Godavari Biorefineries Limited Distillery Division Sameerwadi



Godavari Biorefineries Ltd

Date: 27.11.2021

GBL/SMR/MoEF&CC/2021-22/ 558

The Additional Principal Chief Conservator of Forests (C) Ministry of Environment, Forests & Climate Change, Regional Office (South zone) ,4th Floor, E & F Wings Kendiya Sadan, ,17th Main Road,IInd Block,Koramangala Bengaluru -560034

Sub: Half yearly compliance report for the period of April 2021 - September 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 April 2021 to September 2021. The details are as follows

SI No	Description	Details
1.	Name of the Industry	Godavari Biorefineries Limited
		(Distillery Division)
		Sameerwadi-587316
		Tal: Mudhol, Dist : Bagalkot
2.	Person Responsible	Shri. Umesh M Benalli
		Asst.General Manager
3.	Email.ID	gbldistillery@somaiya.com
4.	Phone No/ Mobile	08350-260081
		+919449416276
5.	Web site details	www.somaiya.com
6.	Environmental Clearance details	F No, J 11011/191/2007-IA II(1) dated 9 th 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 1 st June 2011
		F No. J-11011/272/2009-IA II(1) dated 7 th July 2009
7.	Working days (Days)	124.2

Works: P O Sameerwadi, Tal Mudhol, Dist Bagalkot, Kamataka State - 597 316. INDIA Tel : (91-08350) 260046/ 47/ 48 Fax: (91-08350) 260037 Gram: "SUGAR MILLS" Sameerwadi

Regd. Office: Somalya Bhavan, 45/47, Mahatma Gandhi Road, Fort, Mumbai - 400 001 INDIA.

Half Yearly Compliance for the period April 2021 to September 2021.

GST No: 29AABCG2543C1ZZ



<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 for 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 Biomethanisation plant of capacity 1000 M3/d & 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 followed by 40 TPH incineration boiler for the disposal of spentwash. The photographs of Biocompost yard, Evaporation system and incineration boiler are enclosed as Exhibit No-1 Industry ensures the operation days will not exceed 330 days.

(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 Authorisation renewal is under progress.
(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/CGWA.	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	Industry ensures and undertakes all the waste minimization measures.			
	 minimization measures as below:- 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 hoses i,e 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 stored	The raw material such as molasses is stored in
)	in silos or in covered areas to prevent dust	the steel tanks with proper roofing. Dyke wall
	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 monitoring
	night vision capability and flow meters in the	and Flow meters are enclosed as Exhibit No-10
	channel/drain carrying effluent within the	
	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.	Not applicable.
(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.	Industry abides by the condition. The Ambient Air Quality reports are enclosed as Exhibit No- 11.
(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.	Noted & agreed.
(iv)	The project proponent shall prepare a site specific conservation plan and wildlife management plan in case of the presence of schedule-1 species in the study area, as	Industry does not fall under the schedule -1 for the management of forest / wildlife.

	applicable to the project, and submit to Chief	
	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	Noted & agreed
	required, if any.	
(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 in 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.	Industry abides by the condition.
(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).	Industry monitoring the noise levels in and 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 are enclosed in 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.	Responsibility department and carrying out various programs such as Help a Child (for Poor farmers surrounding the industry), Medical		
(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)	A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering /specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	Industry is having full pledged Environment management cell and laboratory facilities to carry out the Environmental monitoring on day today basis. 1) B.R.Bakshi- Executive Director 2) S.U.Godage-General Manager (Distillery) 3) K.V.Goudar- Sr. Manager (Biocompost) 4) R.N.Desai - Dy. Manager (Production) 5) B B Khandgavi- Manager (Biocompost) 6) R V Deshpande- Asst. Manager (Safety) 7) A V Kulkarni - Sr. Officer (Biogas) 8) K.S.Malabadi- Sr. Officer (Biogas) 9) Dr. Anadani - Medical Officer		
(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 earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.	Industry abides by the condition. The details are as follows Capital Cost :Rs 7935 lakhs Recurring Cost : water - Rs 361.38 lakhs		

(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-15
(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 submitted to the regional office on 29 th May 2021
(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 email.	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 -16.

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
ce: Sameerwadi e : 27.11.2021	Yours faithfully For Godavari Biorefineries Limited
	U.M. Benalli Asst. General Manager
The Member Secretary, Karnataka State Pollution C Floor, Church Street, Bangalore-1.	Control Board, Parisara Bhavan, #49, 4 th & 5 th
-	The Member Secretary, Karnataka State Pollution (

ETP Photographs Exhibit No-1

Integrated Evaporation (Falling film type)







IInd stage Evaporation (Forced circulation)

Incineration Boiler -40 TPH





26 Acres of RCC Biocomposting Yard







Bull Make Mixing Mchine

Condensate Polishing Unit (RO System)





Condensate Polishing Unit (Biological) System



Exhibit No-2

Hazardous waste authorization from KSPCB

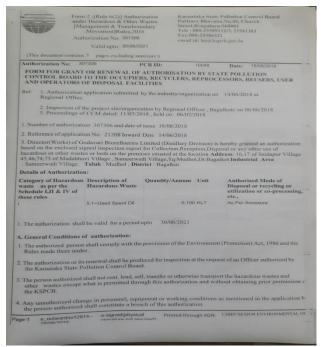
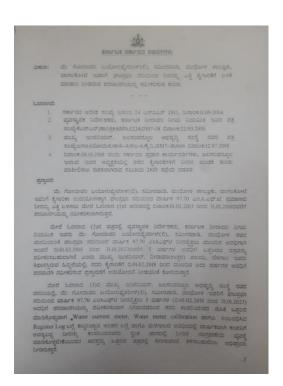
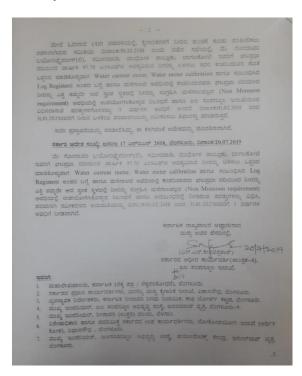




Exhibit No-3

Water drawl permission from water resources department GOK.





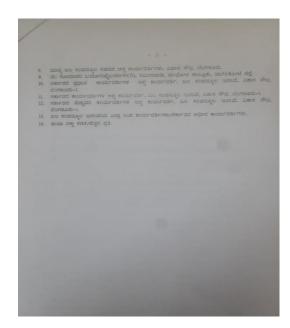


Exhibit No-4

High Pressure Hydro jet machines





Greenbelt area Exhibit No-5





Exhibit No-6

CSR expenditure of GBL Sameerwadi from 2016-17 to 2020-21

No.	Project name	20-21	19-20	18-19	17-18	16-17	Total
1							
	Promotion of education	8.5	19.13	26.57	52.04	91.55	197.79
2							
	Promoting health care	10.9		3.21	0.40	2.96	17.47
3							
	Women empowerment	0.75	3.53	1.37	3.18	5.49	14.32
4							
	Environmental sustainability	5.71		34.88		30.55	71.14
5							
	Promote to rural sports				9.20	9.20	18.40
	Total	25.86	22.66	66.03	64.82	139.75	319.12

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

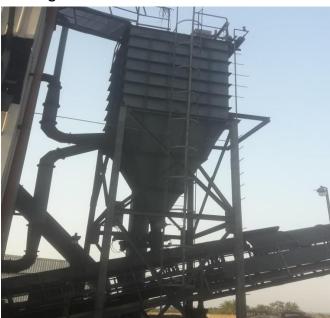


Exhibit No-10

Online emission Monitoring Sensor





Flow meters

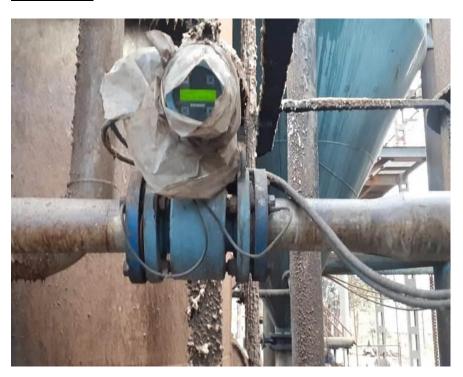




Exhibit No-11

❖ Boiler Stack monitoring results: -

Month & Year	Stack No-3, 40 TPH Incineration boiler						
	Stack ID- 1.7 mtr, Height – 81 mtr						
		Fuel: Concentrated Spent wash & Coal, Fuel Ratio: 65:35					
	Flue gas Flue gas Particulate SO2 NOX						
	velocity	Outlet temp	matter (SPM)	mg/nm3	mg/Nm3		
	(m/Sec)	deg C	mg/Nm3				
April .2021					other state we are		
May.2021		unable to carry out the monitoring during the period April 2021to July .2021.					
June.2021							
July.2021	1						
August. 2021	12.9	145	66	47	34		
September 2021	Plant Stopped for general maintenance						

Ambient Air quality monitoring details:

Month &	Location	Wind	Parameters			
Year		direction				
	Sampling station		PM _{2.5}	PM ₁₀	NO _x	SO ₂
			μg/m³	µg/m³	μg/m³	μg/m³
August.	Near distillery gate	Easterly	22	61	12	09.00
2021	Near BTP plant	Easterly	20	54	10.00	07.00
September	Near distillery gate	Easterly	18	52	09.00	07.00
.2021	Near BTP plant		15	47	08.00	06.00

Electrostatic Precipitator Meter reading :

Sl No	Month	Working	Initial	Final reading	Total	KWH		
		days	Reading		MWH			
1	April. 2021	26.2	1355.325	1386.052	30.727	30727		
2	May.2021	30.2	1386.052	1419.013	32.961	32961		
3	June.2021	29.1	1419.013	1456.311	37.298	37298		
4	July.2021	28.4	1456.311	1494.179	37.868	37868		
5	August.2021	10.3	1494.179	1516.885	22.706	22706		
6	September. 2021	-	1516.885	1516.885	0.00	0		
	Total	124.2			161.560	161560		
	Average unit consumption : 161560 / 124.2 = 1300.805 KWH							
	_	-						

Trade Sample Analysis report: Raw Spent wash

SI No	Parameter	Unit	Result	Test method
			1	
			04.08.2021	
1	рН		2.61	IS: 3025(P-11)1983
2	COD	mg/lit	118310	IS: 3025(P-58) 2006
3	BOD	mg/lit	53890	IS: 3025(P-44)1993
4	Total solids	mg/lit	157170	APHA 22 nd edition2012,2540 B
5	Total Volatile solids	mg/lit	71920	APHA 22 nd edition2012, 240- E,G
6	Total Inorganic solids	mg/lit	85250	APHA 22 nd edition2012, 2540 C
7.	Chlorides	mg/lit	6738	IS: 3025(P-32)1988
8.	Sulphates	mg/lit	4712	IS: 3025(P-24)1986
9	Potash	mg/lit	13700	IS: 3025(P-45)1993

❖ Trade sample Analysis report: Spent wash sample after Integrated Evaporation (IMEE)

SI No	Parameter	Unit	Result	Test method
			1	
			04.08.2021	
1	рН		2.69	IS: 3025(P-11)1983
2	COD	mg/lit	151830	IS: 3025(P-58) 2006
3	BOD	mg/lit	63270	IS: 3025(P-44)1993
4	Total solids	mg/lit	189640	APHA 22 nd edition2012,2540 B
5	Total Volatile solids	mg/lit	103970	APHA 22 nd edition2012, 240- E,G
6.	Total Inorganic solids	mg/lit	85670	APHA 22 nd edition2012, 2540 C
7.	Chlorides	mg/lit	9285	IS: 3025(P-32)1988
8.	Sulphate	mg/lit	5971	IS: 3025(P-24)1986
9.	Potash	mg/lit	16800	IS: 3025(P-45)1993

❖ Trade sample Analysis report: Spentwash sample after 1st Stage Evaporation

SI	Parameter	Unit	Result	Test method
No				
			1	
			04.08.2021	
1	рН		2.55	IS: 3025(P-11)1983
2	COD	mg/lit	259160	IS: 3025(P-58) 2006
3	BOD	mg/lit	109240	IS: 3025(P-44)1993
4	Total solids	mg/lit	298310	APHA 22 nd
				edition2012,2540 B
5	Total Volatile	mg/lit	172130	APHA 22 nd edition2012,
	solids			240- E,G

6.	Total	mg/lit	126180	APHA 22 nd edition2012,
	Inorganic			2540 C
	solids			
7.	Chlorides	mg/lit	13629	IS: 3025(P-32)1988
8.	Sulphate	mg/lit	9485	IS: 3025(P-24)1986
9.	Potash	mg/lit	21600	IS: 3025(P-45)1993

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

SI	Parameter	Unit	Result	Test method
No				
			1	
			04.08.2021	
1	рН		2.53	IS: 3025(P-11)1983
2	COD	mg/lit	491730	IS: 3025(P-58) 2006
3	BOD	mg/lit	210910	IS: 3025(P-44)1993
4	Total solids	mg/lit	528670	APHA 22 nd edition2012,2540 B
5	Total Volatile solids	mg/lit	347390	APHA 22 nd edition2012, 240- E,G
6.	Total Inorganic solids	mg/lit	181280	APHA 22 nd edition2012, 2540 C
7.	Chlorides	mg/lit	21833	IS: 3025(P-32)1988
8.	Sulphate	mg/lit	15409	IS: 3025(P-24)1986
9.	Potash	mg/lit	26100	IS: 3025(P-45)1993

Trade sample Analysis report: Process Condensate

SI No	Parameter	Unit	Result	Test method
			1	
			04.08.2021	
1	рН		2.42	IS: 3025(P-11)1983
2	COD	mg/lit	690	IS: 3025(P-58) 2006
3	BOD	mg/lit	210	IS: 3025(P-44)1993
4	Total disolved solids	mg/lit	195	IS: 3025(P-16)1984
5	Total suspended solids	mg/lit	10	IS: 3025(P-17)1984
7.	Chlorides as CL ⁻	mg/lit	162	IS: 3025(P-32)1988
8.	Sulphates as SO ₄	mg/lit	35	IS: 3025(P-24)1986
9.	Oil & Grease	mg/lit	ND	IS: 3025(P-39)1991 (RA 2003)

❖ Spentless:

SI	Parameter	Unit	Result	Test method
No				
			1	
			04.08.2021	
1	рН		3.29	IS: 3025(P-11)1983
2	COD	mg/lit	212	IS: 3025(P-58) 2006
3	BOD (3 days @27deg C)	mg/lit	40	IS: 3025(P-44)1993
4	Total disolved solids	mg/lit	105	IS: 3025(P-16)1984
5	Total suspended solids	mg/lit	<4	IS: 3025(P-17)1984
7.	Chlorides as CL ⁻	mg/lit	72	IS: 3025(P-32)1988
8.	Sulphates as SO ₄	mg/lit	10	IS: 3025(P-24)1986
9.	Oil & Grease	mg/lit	ND	IS: 3025(P-39)1991 (RA 2003)

Condensate polishing Unit (BTP)

SI	Parameter	Unit	Result		Test method
No					
			Inlet	Outlet	
			04	1.08.2021	
1	рН		8.32	7.82	IS: 3025(P-11)1983
2	COD	mg/lit	610	86	IS: 3025(P-58) 2006
3	BOD (3 days @27deg C)	mg/lit	190	20	IS: 3025(P-44)1993
4	Total disolved solids	mg/lit	260	180	IS: 3025(P-16)1984
5	Total suspended solids	mg/lit	30	24	IS: 3025(P-17)1984
7.	Chlorides as CL ⁻	mg/lit	52	29	IS: 3025(P-32)1988
8.	Sulphates as SO ₄	mg/lit	45	30	IS: 3025(P-24)1986
9.	Oil & Grease	mg/lit	ND	ND	IS: 3025(P-39)1991 (RA 2003)

Noise Level Measurement Report:

Date of measurement: 27.11.2020

SI	Location	Sampling	04.08.2021	30.09.2021
No		time		
			dB(A) Leq
1	Distillery main gate	Day	64.2	54.5
		Night	52.9	51.1
2.	Distillery plant	Day	68.5	56.5
		Night	62.1	51.9
3.	Compost yard	Day	56.1	48.2
		Night	47.5	43.7
4.	Incineration Boiler	Day	69.8	57.1
		Night	64.3	52.3
5.	General office	Day	52.8	50.8
		Night	41.7	42.5

❖ Borewell Analysis report: Date of Sampling: 04.08.2021

SI No	Test parameter	Unit	Girish Kulkarni Handigun d	Vijay N Bhasme Handigund	Ulleppa Chanal 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		8.04	7.53	7.58	IS: 3025(P-11)1983
4	Turbidity	NTU	0.5	0.1	0.2	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	190	185	192	IS: 3025(P-23) 1986
6	COD	mg/lit	27	25	28	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	<4	<4	<4	IS: 3025(P-44)1993
8	TDS	mg/lit	730	710	810	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	154	145	195	IS: 3025(P-32)1988
10	Hardness	mg/lit	790	816	940	IS: 3025(P-21)1983
11	Calcium	mg/lit	246	258	268	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	43	42	66	IS: 3025(P-46)1994
13	Sodium	mg/lit	71.2	85.2	103.1	IS: 3025(P-45) 1993
14	Potassium	mg/lit	5.8	5.3	4.7	IS: 3025(P-44)1993
15	%sodium	%	16.24	18.37	19.15	By calculation
16	SAR		1.1	1.29	1.46	By calculation
17	RSC	meq/l	-12.08	-12.7	-15.06	By calculation
18	EC	μmhos/cm	1510	1540	1710	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 04.08.2021

SI No	Test parameter	Unit	Mahadev Chingundi Handigund	Sidappa Kuribagi Handigund	B K Koligud 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		7.24	7.38	7.35	IS: 3025(P- 11)1983
4	Turbidity	NTU	0.1	0.1	0.1	IS: 3025(P- 10)1984
5	Total Alkalinity	mg/lit	150	198	126	IS: 3025(P-23) 1986
6	COD	mg/lit	21	30	21	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	930	350	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	92	212	61	IS: 3025(P- 32)1988
10	Hardness	mg/lit	560	970	340	IS: 3025(P- 21)1983
11	Calcium	mg/lit	161	310	109	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	38	48	17	IS: 3025(P- 46)1994
13	Sodium	mg/lit	84.8	91.7	64.9	IS: 3025(P-45) 1993
14	Potassium	mg/lit	4.1	5.3	3.5	IS: 3025(P- 44)1993
15	%sodium	%	24.66	16.93	28.95	By calculation
16	SAR		1.56	1.28	1.53	By calculation
17	RSC	meq/l	-8.21	-15.54	-4.35	By calculation
18	EC	μmhos/cm	724	1820	640	IS: 3025(P- 14)1984

❖ Borewell Analysis report:

Date of Sampling: 04.08.2021

SI No	Test parameter	Unit	M M Mutapagaol Handigund	Test Method
			7	
1	Color	Hazen	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	IS: 3025(P-05) 1983
3	рН		7.59	IS: 3025(P-11)1983
4	Turbidity	NTU	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	160	IS: 3025(P-23) 1986
6	COD	mg/lit	21	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	< 4	IS: 3025(P-44)1993
8	TDS	mg/lit	530	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	145	IS: 3025(P-32)1988
10	Hardness	mg/lit	430	IS: 3025(P-21)1983
11	Calcium	mg/lit	218	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	28	IS: 3025(P-46)1994
13	Sodium	mg/lit	69.7	IS: 3025(P-45) 1993
14	Potassium	mg/lit	2.8	IS: 3025(P-44)1993
15	%sodium	%	18.6	By calculation
16	SAR		1.18	By calculation
17	RSC	meq/l	-10.03	By calculation
18	EC	µmhos/cm	830	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 30.09.2021

SI No	Test parameter	Unit	Bharma ppa Sanadi Kappalg uddi	Mayappa Sanadi Kappalgud di	Mahadev Ajjapagaol Kappalguddi	Test Method
			1	2	3	
1	Color	Hazen	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeab le	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		7.28	7.75	7.40	IS: 3025(P-11)1983
4	Turbidity	NTU	1.7	1.4	1.8	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	380	370	350	IS: 3025(P-23) 1986
6	COD	mg/lit	31	33	41	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	<4	<4	5	IS: 3025(P-44)1993
8	TDS	mg/lit	1070	1210	1350	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	340	319	650	IS: 3025(P-32)1988
10	Hardness	mg/lit	610	590	860	IS: 3025(P-21)1983
11	Calcium	mg/lit	156	142	240	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	54	57	63	IS: 3025(P-46)1994
13	Sodium	mg/lit	107.3	109.3	125.2	IS: 3025(P-45) 1993
14	Potassium	mg/lit	5.6	5.8	6.8	IS: 3025(P-44)1993
15	%sodium	%	27.38	28.5	23.9	By calculation
16	SAR		1.89	1.96	1.86	By calculation
17	RSC	meq/l	-4.7	-4.45	-10.25	By calculation
18	EC	μmhos/c m	1580	1680	1780	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 30.09.2021

SI No	Test parameter	Unit	Bhimappa Uddapagaol Kapplguddi	Tukara m Uddapa gaol Kappal guddi	Parmahan s Bhangi Kappalgud di	Azadnagar Saidapur	Test Method
			4	5	6	7	
1	Color	Hazen	<5	<5	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreea ble	Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		7.62	7.76	7.62	7.52	IS: 3025(P-11)1983
4	Turbidity	NTU	0.7	1.2	0.1	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	420	350	230	210	IS: 3025(P-23) 1986
6	COD	mg/lit	52	27	18	14	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	7	<4	<4	<4	IS: 3025(P-44)1993
8	TDS	mg/lit	1130	1025	580	490	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	495	407	204	142	IS: 3025(P-32)1988
10	Hardness	mg/lit	610	560	460	390	IS: 3025(P-21)1983
11	Calcium	mg/lit	172	118	140	112	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	44	65	27	27	IS: 3025(P-46)1994
13	Sodium	mg/lit	109.2	97.5	84.3	65.1	IS: 3025(P-45) 1993
14	Potassium	mg/lit	6.5	6.1	5.8	3.3	IS: 3025(P-44)1993
15	%sodium	%	27.74	27.12	28.15	26.39	By calculation
16	SAR		1.92	1.78	1.7	1.43	By calculation
17	RSC	meq/l	-3.86	-4.31	-4.65	-3.65	By calculation
18	EC	μmhos/cm	1680	1530	890	840	IS: 3025(P-14)1984

❖ Borewell Analysis report: Date of Sampling: 30.09.2021

SI No	Test parameter	Unit	Test Borewell No-3	Test Borewell No-4	Test Method
			8	9	
1	Color	Hazen	<5	<5	IS: 3025(P-04)1983
2	Odor		Agreeable	Agreeable	IS: 3025(P-05) 1983
3	рН		7.22	7.17	IS: 3025(P-11)1983
4	Turbidity	NTU	0.1	0.1	IS: 3025(P-10)1984
5	Total Alkalinity	mg/lit	150	190	IS: 3025(P-23) 1986
6	COD	mg/lit	18	29	IS: 3025(P-58) 2006
7	BOD(3days @270 C	mg/lit	<4	<4	IS: 3025(P-44)1993
8	TDS	mg/lit	460	575	IS: 3025(P-16) 1984
9	Chlorides	mg/lit	162	209	IS: 3025(P-32)1988
10	Hardness	mg/lit	300	350	IS: 3025(P-21)1983
11	Calcium	mg/lit	56	60	IS: 3025(P-40) 1991
12	Magnesium	mg/lit	39	49	IS: 3025(P-46)1994
13	Sodium	mg/lit	75.2	95.8	IS: 3025(P-45) 1993
14	Potassium	mg/lit	3.8	5.2	IS: 3025(P-44)1993
15	%sodium	%	34.9	36.78	By calculation
16	SAR		1.88	2.22	By calculation
17	RSC	meq/l	-3.05	-3.28	By calculation
18	EC	μmhos/cm	870	960	IS: 3025(P-14)1984

❖ Piezometer Station Analysis report: date 30.09.2021

SI No	Test parameter	Unit	Piezome ter Station No-1	Piezom eter Station No-2	Piezom eter Station No-3	Piezo meter Statio n No- 4	Piezo meter Statio n No- 5	Piezo meter Statio n No-
1	Color	Hazen	15	Dry	<5	<5	Dry	<5
2	Odor		Agreeabl e		Agreea ble	Agree able		Agree able
3	рН		7.58		8.13	7.57		750
4	Turbidity	NTU	3.33		20.7	10		4.7
5	Total Alkalinity	mg/lit	248		320	760		280
6	COD	mg/lit	71		52	60		39
7	BOD(3days @270 C	mg/lit	10		+	8		6
8	TDS	mg/lit	1680		870	1570		730
9	Chlorides	mg/lit	622		352	617		125
10	Hardness	mg/lit	790		350	760		410
11	Calcium	mg/lit	210		82	218		96
12	Magnesium	mg/lit	65		35	52		41
13	Sodium	mg/lit	171.2		117.2	162.4		126.1
14	Potassium	mg/lit	8.5		5.8	6.9		5.3
15	%sodium	%	31.69		41.72	31.53		39.78
16	SAR		2.64		2.72	2.56	1	2.71
17	RSC	meq/l	-10.96		-0.61	-0.03		-2.61
18	EC	μmhos/cm	2480		1150	2090		1160

❖ Soil analysis report: Date of Sampling: 04.08.2021

SI No	Test parameter	Unit	Girish Kulkarni	Vijay Bhasme	Ulleppa Chanal	Mahadev Chingundi	Test Method
			1	2	3	4	
1	рН	-	7.69	7.82	7.81	7.93	PP-77 -78
2	Conductivity	mmhos/cm	0.340	0.370	0.430	0.290	PP-81 -82
3	Mineraliable Nitrogen	%	0.061	0.063	0.069	0.068	PP-89 -91
4	Available Phosphorus	Kg/ha	53	51	57	56	PP-96 -98
5	Available Potassium	Kg/ha	490	590	410	470	PP-99 -100
6	Organic carbon	%	0.67	0.68	0.65	0.65	PP-84 -85
7	Calcium (as Ca)	%	2.85	2.77	2.91	2.34	PP-103 - 104
8	Magnesium(as Mg)	%	0.21	0.26	0.23	0.19	PP-104 - 105

SI No	Test parameter	Unit	Basvaraj Koilgud	Mahalingappa Muttapagaol	Test Method
			5	6	
1	рН	-	8.19	7.92	PP-77 -78
2	Conductivity	mmhos/cm	0.298	0.382	PP-81 -82
3	Mineraliable Nitrogen	%	0.067	0.064	PP-89 -91
4	Available Phosphorus	Kg/ha	47	53	PP-96 -98
5	Available Potassium	Kg/ha	410	560	PP-99 - 100
6	Organic carbon	%	0.64	0.68	PP-84 -85

7	Calcium (as Ca)	%	2.79	2.71	PP-103 -
					104
8	Magnesium	%	0.26	0.26	PP-104 -
	(as Mg)				105

❖ Soil analysis report: Date of Sampling: 30.09.2021

SI No	Test parameter	Unit	Bharmappa Sanadi	Mayapp a Sanadi	Mahadev Ajjapagao I	Bhimappa R Uddapagao I	Test Method
			1	2	3	4	
1	рН	-	7.79	7.63	7.65	7.88	PP-77 -78
2	Conductivity	mmhos/cm	0.210	0.290	0.326	0.530	PP-81 -82
3	Mineraliable Nitrogen	%	0.043	0.043	0.057	0.049	PP-89 -91
4	Available Phosphorus	Kg/ha	46	45	54	52	PP-96 -98
5	Available Potassium	Kg/ha	310	360	510	720	PP-99 -100
6	Organic carbon	%	0.62	0.68	0.82	0.78	PP-84 -85
7	Calcium (as Ca)	%	2.92	2.61	2.30	2.15	PP-103 -104
8	Magnesium (as Mg)	%	0.063	0.025	0.041	0.063	PP-104 -105

SI No	Test parameter	Unit	Tukuram Udapagaol	Parmahan s Bhangi	Test Method
			5	6	
1	рН	-	8.12	7.83	PP-77 -78
2	Conductivity	mmhos/cm	0.364	0.270	PP-81 -82
3	Mineraliable Nitrogen	%	0.056	0.048	PP-89 -91
4	Available Phosphorus	Kg/ha	71	61	PP-96 -98
5	Available Potassium	Kg/ha	540	370	PP-99 -100
6	Organic carbon	%	0.82	0.69	PP-84 -85
7	Calcium (as Ca)	%	2.73	2.68	PP-103 -104
8	Magnesium (as Mg)	%	0.039	0.046	PP-104 -105

❖ Boiler Ash analysis report:

SI No	Parameter	Unit	
			04.08.2021
1	Moisture	%	0.71
2	pH(Saturated)		11.4
3	Total Volatile Solids	%	1.49
4	Residual ash	%	98.51
5	Nitrogen	%	1.04
6	Phosphorus as P2O5	%	1.37
7	Potassium as K2O	%	14.3
8	Organic carbon	%	5.6

***** Biocompost Analysis Report :

SI No	Parameter	Unit	Result			
			04.8.2021	30.09.2021	26.01.21	27.02.21
1	Moisture	%	24.91	23.69		
2	pH(Saturated)		6.61	6.53		
3	Total Volatile Solids	%	63.57	63.84		
4	Residual ash	%	36.43	36.16		
5	Nitrogen	%	1.72	1.69		
6	Phosphorus as P2O5	%	1.89	1.85		
7	Potassium as K2O	%	3.77	3.72		
8	Organic carbon	%	27.59	26.35		
9	C/N		16.04	15359	16.73	16.79
	Leachate Water (Filtrate					
10	pH		8.18	7.91		
11	COD	mg/lit	224	221		
12	BOD	mg/lit	23	22		
13	Chlorides	mg/lit	168	153		
14	EC	μMhos/cm	1460	1390		

Exhibit-12

LED based lighting system







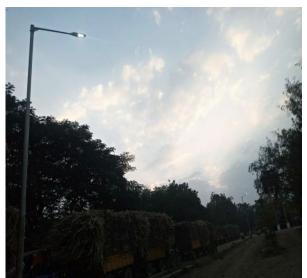


Exhibit-13

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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1

EC Accordance Information letter submitted to Gram Panchayats Exhibit-15



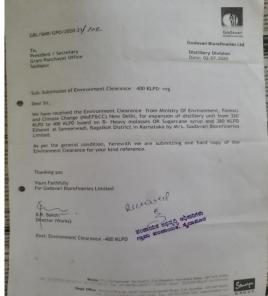




Exhibit-16

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

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

