

Ref. No. PKDNNHKASSK/MFG/2019-2020/

Date- 01/07/2019

To,
The Regional Officer,
APCCFC (Central)
Ministry of Environmental and Forests Govt. of India,
Regional Office (WCZ) Ground Floor East wing,
New Secretariat Bldg, near old VCA Stadium,
Civil lines, Nagpur – 440001.
apccfccentral-ngp-neg-mef@gov.in

**Sub: ENVIRONMENTAL STATUS REPORT FOR THE PERIOD OF 01 Jan.2019
to 30 June 2019**

Ref 1: Compliance of Sugar 5000 TCD & 24 MW, Environment clearances as per EIA notification 2006. Environment Clearance Vide: F. No. J-11011/197/2013-IA-II (I) Dated 22nd February 2017

Ref 2: Compliance of 30 KLPD Distillery as per EIA notification 2006, Environment Clearance Vide: F. No. J-11011/661/2007- IA II (i) Dated 17th September 2007 & Extension validity letter Dt. 12th October 2015

Dear Sir,

With reference to the above subject matter, we are submitting the environmental status Report and six monthly compliance of environmental Clearance conditions. The Co-generation Power Plant is yet to be implemented.

Thanking You,

Yours faithfully,

Managing Director
Padmabhushan Krantiveer
Dr. Naganath Anna Naykwadi
Hutatma Kisan Ahir Sahkari Skhar Karkhana Ltd.

**Padmabhushan Krantiveer Dr. Naganath Anna Naykwadi Hutatma Kisan Ahir Sahkari Sakhar Karkhana Ltd. Naganath Anna Nagar, Walwe Dist: Sangli – 416313(1 Jan.2019 to 30 Jun.2019)
Reg.: Compliance of Sugar 5000 TCD & 24 MW Environment clearances as per EIA notification 2006.**

Ref: Environment clearance Vide: F. No. J-11011/197/2013-IA-II (I) Dated 22nd February 2017.

A.	<u>SPECIFIC CONDITIONS</u>	<u>COMPLIANCE</u>
i.	ESP along with stack of adequate height shall be provided to bagasse fired boiler to control particulate emission within 50mg/Nm ³ .	Co-generation power plant is yet to be established, at which time ESP & sufficient stack height shall be provided. At present for 5000 TCD the existing boiler with wet scrubber is adequate.
ii.	An action taken note (Duly certified by the 'RO, MoEF & CC) non complied points of Compliance Report of Regional Office, MoEF &CC Dated 10* August, 2016 be submitted.	Enclosed
iii.	Total fresh water requirement from Krishna River shall not exceed 3670 m ³ /day during season. No ground water shall be used.	At present sugar factory capacity is expanded & as such present water requirement is only 450m ³ /day. Ground water is not required and not drawn.
iv.	Water Consumption also to be restricted to 100 liters/ton initially and further to 50 Liters/ton cane crushed in a time bound manner as per the CPCB guidelines.	Water requirement at present is 450m ³ /day.
v.	Effluent generation shall not exceed 1180 m ³ /day during season. Effluent shall be treated in ETP, and domestic waste water treated in STP only. ETP should be designed to treat the BOD upto 30 mg/lit of effluent standard even in case of land disposal.	At present effluent generation is only 340m ³ /day. and 72m ³ /day for domestic effluent. Co-generation power plant is not yet implemented.
vi.	Process effluent /any waste shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	Noted & complied.
vii.	Adequate numbers of Ground water quality monitoring stations by providing piezometers around the project area and compost yard shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Nagpur and SPCB	Noted.
viii.	Bagasses stored shall be done in such way that it does not get air borne or fly around due to wind.	Bailed Bagasses is only stored.
ix.	Boiler ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided. Bagasses ash shall be stored separately	Fly ash from boiler is sold to the Bricks manufacturer on day to day basis & as such storage facilities are not provided.

x.	Fire fighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for firefighting shall be made to control fire from the alcohol storage tank. DMP shall be implemented.	Firefighting arrangements have been provided in Alcohol storage ware houses by providing the Fire Hydrant. The two fire engines are also available with industry. DMP is fully implemented.
xi.	Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.	Occupational health surveillance regularly carried out & record is maintained separately.
xii	Dedicated parking facility for loading and unloading of materials shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.	The dedicated parking facility is provided for loading and unloading. The traffic management is well planned as per R.T.O. regulations.
xiii.	As proposed, green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	At present 25 % is completed as per CPCB guidelines & remaining 8% shall be developed within a period of 2 to 3 year.
xiv	All the commitments made during the Public Hearing/Public Consultation meeting held on 26 th August, 2015 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.	All commitments have been fully implemented.
xv.	At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Nagpur. Implementation of such program shall be ensured accordingly in a time bound manner.	Budgetary provision of 5 % of the cost of project is earmarked for CSR activities. The local need is being identified & appropriate budgetary allocation shall be made & shall be submitted.
xvi.	Zero Liquid Discharge shall be ensured.	The industry has followed anaerobic Digester followed by MEE & Composting for Distillery unit to achieve zero liquid discharge. For sugar factory the treated effluent is utilized on 40 hectares of land for irrigation.
xvii.	Continuous online (24 x7) monitoring to be installed. Data to be uploaded on company's website and provided to the respective RO of MoEF & CC, CPCB and SPCB	Complied.
B.	<u>GENERAL CONDITIONS :</u>	<u>COMPLIANCE</u>
i.	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board, State Government and any other statutory authority.	Noted.
ii.	No further expansion or modification in the plant be carried out without prior approval of the Ministry of Environment	Noted

	and 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.	
iii.	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated..	Complied
iv.	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	Followed.
v.	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 generations. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (Day Time) and 70 dBA (Night Time).	Complied.
vi.	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	Being implemented.
vii.	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 be imparted.	Complied.
viii.	The company shall also comply with all 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, risk mitigation measures and public hearing relating to the project shall be implemented.	Complied.
ix.	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.	Already implemented.
x.	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Implemented.
xi.	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	Provided.
xii.	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	Complied.

	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.	
xiii.	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.	Complied.
xiv.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results 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 reports shall be posted on the website of the company.	Shall be implemented regularly.
xv.	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.	Submitted regularly.
xvi.	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 at http://moef.nic.in . This shall be advertised within seven days from the date of issue of clearance letter, at two local news papers that are widely circulated in the region of which one 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.	Complied
xvii.	The project authorities shall inform the regional office as well as Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Date of Financial Closer is: 31 st March 2018 Date of Financial approval: 10-07-2017 Date of start of development work: Aug 2017

**Compliance of 30 KLPD Distillery as per EIA notification 2006 (1 Jan.2019 to 30 Jun.2019)
Ref : Environment clearance Vide : F.No. J-11011/661/2007- IA II (i) Dated 17th September 2007
&extension validity letter Dt. 12th October 2015**

A.	<u>SPECIFIC CONDITIONS</u>	<u>COMPLIANCE</u>
i.	The company shall adopt continuous fermentation technology and ensure that the spent wash generation shall not exceed 240m ³ /d. The spent wash shall be composted with pressmud to achieve “zero discharge”. Land and other requirements for treatment of spent wash with pressmud shall be as per the CPCB guidelines. The company shall earmark an area of 4.80 ha. For bio-composting, storage of pressmud and finished products. The compost yard shall be made impervious as per the CPCB guidelines.	Complied
ii.	The company shall install Wet Scrubber and stack height as per CPCB / SPCB standards to control the emission from the bagasses fired boiler installed to achieve the particulate emission within the prescribed standards.	Implemented. Steam is taken from sugar factory boiler which are provided wet scrubber as APC equipment.
iii.	The spent wash shall be stored in impervious pucca lagoons. The spent wash lagoons shall have proper lining with HDPE and shall be kept in proper conditions to prevent ground water pollution. As per CPCB recommendation, storage shall not exceed 30 days capacity.	Spent wash storage lagoon is constructed as per CPCB guidelines.
iv.	Adequate numbers of ground water quality monitoring stations by providing piezometers around the compost plant and project area shall be set up. Samplings and trend analysis monitoring must be made on monthly basis and report submitted to SPCB and Ministry.	Piezometers are provided at the compost yard, monthly basis report submitted to SPCB & Ministry.
v.	The operation of distillery shall be restricted to 270 days and that it shall not operate during rainy season and /or whenever the ETP is not able to treat the effluent as per standards.	Distillery operation is restricted to 270 days. Distillery shall not be operated during rainy season.
vi.	The company shall implement all the recommendations/conditions/modification/improvements suggested by public hearing panel and reports shall be submitted to this ministry within three months.	Public Hearing for Distillery was conducted on 13 th February 2007 . We have already submitted the compliance report to the Ministry, the copy of which is enclosed.
vii.	As reflected in the EIA/EMP, green belt of adequate width and density in 8.0 acres of plant area shall be provided to mitigate the effect of fugitive emission all around plant and compost yard as per CPCB guidelines in conditions with the local DFO.	At present, 25 % of the area is covered under green belt and remaining 8% shall be covered within a period of 2 to 3 year as per the CPCB Guidelines.
B.	<u>GENERAL CONDITIONS :</u>	<u>COMPLIANCE</u>
i.	The industry shall that the treated effluent and stack emission from the unit are within the norms stipulated under EPA rules of SPCB whichever is more stringent. In case of process disturbances/failure of pollution	Noted & shall be complied

	control equipment by the unit, respective units shall be shut down and shall not restarted until the control measures are rectified to achieve the desired efficiency.	
ii.	No further expansion or modification in the plant be carried out without prior approval of the Ministry of Environment and Forest.	Noted.
iii.	Ambient Air Quality Stations shall be set up in the down wind direction as well as where maximum ground level concentration of SPM, SO ₂ , NO _x are anticipated in consultations with State Pollution Control Board.	Complied.
iv.	Adequate number of influent and effluent quality stations shall be set up in consultation with the State Pollution Control Board. Regular monitoring should be carried out for relevant parameters.	Complied.
v.	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 generations. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (Day Time) and 70 dBA (Night Time).	Complied.
vi.	Company shall adopt rain water harvesting measures to recharge the ground water.	Being implemented.
vii.	Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the medical records of each employee shall be maintained separately.	Occupational health surveillance regularly carried out & record is maintained separately.
viii.	The project proponent shall also comply with all environmental protection measures and safeguards recommended in the EIA/EMP report.	Noted & being implemented.
ix.	A separate environmental management cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	Provided.
x.	The project authorities shall requisite funds for both recurring and non recurring expenditure to implement the conditions stipulated by the Ministry of Environment and Forests as well as State Government along with the implementation schedule for any other purpose.	Budgetary provision of 5 % of the cost of project is earmarked for CSR activities. The local need is being identified & appropriate budgetary allocation shall be made & shall be submitted.
xi.	The implementation of the project vis-à-vis environmental action plans will be monitored by Ministry's Regional Office at Bhopal / State Pollution Control Board/ Central Pollution Control Board. A six monthly compliance status report along with the data shall be submitted to the monitoring agencies.	Noted & implemented. Six monthly compliance reports along with Data shall be submitted to Regional office Nagpur, CPCB & MPCB regularly.
xii.	The Project Proponent shall inform the public that the project has been accorded environmental clearance by	Informed & copy is enclosed.

	Ministry and copies of the clearance letter are available with the State Pollution Board/ Committee and may also be seen at Website of Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and copy of the same shall be forwarded to the Regional Office.	
xiii.	The Project Authorities shall inform the regional Office as well as the Ministry the date of financial closer and final approval of the Project by the concerned authorities and the date of start of land development work.	Date of Financial Closer is: 07-11-2015 Date of Financial approval:24-02-2016 Date of start of development work: June 2016

ANNEXURE I

TEST REPORT

Report Ref. No. : SEC/BSR/Stack-I/18-19	Nature of Sample: Stack
Name of Industry/Customer: : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Stack Monitoring	Period: Dec 2018 to June 2019

Sr. No.	Parameter	Dec	Jan	Feb	Limit	Mean	Standard Deviation
1.	Stack Height (m)	30.00 m			--	-	-
2.	Stack Diameter (m)	a) Top – 8 ft b) Bottom – 12 ft.			--	-	-
3.	Boiler Capacity (T/hr)	20 x 2 TPH [stack-1 – old]			--	-	-
4.	Fuel Used	Bagasse			--	-	-
5.	Flue Gas Tem.(°C)	127°C	125°C	127°C	--	126.33	1.15
6.	Flue Gas Velocity (m/sec.)	8.7 m/s	8.5 m/s	8.4 m/s	--	8.53	0.15
7.	P.M.(mg/Nm ³)	110	107	109	<150	108.67	1.53
8.	NO _x (mg/Nm ³)	21	20	25	<80	22	2.65
9.	SO ₂ (mg/Nm ³)	67	65	68	<80	66.67	1.53

Remark: The stack monitoring results indicate that all the parameters are within prescribed limits, indicating the APC performance is satisfactory.

TEST REPORT

Report Ref. No. : SEC/BSR/Stack-II/18-19	Nature of Sample: Stack
Name of Industry/Customer : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Stack Monitoring	Period: Dec 2018 to June 2019

Sr. No.	Parameter	Dec	Jan	Feb	Limit	Mean	Standard Deviation
1.	Stack Height (m)	30.00 m			--	-	-
2.	Stack Diameter (m)	a) Top – 2.25ft b) Bottom – 3.00 ft.			--	-	-
3.	Boiler Capacity (T/hr)	35 TPH [stack-2 – New]			--	-	-
4.	Fuel Used	Bagasse			--	-	-
5.	Flue Gas Tem.(°C)	134°C	132°C	135° C	--	133.67	1.53
6.	Flue Gas Velocity (m/sec.)	9.3 m/s	9.1 m/s	9.2 m/s	--	9.20	0.10
7.	P.M.(mg/Nm ³)	121	119	120	<150	120.00	1.00
8.	NO _x (mg/Nm ³)	30	29	31	<80	30.00	1.00
9.	SO ₂ (mg/Nm ³)	75	70	72	<80	72.33	2.52

Remark: The stack monitoring results indicate that all the parameters are within prescribed limits, indicating the APC performance is satisfactory.

TEST REPORT

Report Ref. No. : SEC/BSR/Stack-III/18-19	Nature of Sample: Stack
Name of Industry/Customer: : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Ambient Air Quality	Period: Dec 2018 to June 2019

Sr. No.	Sampling Station	PM _{2.5} (µg/m ³)			Mean	Standard Deviation	PM ₁₀ (µg/m ³)			Mean	Standard Deviation
		Limits < 60µg/m ³					Limits < 100µg/m ³				
		Dec	Jan	Feb			Dec	Jan	Feb		
<u>1</u>	Near Factory Main Gate	31	34	32	32.33	1.52	74	76	77	75.66	1.52
<u>2</u>	Near Sugar Go down No. 3	28	-	-	-	-	68	-	-	-	-
<u>3</u>	Near Sugar ETP Plant	-	30	28	29	-	-	70	72	71	-

Sr. No.	Sampling Station	SO ₂ (µg/m ³)			Mean	Standard Deviation	NO _x (µg/m ³)			Mean	Standard Deviation
		Limits < 80µg/m ³					Limits < 80µg/m ³				
		Dec	Jan	Feb			Dec	Jan	Feb		
<u>1</u>	Near Factory Main Gate	16.00	15.00	14.00	15	1	14.00	12.00	12.00	12.66	1.15
<u>2</u>	Near Sugar Go down No. 3	12.00	-	-	-	-	10.00	-	-	-	-
<u>3</u>	Near Sugar ETP Plant	-	12.00	12.00	12	-	-	8.00	8.00	8	-

Remarks: The ambient monitoring analysis results indicate that all the parameters are within prescribed limits of NAAQS.

TEST REPORT

Report Ref. No. : SEC/BSR/Noise/18-19	Nature of Sample: Noise
Name of Industry/Customer : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Noise Level Monitoring	Period: Dec 2018 to June 2019

Sr. No.	Location of recording Sound level	Standard Limit dB (A) Leq	Time	dB (A) Leq
1.	Factory Main Gate	75	Day	60.7
		70	Night	51.9
2.	Near Distillery Gate	75	Day	57.4
		70	Night	45.9
3.	Cane Cutter	75	Day	71.4
		70	Night	68.0
4.	Sugar Mill House	75	Day	72.7
		70	Night	67.5
5.	Boiling House	75	Day	73.1
		70	Night	67.9
6.	Turbine House	75	Day	73.9
		70	Night	69.6
7.	Weigh Bridge	75	Day	70.9
		70	Night	64.8
8.	Sugar ETP Plant	75	Day	56.1
		70	Night	42.8
9.	Compost Site	75	Day	59.3
		70	Night	45.1
10.	Factory Guest House	75	Day	53.9
		70	Night	42.5

Remarks: Noise Levels in the premise of Hutatma Kisan Ahir SSK Ltd.,Walva (Sangli). are within prescribed limits. This is due to proper acoustic enclosures to the Noise generating machines and development of adequate Greenbelt.

TEST REPORT

Report Ref. No. : SEC/BSR/W-JK/18-19	Nature of Sample: Waste water
Name of Industry/Customer: : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Sugar ETP Inlet	Period: Dec 2018 to June 2019

Sr. No.	Test Parameter	Month			Units	Mean	Standard Deviation	Test Method
		Dec	Jan	Feb				
1	pH	6.50	5.66	5.29	-	-	-	IS:3025 (P-11) 1983
2	Chemical Oxygen Demand (mg/l)	1805	1544	2170	mg/l	1839.67	314.44	IS:3025 (P-58) 2006
3	B.O.D. (3 days at 27°C) (mg/l)	630	670	940	mg/l	746.67	168.62	IS:3025 (P-44) 1993
4	Total Dissolved Solids (mg/l)	1780	1390	1510	mg/l	1560.00	199.75	IS:3025(P-16)1984
5	Total Suspended Solids (mg/l)	249	238	265	mg/l	250.67	13.58	IS:3025 (P-17) 1984
6	Chloride as Cl ⁻ (mg/l)	71	85	97	mg/l	84.33	13.01	IS:3025 (P-32) 1988
7	Sulphate as SO ₄ (mg/l)	89	110	134	mg/l	111.00	22.52	IS:3025 (P-24) 1986
8	Oil & Grease (mg/l)	10	10	10	mg/l	10.00	0.00	IS:3025 (P-39) 1991 (RA 2003)

Remarks : Sugar ETP inlet samples were analyzed for its inlet parameter concentrations, Arithmetic Mean and Standard Deviation show significant variations, which indicate that the process variations are significant and it is suggested to increase the equalization tank capacity so that the variations could be minimized.

Padmabhushan Krantiveer Dr. Nagnathanna Nayakawadi Hutatma Kisan Ahir S.S.K.Ltd.,Walwa

TEST REPORT

Report Ref. No. : SEC/BSR/W-MP4/18-19	Nature of Sample: Waste water
Name of Industry/Customer: : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Sugar ETP Outlet	Period: Dec 2018 to June 2019

Sr. No.	Test Parameter	Month			Units	Standards	Mean	Standard Deviation	Test Method
		Dec	Jan	Feb					
1	pH	7.24	7.39	7.80	-	5.5-8.5	-	-	IS:3025 (P-11) 1983
2	Chemical Oxygen Demand (mg/l)	157	146	116	mg/l	250	139.67	21.22	IS:3025 (P-58) 2006
3	B.O.D. (3 days at 27°C) (mg/l)	62	50	41	mg/l	100	51.00	10.54	IS:3025 (P-44) 1993
4	Total Dissolved Solids (mg/l)	640	618	508	mg/l	2100	588.67	70.72	IS:3025(P-16)1984
5	Total Suspended Solids (mg/l)	55	54	49	mg/l	100	52.67	3.21	IS:3025 (P-17) 1984
6	Chloride as Cl ⁻ (mg/l)	36	34	38	mg/l	600	36.00	2.00	IS:3025 (P-32) 1988
7	Sulphate as SO ₄ (mg/l)	52	61	72	mg/l	1000	61.67	10.02	IS:3025 (P-24) 1986
8	Oil & Grease (mg/l)	ND	ND	ND	mg/l	10	-	-	IS:3025 (P-39) 1991 (RA 2003)

Remarks: The outlet concentrations are within prescribed limits of consent standards.

Padmabhushan Krantiveer Dr. Nagnathanna Nayakawadi Hutatma Kisan Ahir S.S.K.Ltd.,Walwa

TEST REPORT

Report Ref. No. : SEC/BSR/W/18-19	Nature of Sample: Water
Name of Industry/Customer: : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Piezometer Bore well – No. 01 [West]	Period: Dec 2018 to June 2019

Sr. No	Test Parameter	Unit	Jan	Feb	Mean	IS:2296 Standards	Test Method
1	*Color	Hazen	< 5	< 5	-	--	IS:3025 (P-4) 1983
2	*Odor	--	Agreeable	Agreeable	-	--	IS:3025 (P-5) 1983
3	pH	--	8.39	8.07	-	6.5 – 8.5	IS:3025 (P-11) 1983
4	Turbidity	NTU	0.6	0.2	0.40	--	IS:3025 (P-10) 1984
5	Total Alkalinity (as CaCO ₃)	mg/l	270	262	266.00	--	IS:3025 (P-23) 1986
6	Chemical Oxygen Demand	mg/l	51	32	41.50	--	IS:3025 (P-58) 2006
7	B.O.D. (3day's at 27°C)	mg/l	8	< 4	8.00	--	IS:3025 (P-44) 1993
8	Total Dissolved Solids	mg/l	772	720	746.00	2100	IS:3025 (P-16) 1984
9	Chlorides (as Cl)	mg/l	116	112	114.00	600	IS:3025 (P-32) 1988
10	Hardness (as CaCO ₃)	mg/l	406	410	408.00	--	IS:3025 (P-21) 1983
11	Calcium (as Ca)	mg/l	85	89	87.00	--	IS:3025 (P-40) 1991
12	Magnesium (as Mg)	mg/l	47	46	46.50	--	IS:3025 (P-46) 1994
13	Sodium (as Na)	mg/l	27.2	32.9	30.05	--	IS:3025 (P-45) 1993
14	Potassium (as K)	mg/l	1.3	1.7	1.50	--	IS:3025 (P-45) 1993
15	% Na (Max)	%	12.68	14.75	13.71	60	By Calculation
16	Sodium Absorption Ratio	---	0.58	0.7	0.64	26	By Calculation
17	Residual Sodium Carbonate	meq/l	-2.76	-3.04	-2.90	2.5	By Calculation
18	Electrical Conductivity	µmhos/cm	1247	1020	1133.50	2250	IS:3025 (P-14) 1984

Remarks: The analysis results indicate that all the parameters are within prescribed limit and the bore well water is fit for irrigation/gardening. Suggested to analyze minimum four samples for statistical analysis.

Padmabhushan Krantiveer Dr. Nagnathanna Nayakawadi Hutatma Kisan Ahir S.S.K.Ltd.,Walwa

TEST REPORT

Report Ref. No. : SEC/BSR/W/18-19	Nature of Sample: Water
Name of Industry/Customer: : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Piezometer Bore well – No. 02 [South]	Period: Dec 2018 to June 2019

Sr. No.	Test Parameter	Unit	Jan	Feb	Mean	IS:2296 Standards	Test Method
1	*Color	Hazen	< 5	< 5	-	--	IS:3025 (P-4) 1983
2	*Odor	--	Agreeable	Agreeable	-	--	IS:3025 (P-5) 1983
3	pH	--	8.28	8.42	-	6.5 – 8.5	IS:3025 (P-11) 1983
4	Turbidity	NTU	0.6	0.1	0.35	--	IS:3025 (P-10) 1984
5	Total Alkalinity (as CaCO ₃)	mg/l	240	254	247.00	--	IS:3025 (P-23) 1986
6	Chemical Oxygen Demand	mg/l	34	31	32.5	--	IS:3025 (P-58) 2006
7	B.O.D. (3day's at 27°C)	mg/l	< 4	< 4	4.00	--	IS:3025 (P-44) 1993
8	Total Dissolved Solids	mg/l	630	670	650.00	2100	IS:3025 (P-16) 1984
9	Chlorides (as Cl)	mg/l	113	120	116.50	600	IS:3025 (P-32) 1988
10	Hardness (as CaCO ₃)	mg/l	408	429	418.50	--	IS:3025 (P-21) 1983
11	Calcium (as Ca)	mg/l	91	94	92.50	--	IS:3025 (P-40) 1991
12	Magnesium (as Mg)	mg/l	42	47	44.50	--	IS:3025 (P-46) 1994
13	Sodium (as Na)	mg/l	21.4	25.8	23.60	--	IS:3025 (P-45) 1993
14	Potassium (as K)	mg/l	2.1	2.3	2.20	--	IS:3025 (P-45) 1993
15	% Na (Max)	%	10.36	11.52	10.94	60	By Calculation
16	Sodium Absorption Ratio	---	0.46	0.54	0.50	26	By Calculation
17	Residual Sodium Carbonate	meq/l	-3.25	-3.53	-3.39	2.5	By Calculation
18	Electrical Conductivity	µmhos/cm	1044	1028	1036.00	2250	IS:3025 (P-14) 1984

Remarks: The analysis results indicate that all the parameters are within prescribed limit and the bore well water is fit for irrigation/gardening. Suggested to analyze minimum four samples for statistical analysis.

Padmabhushan Krantiveer Dr. Nagnathanna Nayakawadi Hutatma Kisan Ahir S.S.K.Ltd.,Walwa

TEST REPORT

Report Ref. No. : SEC/BSR/W/18-19	Nature of Sample: Water
Name of Industry/Customer: : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Piezometer Bore well – No. 03 [East]	Period: Dec 2018 to June 2019

Sr. No.	Test Parameter	Unit	Jan	Feb	Mean	IS:2296 Standards	Test Method
1	*Color	Hazen	< 5	< 5	-	--	IS:3025 (P-4) 1983
2	*Odor	--	Agreeable	Agreeable	-	--	IS:3025 (P-5) 1983
3	pH	--	8.02	8.19	-	6.5 – 8.5	IS:3025 (P-11) 1983
4	Turbidity	NTU	4.5	1.2	2.85	--	IS:3025 (P-10) 1984
5	Total Alkalinity (as CaCO ₃)	mg/l	290	310	300.00	--	IS:3025 (P-23) 1986
6	Chemical Oxygen Demand	mg/l	64	47	55.50	--	IS:3025 (P-58) 2006
7	B.O.D. (3day's at 27°C)	mg/l	15	8	11.50	--	IS:3025 (P-44) 1993
8	Total Dissolved Solids	mg/l	1132	1180	1156.00	2100	IS:3025 (P-16) 1984
9	Chlorides (as Cl)	mg/l	144	153	148.50	600	IS:3025 (P-32) 1988
10	Hardness (as CaCO ₃)	mg/l	520	570	545.00	--	IS:3025 (P-21) 1983
11	Calcium (as Ca)	mg/l	158	162	160.00	--	IS:3025 (P-40) 1991
12	Magnesium (as Mg)	mg/l	31	40	35.50	--	IS:3025 (P-46) 1994
13	Sodium (as Na)	mg/l	25.2	49.2	37.20	--	IS:3025 (P-45) 1993
14	Potassium (as K)	mg/l	3.2	3.7	3.45	--	IS:3025 (P-45) 1993
15	% Na (Max)	%	9.43	15.72	12.57	60	By Calculation
16	Sodium Absorption Ratio	---	0.47	0.89	0.68	26	By Calculation
17	Residual Sodium Carbonate	meq/l	-4.68	-5.23	-4.95	2.5	By Calculation
18	Electrical Conductivity	µmhos/cm	1776	1965	1870.50	2250	IS:3025 (P-14) 1984

Remarks: The analysis results indicate that all the parameters are within prescribed limit and the bore well water is fit for irrigation/gardening. Suggested to analyze minimum four samples for statistical analysis.

Padmabhushan Krantiveer Dr. Nagnathanna Nayakawadi Hutatma Kisan Ahir S.S.K.Ltd.,Walwa

TEST REPORT

Report Ref. No. : SEC/BSR/W/18-19	Nature of Sample: Water
Name of Industry/Customer: : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Piezometer Bore well – No. 04 [North]	Period: Dec 2018 to June 2019

Sr. No	Test Parameter	Unit	Jan	Feb	Mean	IS:2296 Standards	Test Method
1	*Color	Hazen	< 5	< 5	-	--	IS:3025 (P-4) 1983
2	*Odor	--	Agreeable	Agreeable	-	--	IS:3025 (P-5) 1983
3	pH	--	8.19	8.09	-	6.5 – 8.5	IS:3025 (P-11) 1983
4	Turbidity	NTU	0.1	0.1	0.10	--	IS:3025 (P-10) 1984
5	Total Alkalinity (as CaCO ₃)	mg/l	258	260	259.00	--	IS:3025 (P-23) 1986
6	Chemical Oxygen Demand	mg/l	55	35	45.00	--	IS:3025 (P-58) 2006
7	B.O.D. (3day's at 27°C)	mg/l	10	< 4	10.00	--	IS:3025 (P-44) 1993
8	Total Dissolved Solids	mg/l	1070	1090	1080.00	2100	IS:3025 (P-16) 1984
9	Chlorides (as Cl)	mg/l	146	151	148.50	600	IS:3025 (P-32) 1988
10	Hardness (as CaCO ₃)	mg/l	548	578	563.00	--	IS:3025 (P-21) 1983
11	Calcium (as Ca)	mg/l	151	153	152.00	--	IS:3025 (P-40) 1991
12	Magnesium (as Mg)	mg/l	41	47	44.00	--	IS:3025 (P-46) 1994
13	Sodium (as Na)	mg/l	31.3	39.5	35.40	--	IS:3025 (P-45) 1993
14	Potassium (as K)	mg/l	4.0	3.8	3.90	--	IS:3025 (P-45) 1993
15	% Na (Max)	%	11	12.89	11.94	60	By Calculation
16	Sodium Absorption Ratio	---	0.58	0.71	0.60	26	By Calculation
17	Residual Sodium Carbonate	meq/l	-5.8	-6.36	-6.08	2.5	By Calculation
18	Electrical Conductivity	µmhos/cm	1451	1591	1521.00	2250	IS:3025 (P-14) 1984

Remarks: The analysis results indicate that all the parameters are within prescribed limit and the bore well water is fit for irrigation/gardening. Suggested to analyze minimum four samples for statistical analysis.

TEST REPORT

Report Ref. No. : SEC/BSR/C/18-19	Nature of Sample: Compost
Name of Industry/Customer: : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Ready Compost	Period: Dec 2018 to June 2019

Sr. No.	Test Parameter	Dec	Jan	Mean	Unit	Standards
1	Moisture	33.75	30.72	32.23	%	< 35
2	pH (Saturated)	7.81	7.89	-	--	6.5 – 8.5
3	Total Volatile Solids	62.23	60.54	61.38	%	60 – 65
4	Residual Ash	37.77	39.46	38.61	%	40 – 45
5	Nitrogen as N	1.64	1.69	1.66	%	>2.0
6	Phosphorus as P2O5	1.82	1.85	1.83	%	>0.50
7	Potassium as K2O	3.71	3.79	3.75	%	>3.0
8	Organic Carbon	26.53	27.12	26.82	%	20 – 30
9	C/N	16.17	16.04	16.10	--	< 17
Leachate Water (Filtrate)						
10	pH	8.09	8.35	-	--	6.5 – 8.5
11	C.O.D.	212	210	211.00	mg/l	< 250
12	B.O.D.	25	22	23.50	mg/l	< 30
13	Chlorides	121	135	128.00	mg/l	< 600
14	E. Conductivity	1510	1560	1535.00	µmhos/cm	< 2100

Remarks: Ready compost results are within prescribed limits. The results show that the Compost is of good quality, as it has all the nutrient contents as per the standards.

TEST REPORT

Report Ref. No. : SEC/BSR/W-MP1/18-19	Nature of Sample: Water
Name of Industry/Customer : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Biogas Inlet	Period : Dec 2018 to June 2019

Sr. No.	Test Parameter	Unit	Result	Test Method
1	pH	-	3.98	IS:3025 (P-11) 1983
2	C.O.D	mg/l	1,18,240	IS:3025 (P-58) 2006
3	B.O.D	mg/l	48,960	IS:3025 (P-44) 1993
4	Total Solids	mg/l	1,39,856	APHA 22 nd Edition-2012, 2540 B
5	Total Volatile Solids	mg/l	69,800	APHA 22 nd Edition-2012, 2540-E,G
6	Total Inorganic Solids	mg/l	70,056	APHA 22 nd Edition-2012, 2540 C
7	Chlorides	mg/l	18,951	IS:3025 (P-32) 1988
8	Sulphates	mg/l	2088	IS:3025 (P-24) 1986
9	K	mg/l	31,500	IS:3025 (P-45) 1993

Remarks: The Mean and Standard deviations are significantly high as the spentwash characteristics vary widely depending on the process variations and quality of raw materials. Suggested to analyze minimum four samples for statistical analyses.

TEST REPORT

Report Ref. No. : SEC/BSR/W-MP2/18-19	Nature of Sample: Water
Name of Industry/Customer: : Hutatma Kisan Ahir SSK Ltd.	Sample Collected By: SEC Lab
Address: Walva-416313, (Dist) Sangli.	
Name of Sample : Biogas Outlet	Period: Dec 2018 to June 2019

Sr. No.	Test Parameter	Unit	Result	Standards	Test Method
1	pH	-	7.45	---	IS:3025 (P-11) 1983
2	Alkalinity	mg/l	10,340	>6000	IS:3025 (P-23) 1986
3	Volatile Acids	mg/l	6412	< 3000	APHA 22 nd Edition-2012, 5560 C
4	C.O.D	mg/l	33,027	35000-50000	IS:3025 (P-58) 2006
5	B.O.D	mg/l	7390	5000-7000	IS:3025 (P-44) 1993
6	Total Solids	mg/l	69,596	60000-80000	APHA 22 nd Edition-2012, 2540 B
7	Total Volatile Solids	mg/l	38,472	35000-45000	APHA 22 nd Edition-2012, 2540-E,G
8	Total Inorganic Solids	mg/l	31,124	25000-35000	APHA 22 nd Edition-2012, 2540 C
9	Chlorides	mg/l	12,490	6000 – 8000	IS:3025 (P-32) 1988
10	Sulphates	mg/l	2270	4000 – 6000	IS:3025 (P-24) 1986
11	K	mg/l	27,190	---	IS:3025 (P-45) 1993

Remarks: The effluent quality variations are not significant. It can be concluded that the digester performance is satisfactory. Suggested to analyze minimum four samples for statistical analyses.