidity	NTU	0.3	0.5	0.1	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	210	204	120	192	IS: 3025(P-23) 1986
6	COD	mg/lit	30	30	24	27	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	<4	<4	<4	<4	IS: 3025(P-44)1993
8	TDS	mg/lit	810	950	370	910	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	194	228	52	161	IS: 3025(P-32)1988
10	Hardness	mg/lit	880	1170	380	982	IS: 3025(P-21)1983
11	Calcium	mg/lit	251	328	117	340	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	61	32	21	32	IS: 3025(P-46)1994
13	Sodium	mg/lit	68.9	91.5	69.4	82.7	IS: 3025(P-45) 1993
14	Potassium	mg/lit	5.2	4.3	3.2	4.8	IS: 3025(P-44)1993
15	%sodium	%	14.49	17.2	28.29	15.42	By calculation
16	SAR		1.01	1.29	1.55	1.14	By calculation
17	RSC	meq/l	-13.43	-14.98	-5.2	-15.82	By calculation
18	EC	µmhos/cm	1690	1870	710	1670	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 26.01.2021

SI No	Test parameter	Unit	Mahadev Chingundi Handigund	Sidappa S Kuribagi Handigund	Mahalingap pa Muttapaga ol	Ishwar Terdal Bisnal	Test Method
			-		Handigund	0	
			5	6	/	8	
1	Color	Hazen	<5	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		7.29	6.91	7.83	7.22	IS: 3025(P-11)1983
4	Turbidity	NTU	0.2	0.2	0.1	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	170	220	190	180	IS: 3025(P-23) 1986
6	COD	mg/lit	25	33	26	24	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	<4	<4	<4	<4	IS: 3025(P-44)1993
8	TDS	mg/lit	470	1030	650	470	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	130	254	179	95	IS: 3025(P-32)1988
10	Hardness	mg/lit	620	1290	450	402	IS: 3025(P-21)1983
11	Calcium	mg/lit	188	430	232	110	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	37	52	32	31	IS: 3025(P-46)1994
13	Sodium	mg/lit	89.2	95.8	71.4	72.5	IS: 3025(P-45) 1993
14	Potassium	mg/lit	3.7	5.7	2.9	3.2	IS: 3025(P-44)1993
15	%sodium	%	23.65	13.86	17.85	27.96	By calculation
16	SAR		1.55	1.16	1.16	1.57	By calculation
17	RSC	meq/l	-9.08	-21.4	-10.46	-4.48	By calculation
18	EC	μmhos/cm	840	1960	940	680	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 27.02.2021

SI No	Test parameter	Unit	Siddappa K Birdi Bisnal	KIAAR LAB Bisnal	Nagappa S Banaj Bisnal	Satayya R Wali	Test Method
			1	2	3	4	
1	Color	Hazen	<5	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		7.81	7.84	7.35	7.46	IS: 3025(P-11)1983
4	Turbidity	NTU	0.1	0.1	0.1	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	170	980	170	160	IS: 3025(P-23) 1986
6	COD	mg/lit	26	28	29	25	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	<4	<4	<4	<4	IS: 3025(P-44)1993
8	TDS	mg/lit	460	510	590	440	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	107	114	152	120	IS: 3025(P-32)1988
10	Hardness	mg/lit	285	285	503	430	IS: 3025(P-21)1983
11	Calcium	mg/lit	62	83	116	126	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	32	19	52	28	IS: 3025(P-46)1994
13	Sodium	mg/lit	65.4	62.3	112.5	89.1	IS: 3025(P-45) 1993
14	Potassium	mg/lit	3.1	3.9	4.1	3.7	IS: 3025(P-44)1993
15	%sodium	%	32.88	31.82	32.47	30.84	By calculation
16	SAR		1.68	1.60	2.18	1.86	By calculation
17	RSC	meq/l	-2.36	-1.93	-6.73	-5.43	By calculation
18	EC	µmhos/cm	790	930	980	790	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 27.02.2021

SI No	Test parameter	Unit	Satayappa R wali Bisnal	Ishwar R Terdal Bisnal	Bhimappa G Shirol Bisnal	
			5	6	7	
1	Color	Hazen	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	pH		7.46	7.60	7.28	IS: 3025(P-11)1983
4	Turbidity	NTU	0.1	0.1	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	160	162	168	IS: 3025(P-23) 1986
6	COD	mg/lit	25	24	27	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	<4	<4	<4	IS: 3025(P-44)1993
8	TDS	mg/lit	440	470	670	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	120	77	152	IS: 3025(P-32)1988
10	Hardness	mg/lit	430	295	760	IS: 3025(P-21)1983
11	Calcium	mg/lit	126	81	221	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	28	23	29	IS: 3025(P-46)1994
13	Sodium	mg/lit	89.1	67.1	108.2	IS: 3025(P-45) 1993
14	Potassium	mg/lit	3.7	2.9	4.7	IS: 3025(P-44)1993
15	%sodium	%	30.84	32.68	25.79	By calculation
16	SAR		1.86	1.69	1.81	By calculation
17	RSC	meq/l	-5.43	-2.72	-10.1	By calculation
18	EC	μmhos/cm	790	76	1290	IS: 3025(P-14)1984

❖ Condensate polishing unit (BTP) Inlet & Outlet parameter details: Date: 28.11.2020

Sl No	Test Parameter	Unit	Sugar Inlet	Distillery inlet	Sugar Outlet	Distillery Outlet	Test Method
1	pH	-	8.41	3.52	7.81	7.06	IS: 3025(P-11)1986
2	Chemical Oxygen demand	mg/lit	185	1468	60	161	IS: 3025(P-58) 2006
3	BOD (3days @ 27 OC)	mg/lit	69	560	11	52	IS:3025(P-44)1993
4	Total dissolved solids	mg/lit	310	1050	190	470	IS:3025(P-16)1984
5	Total suspended solids	mg/lit	43	118	30	45	IS:3025(P-17)1984
6	Chloride as Cl-	mg/lit	57	143	38	80	IS:3025(P-32)1988
7	Sulphate as SO4	mg/lit	29	95	21	41	IS:3025(P-24)1986
8	Oil & Grease	mg/lit	ND	ND	ND	ND	IS:3025(P- 39)1993(RA 2003)

❖ Boiler Ash analysis report:

SI No	Parameter	Unit		Resul	Result		
			1	2	3	4	
			28.11.2020	31.12.20	26.01.21	27.02.21	
1	Moisture	%	0.26	0.35	0.67	0.52	
2	pH(Saturated)		12.08	12.16	11.9	11.7	
3	Total Volatile Solids	%	1.53	1.55	1.47	1.41	
4	Residual ash	%	98.47	98.45	98.53	98.59	
5	Nitrogen	%	1.01	1.08	1.02	1.02	
6	Phosphorus as P2O5	%	1.35	1.38	1.41	1.43	
7	Potassium as K20	%	15.9	15.3	13.7	15.	
8	Organic carbon	%	6.1	5.8	5.72	5.69	

❖ Press mud Analysis: date 28.11.2020

Sl No	Parameter	Unit	Result
1	Moisture	%	56.18
2	pH(Saturated)		4.40
3	Total Volatile Solids	%	51.53
4	Residual ash	%	48.47
5	Nitrogen	%	1.96
6	Phosphorus as P2O5	%	1.4
7	Potassium as K20	%	0.36
8	Organic carbon	%	44.09

Biocompost Analysis Report:

SI No	Parameter	Unit	Result				
			28.11.2020	31.12.20	26.01.21	27.02.21	
1	Moisture	%	32.75	31.57	29.96	29.71	
2	pH(Saturated)		6.80	6.88	6.69	6.64	
3	Total Volatile Solids	%	63.16	63.71	63.12	63.37	
4	Residual ash	%	36.84	36.29	36.88	36.63	
5	Nitrogen	%	1.73	1.71	1.68	1.67	
6	Phosphorus as P2O5	%	1.8	1.85	1.81	1.84	
7	Potassium as K2O	%	3.29	3.37	3.69	3.71	
8	Organic carbon	%	28.53	28.62	28.12	28.05	
9	C/N		16.49	16.73	16.73	16.79	
	Leachate	Water (Filtrate	9				
10	рН		8.10	8.15	8.29	8.25	
11	COD	mg/lit	237	226	229	225	

12	BOD	mg/lit	25	24	25	23
13	Chlorides	mg/lit	190	187	172	180
14	EC	μMhos/cm	1580	1570	1520	1510

Exhibit-12

LED based lighting system









Exhibit-41

Rain water harvesting ponds









Onsite Emergency Plan





GBL/OEP/SUGAR/2013

Revision No.: 3

Revision date: 1.1.2013



DOCUMENT RELEASE AUTHORIZATION

Prepared by Sr. Officer (Safety):

(Ravi.Deshpande)

Checked by:General Manager(Engg) :_

(R.S.Kulkarni)

Approved by DIRECTOR (W)

(S.N.BABLESHWAR)

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GODAVARI BIOREFINERIES LTD.,

SAMEERWADI-587316, DIST-BAGALKOT KARNATAKA



1

Exhibit-15

CORPORATE SOCIAL RESPONSIBILITY ANNUAL REPORT FOR THE YEAR-2018-19

M/s. GODAVARI BIREFINERIES LTD., SAMEERWADI

Promotion of Education:

Help A Child To Study Project: Started a project called help a child to study in 2001 through which we are extending scholarships and necessary assistance such as laptops, text books, carrier guidance, spoken English etc., to the needy and meritorious students. Most of the students provided with scholarship and other benefits are orphans, students with single parent, children of devadasi, children of alcoholic parents, children of daily wage labours etc. Few of our beneficiaries do not have electricity and stays in hut etc. About 56% of ours scholarship went to girl child. During the year we have sponsored 701 students and total scholarships from 2001 is more than 6800.

Furnishing herewith the course wise number of students sponsored during 2018

No.	Present course	Nos.
1	B.E.	51
2	M.B.B.S.	4
3	B.A.M.S.	2
4	M.Sc.	8
5	M.Sc.(Agri)	3
6	M.Com.	7
7	M.A.	2
8	B.C.A.	3
9	B.B.A./ Mgt.	6
10	B.Ed.	5
11	B.V.Sc.	2
12	B.Sc.(Agri) / Hort.	11
13	B.Sc. (Nur./ P.M.)	18
14	B.Sc.	69
15	Diploma	27
16	B.Com.	134
17	B.A.	72
18	MSW/ LLB / BSW	3
19	11th & 12th Sci.	153
20	11th & 12th Com.	85
21	11th & 12th Arts.	36
	Total	701

Scholarship award function:

We conduct scholarship award ceremony on 5th September 2018 and all the beneficiary students were awarded with first installment scholarship cheque, text books and laptops for their projects / assignments. Also felicitate the students that have done extremely well in their studies so as to motivating other students to do well.



Mrs Roopa Balsekar and Mrs. Amrita Somaiya awarding Scholarship cheque to one of the Medicine beneficiary student

Lap tops distributaries:

The project provides laptops to the final year BE, MBA and MCA and students for their project as most of the students are unable to purchase the same. The laptops will be distributed on student's personal account on returnable basis.



Mrs. Amrita Somaiya awarding laptop to one of the Engineering beneficiary student

Felicitation:

Every year during scholarship award function we will also felicitate outstanding student of the project such as gold medalist, University blues, and National level participants etc. to motivate other students.



Mrs. Amrita Somaiya felicitating Mr. Rajat Revankar for securing Two gold medals for Rani Cannamma University for the highest securing in B.Sc Chemistry and Biotech subject Exam

Book Bank:

Help A Child Project have more than 1000 books representing Science, Arts, Commerce and CET books for 11th and 12th standard. These books are being distributed to the beneficiaries of the project on returnable basis every year. Once the final exams over, these books would be collected and are being distributed to next batch students.



Mrs Somaiya awarding text books to one of the beneficiary student

Carrier Counseling:

The career counseling programs, personality development, resume writing, interview skills etc. are being organized regularly for the benefit our project beneficiaries to facilitate wider

exposure about different courses available after 12th and degree. At present our students opts only few courses as a result of which most of our arts students are unemployment.



Students at workshop

2. Supports to Somaiya Vidyavihar Schools:

Godavari supports 2 Marathi medium, 2 Kannada medium, 2 English medium and residential schools in Maharashtra and Karnataka supporting more than 4500 students that are run by Somaiya Vidyavihar. Support is in the farm providing financial assistance for the basic facilities such as construction of new school buildings, libraries, science laboratories, indoor and outdoor playground developments, text books and computers to libraries, beautification with landscaping etc.



Financial assistance for construction of new library for Kannada schools

3. Early Childhood Education through Anganwadis (Preprimary schools)

Early childhood education is an important step in rural development, as this gets young children, who know only the tribal language familiar with the language in which education is taught.

With a mission to provide nutrition value to under- privileged children in the age group of 0-6 years; we have joined hands with the State Governments to support Anganwadi Project. We

support 14 Anganwadi Centres called SOMAIYA SHISUVIHAR in different villages in Bagalkot and Belgaum districts of Karnataka for value based education to the kids of 3 to 5 years of age benefiting more than 340 kids every year. We provide teaching materials and toys, honorarium to volunteers, training to teachers as well as monitoring to ensure that classes are held regularly.

List of Anganwadi centers

No.	Village name	Taluka	District	No of kids
1	Saidapur	Mudhol	Bagalkot	23
2	Nagaral	Mudhol	Bagalkot	30
3	Mahalingpur	Mudhol	Bagalkot	33
4	Kesaragoppa	Mudhol	Bagalkot	21
5	Uttur	Mudhol	Bagalkot	26
6	Bisnal	Mudhol	Bagalkot	22
7	Marapur	Mudhol	Bagalkot	24
8	Sanganatti	Mudhol	Bagalkot	28
9	Navalagi	Jamakhandi	Bagalkot	20
10	Chimmad	Jamakhandi	Bagalkot	25
11	Shivapur	Gokak	Belgaum	30
12	Hallur	Gokak	Belgaum	18
13	Khanatti	Gokak	Belgaum	23
14	Sultanapur	Raybag	Belgaum	21
			Total	344



Students at Anganwadi centres (Pre-primary)

V. Self-Employment Training Program

GBL conducts self-employment programs such as, tailoring classes, bakery training, painting class, vermi composting etc.

Tailoring classes:

When women are empowered, it has a multiplying positive impact on the health and progress of their families and communities. We run 18 tailoring centers in different locations in Bagalkot and Belgaum dist. of Karnataka every year around 325 women in the age group of 15 to 30 learn the art of tailoring and get the opportunity to become self-employed and earn

around Rs 3000/- per month. This allows them to take care of their children while supplementing the family income thus making a better life for her and her children.

Total No of self-employment / tailoring centers:

No.	Village name	Taluka	District	No of women
1	Madabhavi	Mudhol	Bagalkot	16
2	Mallapur	Mudhol	Bagalkot	20
3	Sanaganatti	Mudhol	Bagalkot	16
4	Belagali	Mudhol	Bagalkot	20
5	Bisnal	Mudhol	Bagalkot	14
6	Kesaragoppa	Mudhol	Bagalkot	18
7	Chimmad	Jamakhandi	Bagalkot	20
8	Handigund	Raybag	Belgaum	20
9	Kappalaguddi	Raybag	Belgaum	16
10	Sultanapur	Raybag	Belgaum	20
11	Itnal	Raybag	Belgaum	18
12	Dhawaleshwar	Gokak	Belgaum	18
13	Gurlapur	Gokak	Belgaum	18
14	Hallur	Gokak	Belgaum	20
15	Munnyal	Gokak	Belgaum	17
16	Awaradi	Gokak	Belgaum	18
17	Khanatti	Gokak	Belgaum	17
18	Aralimatti	Gokak	Belgaum	17
			Total	323



Candidates at tailoring class

Further we have started new batches of women empowerment tailoring classes at Kappalaguddi, Sultanapur and Handigund viillages in Raybag taluka and Bisnal village is Mudhol talukd during February 2019.



Kappalaguddi villagers performing pooja on inauguration of new tailoring centre **Donation of Govt. Higher primary school at Halyal taluk**

Constructing two class rooms at Govt. Higher Primary School and compound wall for Govt. High school at Bhasgavati village in Halyal taluk of Karwar dist. Estimated cost of the construction would be around 25 lakhs.



Image of class rooms constructed at Bhaagavati village in Haliyal taluk of Karwar dist



Image of compound wall constructed at Bhaagavati village in Haliyal taluk of Karwar dist

Report on Dental camp held at Sameerwadi

We organized free dental checkup and treatment on 13th August 2018 at Sameerwadi in association with Lions Club Green Basin, Mahalingpur and P.M.Nadagouda Dental College and Hospital, Bagalkot. Team consisting 16 doctors and supporting staff from Bagalkot dental college examined and treated the patients with scaling, filling and extractions of decayed teeth.

206 patients from Sameerwadi and surrounding villages availed the benefit of this camp. Out 206 patients, 54were female and 152 were male.



Help A Child success story



Ms. Kavita M. Kalal

Kavita is an orphan and she used to stay in a room with 3 siblings. She used to clean people's houses every day before school in order to make some money to support her family and education. Being the eldest in her family, the responsibility of her siblings fell on her shoulders at a very tender age.

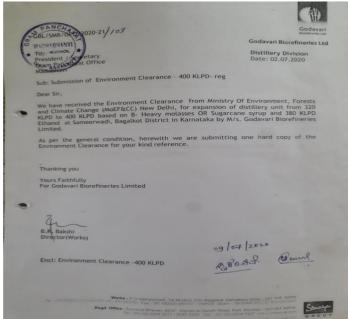
After getting a scholarship from Help A Child, Kavita has completed her pre university course, graduation as well as her post-graduation in Hindi. She also did B.Ed. She use to teach her neighbour's children so as to encourage young children to focus on their education and to not drop out of schools, however tough situations in life become.

Juggling between household chores and studies, has now emerged a bright and confident young lady, Kavita, is now an independent woman who has risen above from the shackles of poverty and has educated herself to ensure that her family's future is also secured.

Exhibit-16

EC Accordance Information letter submitted to Gram Panchayats





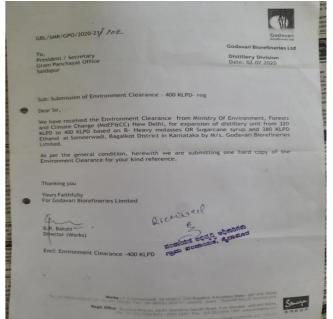


Exhibit-17

<u>Circulation of information of accordance of Environment Clearance in</u>

<u>Vijayavani NewsPaper Dated 18th July 2020</u>

