

**SUMMARY ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT
FOR**

**Proposed 110 KLPD Multi-Feed Stock (Syrup / “B” Heavy
Molasses / “C” Molasses / Grain) Based Distillery Unit along
with 2 MW Co-gen plant**

BY

M/s. Ampra Distilleries Pvt. Ltd.

Gat No. 257/5, Village- Mandrup, Tal- South Solapur, Dist- Solapur,
Maharashtra.

Prepared By

AmplEnviron Pvt. Ltd., Hyderabad

1.0 Introduction

The proposed activity of multi-Feed stacks (Syrup / “B” Heavy Molasses / “C” Molasses / Grain) based distillery (Production of ENA/RS/ Ethanol) will be established by M/s. Ampra Distilleries Pvt. Ltd. (ADPL). The company is registered under the provision of Companies Act, 2013 Bearing Corporate Identity no: U01100PN2021PTC204160, dated: 10.09.2021. The copy of company registration is attached as **Annexure-1.1** the registered office of the company is located at Gat No-307/3, Plot No.7, Near Nimbargi Road, Mandrup, South Solapur, Solapur Maharashtra 413203 and proposed distillery located at the Gat No-257/5, Mandrup, South Solapur, Solapur 413203 Maharashtra.

2.0 Project Location

ADPL is proposing to set up a multi-feed stock Distillery unit of 110KLPD capacity and 2 MW Captive Cogeneration Plant at Gat No-257/5, Mandrup, South Solapur, Solapur, Maharashtra 413203.

As per geographical co-ordinates of the project site, the proposed activity is covered under SOI Toposheet no-47O/15, while the study area of the project (10 km radius) is falling under SOI toposheet no:47O/10, 47O/11, 47O/14,47O/15. The project is located at elevation of 448 meters above mean sea.

3.0 Project Description

Company proposed to install multi feed (Syrup / Molasses / Grain) distillery & 2 MW cogen plant to manufacture Rectified Spirit (RS) / Extra Neutral Alcohol (ENA)/ Ethanol to achieve production capacity of 110 KLPD.

As per Environmental Impact Assessment Notification published by MoEF&CC vide S.O. 1533 dated 14th September, 2006 and its amendments till date, the proposed activity of the company requires prior Environmental Clearance as proposed activity is falling under schedule 5(g) of the EIA notification; since it is an multi feed (Syrup / “C”Molasses/”B” Heavy Molasses / Grain) based distillery with production rate of 110 KLPD & 2 MW Cogen, the project is to be appraised by EAC as Category A project.

Salient features of proposed project are presented in **Table No. 1**.

Table 1: Salient Features of Project

Sr. No.	Component	Details
1	Name & Address of Company	M/s. Ampra Distilleries Pvt. Ltd. at Gat No-257/5, Mandrup, South Solapur, Solapur 413203 Maharashtra.
2	Product Type	ENA/RS/Ethanol Manufacturing using “C” Molasses,”B” Heavy Molasses, Cane Syrup and Grain as a Raw material
3	Project Type	New
4	Schedule of project as per EIA	5(g)

	Notification, 2006	
5	Category of Project*	'A' General Condition is applicable. Karnataka State boundry located at 3.82 km (Aerial Distance) from project boundry. Also the project is for manufacturing of molasses, grain & syrup based ethanol with >100 KLPD capacity, the project will be appraised as 'A' Category project
6	Plot Area Details	
	Particulars	Area in Sq. m.
		% of Total Plot Area
a	Green Belt	38757.94
b	Parking Area	16608.71
c	Total Built-up Area	27884.04
d	Area Under Internal Roads	15071.10
f	Open Space	12398.21
	Total Plot Area	110720
		100
7	Production Details	
a	Rectified Spirit (RS)/ Extra Neutral Alcohol/ Ethanol	110 KLPD
b	By-product	Fuesl Oil : 0.26 Tons/Day CO2 Gas : 83.77 Tons/Day DDGS: 80.66 Ton/Day
8	Budgetary Estimation	
a	Project Cost (Indian Rs.)	141.41 Crore
b	EMP Cost (Indian Rs.)	Capital: Rs. 3317.39 Lakh, Recurring/Annum: Rs. 461.45 Lakh
9	Power Requirement	
a	Proposed Connected Load	2.0 MW
b	Source	In-House Captive power plant
10	Fuel Requirement	
a	Baggase	4311.6 kg/Hr
b	Biogas	429 Nm3/Hr
c	Spent Wash	1933 Kg/Hr
d	High Speed Diesel	90 l/hr.

11	Diesel Generator (D.G.) Details	
	Capacity & No.	1 x 500 kVA
12	Boiler Details	
a	Steam Boiler	1 x 22 TPH (Incineartor Boiler)
13	Scrubber Details	
	Scrubber for CO ₂ Gas	2 x 1000 CFM capacity scrubbers will be installed to mitigate process emissions.
	Lime	NA
14	Stack Details	
a	Boiler Stack (from ground level)	52 meters (APCD: ESP)
c	D.G	1 x Stack of 4.5 m above roof for D.G.
d	Scrubber Stack	NA
15	Man Power	52
16	Water Requirement	
	Particular	Quantity (m³/day)
	C Molasses Based Production	1 st Cycle: 2000 2 nd Cycle: 392.37
	B Molasses Based Production	1 st Cycle: 1827 2 nd Cycle: 427.65
	Syrup Based Production	1 st Cycle: 1751 2 nd Cycle: 110.68
	Grain Based Production	1 st Cycle: 1762 2 nd Cycle: 390
17	Effluent Load on CPU	
	Particulars	Quantity (m³/day)
	C Molasses Based Production	1172.87
	B Molasses Based Production	964.55
	Syrup Based Production	1370.57
	Grain Based Production	937.2
18	CPU Capacity	
a	Capacity of CPU	CPU capacity : 1500 m ³ /day
19	Details of Hazardous Wastes	

Sr. No.	Particulars	Category*	UOM	Quantity	Method of Disposal/Management
a	Used/Spent Oil	5.1	KL/A	0.1	Disposal through MPCB authorised recycler
*Schedule I of The Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016.					
20	Details of Non-Hazardous Solid Wastes				
Sr. No.	Particulars	Category	UOM	Quantity	Method of Disposal/Management
a	Boiler Ash	-	TPD	9.03	Boiler ash & Press Mud will be mixed together and Sold/ Use as manure
b	Press Mud	-	TPD	46 (Max)	
c	Yeast Sludge	-	TPD	28.04 (Max)	Sold/ Use as manure
d	CPU Sludge	-	TPD	2.75 (Max)	

4.0 Description of the Environment

Primary baseline environmental monitoring studies in 10-km radius study area were conducted through NABL approved laboratory – **Shreeji Aqua Laboratories** during **March 2022 – May 2022**

4.1 Topography, Land use & its Classification

The topographical setting of the study area shows a highly planar pattern with respect to elevation as it ranges between 328 m to 418 m MSL. The study shows that there are 4 LU/LC classes present within the area in 10km buffer area. In the 10km LU/LC map, the Agricultural land covers more than 90 % of the study area. The remaining regions cover less than 10 % of the entire region.

It is also observed that the study area is well connected to roads but no railway line which is passing within the 10 km radius of the study area. The water resource in the region is moderately distributed with respect to reservoirs in the 10 km radius study area. It could be interpreted that the area is dominated by agricultural activities (fallow land and cropland) wherever there is availability of water. Based on the physical characteristics and Land Use Land cover of the study area, it could be understood that there will be change in land use of project site from Wasteland and agriculture land to built-up land and hence land degradation will take place. This is a case of green field project and since the change in land use is minor, no mitigation measures were envisaged

4.2 Soil Environment

The soil samples were derived from 8 different locations within the study area of the project. Analysis results of the same revealed that the pH values of soil samples were varying in range of 7.4 to 8.4; which indicated Neutral to slightly alkaline nature of soil samples. The organic matter content in soils was varying between the ranges from 2.12-5.51%. The values for Nitrogen at all locations varied between 254 to 366.69 mg/kg. & maximum concentration of Nitrogen was

observed at location S6. Concentration of Phosphate was found to be in the range of 51.2 to 78.54 mg/kg. Whereas highest concentration was observed at location S6, while the lowest concentration was observed at location S3. Concentration of potassium amongst all locations was found to be ranging between 68.5 to 98.72 mg/kg. Heavy metals viz .As, Cr, Hg & Pb were below detection limit.

4.3 Air Environment

Ambient Air quality for criteria pollutants viz. PM₁₀, PM_{2.5}, NO_x, SO₂ and CO was monitored at eight (8) locations in study area whereas additional parameters viz. NH₃, C₆H₆, BaP, O₃, Pb and Ni, along with criteria pollutants were monitored at proposed project location.

Particulate Matter (PM₁₀)

The study reveals that maximum concentration was observed to be in the range of 52.3-62.3 µg/m³. The highest 24-hourly concentration was recorded at sampling location A3. At the same time minimum concentration was observed at location A1. The average concentration of PM₁₀ can be said to be ranged between 41.9-56.4 µg/m³. The high average concentration of particulate matter recorded at project site (A2) may be due to local vehicular movement on nearby unpaved road. During baseline period the distillery unit was non-operational. It should be noted that the concentration of PM₁₀ was not observed to be exceeding the standards prescribed by the CPCB on any occasion.

Particulate Matter (PM_{2.5})

The major source of PM_{2.5} is said to be the combustion of fossil fuels, fire wood and industrial emissions etc, present within study area. The maximum of PM_{2.5} (24.6 µg/m³) during the study period was recorded at location A2, whereas the minimum value (14 µg/m³) concentration was recorded at A1 location . The average concentration of PM_{2.5} during the study period was computed to be in the range of 17.25-25.32 µg/m³.

Sulphur Dioxide (SO_x)

High level of SO_x in ambient air indicates the presence of combustion of fossil fuel in the vicinity. The ambient air monitoring results indicate that the highest concentration of SO_x is experienced at A7. The presence of Kurghot-Malkavathe road and fuel burning within village are the principle source of emission for SO_x. The average concentration of SO_x recorded during the study period ranged between 12.87-17.82 µg/m³ respectively. It should be noted that maximum average concentration was recorded at location A3 while the lowest can be observed at location A4.

Oxides of Nitrogen (NO_x)

The various forms of Nitrogen in NO, NO₂ and N₂O are collectively called as Oxides of Nitrogen. The highest value of NO_x during the monitoring period was observed at location A2 while the minimum average was recorded at A5. The average concentrations were in the range of 18.74-26.47 µg/m³. The maximum 24 hourly value of NO_x was recorded at the monitoring location A8 (26.47 µg/m³) whereas the minimum concentration of NO_x was recorded at location A5 (18.74 µg/m³).

Carbon Monoxide (CO)

The anthropogenic source of CO is due to incomplete combustion of fuel majorly in absence of air. The maximum concentration of CO estimated at all locations during the study period can be observed is 0.09 mg/m³.

All the parameters were found to be within the desired limits specified by NAAQ Standard.

4.4 Noise Environment

Ambient noise levels were monitored at eight (8) locations in the study area during the study period.

Industrial Zone

The day time noise level at the project premises was observed to be 50.53 dB (A) while during night time the noise level was recorded to be 41.30 dB (A). It shall be noted that the noise levels during the day time as well as night time were estimated to be under the prescribed standards by CPCB.

Residential Zone

The minimum noise level recorded during the daytime was observed at location N3, whereas the maximum noise levels can be observed at location N5. The location N5 is well populated in the surroundings. It shall be noted that the permissible limits for noise did not exceed at any of the locations selected for sampling.

4.5 Ground Water Environment

It can be concluded that the prevailing ground water in study area is by & large not polluted.

The results revealed that values/ concentrations of various parameters amongst all the samples were in the range of pH – 7.66 to 8.22, TDS – 392.3 to 512.6 mg/l, Sulphates – 48.9 to 84.6 mg/l, Total Hardness – 138.6 to 218.9 mg/l, Nitrate – 16 to 38.9 mg/l, Bicarbonate – 65.3 to 112.3 mg/l, Calcium – 38.72 to 55.4 mg/l, Sodium – 42.2 to 76.54 mg/l, Potassium 16.2 to 69.6 mg/l, Magnesium – 10.21 to 18.1 mg/l, COD - <5.0 mg/l, BOD - <1.0 mg/l, whereas concentrations of Arsenic, Lead were <0.01 mg/l and that of Cadmium, Iron, Chromium, Mercury, Nickel & Zinc were below detection limit but at sample GW4 total hardness was 202.3 which is slightly above the limit, at sample GW8 TDS, Ammonical Nitrogen, Total Hardness & iron were above the limit. In all samples Total Coliforms & E. Coli were below detection limit but in sample GW8 it is slightly above the limit. Bhima River is passing through the study area therefore in some samples parameters like hardness, iron, E-coli, TDS, Ammonical Nitrogen were slightly above the limit in some sample.

Observations during ground water sampling revealed that any of the sampled ground water sources were not subjected to releases, domestic activities like bathing, cattle washing etc. However as evidenced during sampling & field visits the study area was subjected to tremendous agricultural runoff which may be attributed to found concentrations of Nitrogen, Sulphates & Phosphates in ground water samples.

Further to assess the prevailing quality of ground water in study area, the analysis results are compared with the IS 10500 : 2012 viz. Drinking Water Standards by Bureau of Indian Standards which revealed that parameters viz. pH, Chlorides, Sulphates, Nitrate, Arsenic, Calcium, Cadmium, Lead, Chromium, Mercury, Nickel, Zinc, Fluorides, were within acceptable

concentration. Whereas Total Coliforms, E. Coli and Iron, TDS, ammonical nitrogen, Hardness, of sample no. GW8 were slightly high because this well is near to the Bhima River. Whereas in other samples TDS & Magnesium were within permissible concentrations, However though the concentrations of COD, BOD, Sodium, Potassium & Phosphates being not specified in standards based on the specified standards it is can be interpreted that prevailing ground water in study area is fit for human consumption use, thus it can be concluded that the prevailing ground water in study area is by & large not polluted.

4.6 Surface Water Environment

Surface water samples were derived from 6 locations in different surface water bodies within study area, analysis results of the same revealed that pH values amongst all samples varied in the range of 7.3 to 7.6 , Total Hardness concentration varied in the range of 128.9 mg/l to 210.3mg/l & maximum concentration was recorded at SW3, TDS concentration varied in the range of 367.9 to 498.6 mg/l whereas maximum concentration 498.6 mg/l was recorded at SW3 & minimum concentration 367.9 mg/l at SW2. Electrical Conductivity was found to be ranging in between 564.6 to 767.07 μ S/cm. The concentrations of Dissolved Oxygen, BOD & COD were found to be varying in the range of 3.6 to 4 mg/l, 1 to 7 mg/l & 5 to 15 mg/l respectively whereas the concentrations of Phosphates, Nitrate & Ammonical Nitrogen varied in the range of 1.54 to 3.68 mg/l, 10.6 to 36.6 mg/l & 0.16 to 0.58 mg/l respectively.

Concentrations of elements such as Calcium, Sodium & Potassium were found to be in the range of 33.6 to 58.33 mg/l, 46.3 to 69.9 mg/l & 12.3 to 21.3 mg/l respectively.

Heavy metals viz. Lead, Chromium, Mercury, Cadmium, Arsenic & Nickel were below detection limits in all samples but in all Samples Total Coli Form and Fecal Coli Form were above the limit due to the contamination. In sample no. SW3 (Bhima river) Amonical Nitrogen, Total Hardness and iron were slightly above the detection limit due to the agricultural run off.

To ascertain the best suited use of sampled surface water bodies, the analysis results were compared with the Designated Best Use Water Quality Criteria & the analysis revealed that sampled surface water bodies in study area be suited for Class “E” Water i.e., Irrigation, Industrial Cooling, Controlled waste disposal.

4.7 Biotic Environment

Project site flora & fauna:

The scrub forest, wetland and grassland of study area support several ecological important plant species which plays crucial role for the conservation of birds, insects, and mammals. Total 137 plant species were reported during survey of which, 38 are tree species, 18 shrubs, 72 herbs and 9 were climbers. 11 odonates, 25 butterflies and 4 species of moths were also found during field visit, which shows a greater diversity. Species composition of insects is very peculiar of study area; total 25 insects were recorded of which beetles and bugs were more divers among all insect groups. 68 bird species were recorded in the study area, most of them around the water bodies and grassland. Mammals observed during field survey were 11 species which are mostly common, no threatened taxa have been reported from proposed project site. Reptiles and

amphibian's diversity were also noteworthy in study area, 8 reptiles and 4 frog species were documented from study area.

Biological environment of the area was studied during the study period. No endangered species have been sighted in the area. No Wildlife Sanctuary, National Park, Biosphere Reserves, Wildlife Corridors exists within study area of 10 km radius.

Species of concern category - None

Schedule I Species - None

4.8 Socio-Economic Environment

The 10 km study area includes 3 Talukas, 3 Districts of 2 statesie. Maharashtra & Karnataka. There are total 35 villages in the study area. The study area is essentially urban as well as rural in nature. The socio economics of study area is studied through primary and secondary survey. The socio-economic aspects of the study area are summarized in the table given below.

Table 2: Summary of Socio-Economic Aspects

Demographic Parameters	Details
No. of States	2
No. of District	2
No. of Tehsil	3
No. of Villages	35
Total No. of Households	23,468
Total Population	1,18,526
Child Population	16,083
Scheduled Castes	18,009
Scheduled Tribes	5,754
Literacy (Average)	Average: 71.27 %
Total Workers	56,716
Main Workers	49,424
Marginal Workers	7,292

Source: Primary Census Abstract & DCHB 2011, Solapur and Karnataka District, State Maharashtra and Karnataka

5.0 Anticipated Environmental Impacts and Mitigation Measures

Table 3: Summary of Impacts & Mitigations

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
Construction Phase				
1.	Air Quality	Dust during handling of cement/concrete/stone aggregates & other construction materials.	<p>The estimated generation would be around 8.268 tons/month of the activity.</p> <p>Exposure of construction workers to such dusts may lead to short term respiratory problems, whereas, prolonged & continuous exposure may lead to malfunctioning of lungs.</p> <p>The anticipated construction period will be 8 months after grant of all Environmental Clearance, Consent To Establish & all other Statutory Permissions.</p>	Proper loading and unloading of the materials to ensure minimum dust. Managing & covering the stockpiles. Regular sprinkling of water on the working site, Installing wind barriers around working site & all around the plot boundary for containing the dust.
2.	Noise Levels	Noise generated from construction machineries like Poelain, Lift Crane, Jack Hammer Drill, Digger, Compactor, Roller etc. & by use of construction equipments like Jack Hammer, Cutter, Drill Concrete vibrator etc. and by arrival & depart of transport vehicles.	It is anticipated that the cumulative noise levels by all construction machineries, equipments & activities at propagating at plant boundary will be in the range of 19.75 dBA to 21.32 dBA & propagating intensity of noise at distance of 100 m from plot will be 18.41 dBA, thus significant impacts outside plant premises are not anticipated.	PPEs viz. Ear Plugs/Muffs will be provided to workers, Construction activities will be limited from 9.00 AM to 5.00 PM, Installation of noise barriers around project plot will further minimize the intensity of propagating noise.

3.	Water Quality	Surface runoff generated Water used for construction activities mainly for concrete mixing, sprinkling etc. Sanitation waste water by construction workers.	If such runoff water & sanitation waste water finds way to surrounding soils & water body, may lead to contamination of surrounding soils & increased turbidity & contamination in water body.	The surface runoff generated during construction activities will be properly filtered and utilised for gardening or sprinkling & Mobile sanitation facilities will be provided to workers which will be periodically cleaned through night soil tankers.
4.	Construction & Demolition Wastes Management	Proposed project being a green field project demolition waste will not occur however inert construction wastes such as: Cardboards, Wooden Boxes, Wooden planks, Metal rods, HDPE bags, Felled Concrete, Stones, Aggregates & debris will be anticipated to be generated. Excavated/Dug soil/earth will be generated during site preparation activities.	Haphazard handling of such wastes may lead to advent of Rodents, Reptiles within project plot, thereby causing dangers to workers working on site. Disposal of such wastes on land will lead to degradation of soils.	Excavated/ dug soil/earth will be stored appropriately in dedicated space within project plot & will be used for green belt development activity along with mix of new soil. Inert construction wastes viz. Cardboards, Wooden Boxes, Wooden planks, Metal rods, HDPE bags will be stored in dedicated space & sold to recyclers. Felled Concrete, Stones, Aggregates & debris will be used as filling material for internal roads in consonance with Construction & Demolition Wastes Management Rules 2016.
Operational Phase				
1.	Air Quality	Utilities stack emissions viz. Particulate Matter, SO ₂ , NO _x & CO from boiler & D.G operations & Process emissions viz. CO ₂ & VOC's.	The anticipated maximum concentration of PM ₁₀ from steam boiler operations will be 0.19 maximum concentration of SO ₂ will be 1.23 & that of NO _x will be 1.96 g/m ³ , CO will be 0.173 g/m ³ .	1. ESP will be attached to stack of adequate height viz. 52 m based on CPCB calculations will be provided to the boiler efficient dispersion of emissions.

		<p>VOC emission generated due to the handling and storage of the Ethanol.</p> <p>Fugitive emissions from material transport vehicles.</p>	<p>which are likely to be carried in downwind direction.</p> <p>Anticipated health effects: People in downwind localities if prone to continuous & prolonged emissions may be susceptible to adverse health impacts related to respiratory & pulmonary due to particulate matter. Carbon monoxide decreases the oxygen carrying capacity of the blood by reducing the haemoglobin. The anticipated process generations are CO₂- 83.77 TPD, Which will be sent to CO₂ recovery plant.</p> <p>The health effects related to VOC's are eye, nose and throat irritation headaches.</p> <p>Environmental effects:</p> <p>The air emissions in long course of time may affect the immediate surrounding vegetation stature physically (leaf senescence, hampered growth etc.) & biologically thus may affect the overall surrounding ecology.</p>	<ol style="list-style-type: none"> 2. D.G will be provided with a stack of 4.5 m above roof as per CPCB guidelines for proper dispersion of emissions. 3. CO₂ Bottling plant is proposed for recovery of process emission. 4. Provision of closed feeding system for solvents. 5. The roads within the premises will be paved to avoid the dust generation from vehicular activity. 6. It will be ensured that all the transportation vehicles have a valid PUC (Pollution under Control) Certificate. 7. Regular sweeping of all the roads & floors will be done to avoid fugitive dust. 8. The proposed thick green belt of 10 m width along the plant periphery will help to capture the fugitive emissions. 9. Industry to ensure that at no point of time the air emission concentrations exceed the prescribed CPCB/Consented standards.
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2.	Noise Quality	Operation of Steam Boilers, Cooling Towers, Pumps, Blowers & material transport vehicles.	<p>It is anticipated that the cumulative noise levels by all machineries, equipment's & operation activities at propagating at plant boundary will be in the range of 2.17 dBA to 4.31 dBA.</p> <p>Impacts of exposure to continuous & prolonged noise would be Temporary/Permanent hearing loss, Mental disturbances Increase in heart rate Reduced workers performance due to psychiatric disorder and Tinnitus in case of high level of noise exposure on regular basis.</p> <p>The intensity of propagating noise at a distance of 100 m from plot boundary will be 2.15 dBA, thus significant impacts outside plant premises are not anticipated.</p>	<p>1. Acoustic enclosures will be provided to high noise generating equipment for attenuation of noise level during operation.</p> <p>2. Steam boilers will be placed in a confined space viz. boiler house where the surrounding walls will acts as a barrier for propagating noise.</p> <p>3. PPE's viz. Ear muffs/plugs will be provided to workers working near noise generating equipment's.</p> <p>4. The proposed thick green belt of 10-20 m width along the plant periphery will help to further minimise the intensity of propagating noise out of plant premises.</p>
3.	Water Quality	<p>1. Effluent from process, washings, Backwashes.</p> <p>2. Boiler & Cooling Tower blow-downs.</p> <p>3. Domestic wastewater.</p>	<p>The anticipated treated effluent characteristics area: pH - 7.5 to 8.0, TSS < 100 mg/lit., BOD < 100 mg/lit., COD < 250 mg/lit., TDS < 2100 mg/lit. and Oil & Grease < 10 mg/lit.</p> <p>Accidental/Deliberate release of treated/un-treated effluents in surface water bodies may lead to contamination/ eutrophication/ acidification/ toxification of the</p>	<p>For efficient treatment of the spent wash separated using analyser column followed by MEE and after that Spent wash will be burnt in incineration boiler ; The condensate from MEE unit will be collected and it will be further treated in CPU of 1500 KL Capacity along with other effluent streams like Spent Lees, Blowdowns from Boiler and</p>

			<p>subjected water bodies and in of case land may lead to complete degradation of subjected land affecting, also may contaminate the ground water by way of percolation.</p> <p>Such affected soils, Surface water & ground water sources cannot be used for any purpose & depending terrestrial & aquatic ecology will be completely affected.</p>	<p>Cooling Towers, Sealing water, WTP reject and Washing effluent.</p> <p>The CPU will be consist of Primary, Secondary and Tertiary unit</p> <p>Domestic effluent load will be connected and treated in secondary treatment facility.</p>
4.	Solid Waste Management - Hazardous	<p>1. Hazardous waste i.e. Spent oil generated from DG and maintenance of the plant.</p> <p>2. Hazardous waste generated from maintenance operations.</p>	<p>Unscientific handling & disposal may lead to contamination of surrounding soils, water sources & there by affecting the ecology & health of the workers coming in direct contact with the hazardous waste like skin allergies/rashes/burns etc.</p>	<p>1. Spent oil generated from project activities will be handled, stored and will be burn into incineration boiler with other fuels.</p>
5	Solid Waste Management (Non-Hazardous Inert Waste)	<p>1. Scrap Metal</p> <p>2. Scrap Plastic</p> <p>3. Office Waste</p> <p>4. Canteen Waste</p> <p>5. Wooden Pallets</p> <p>6. Boiler Ash</p> <p>7. CPU Sludge</p> <p>8. Dry Spent wash powdered</p> <p>9. Yeast Sludge</p>	<p>Hap-hazard handling & storage may lead to inadequate open space in plant premises & it may lead to rodent breeding thereby affecting the occupational health & environment.</p>	<p>1. Designated area for Scrap materials (Metal, Plastic, Wooden Pallets, Office Waste) storage will be provided in the plant.</p> <p>2. Scrap materials will be recycled through scrap vendors.</p> <p>3. Daily housekeeping waste and canteen waste will be disposed through vermin composting facility (off-site).</p> <p>4. Boiler ash – 9.03 TPD</p> <p>5. Press Mud 46 TPD (Boiler ash</p>

				& Press Mud will be mixed together and Sold/ Use as manure) 6. CPU Sludge- 2.75 TPD, Yeast Sludge – 28.04 TPD & Use as manure
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Ampra Distilleries Pvt. Ltd.	Executive Summary for Proposed 110 KLPD Multi-Feed Stock (Syrup / B Molasses / C Molasses / Grain) Based Distillery Unit along with 2 MW Co-gen Plant at Gat No-257/5, Village- Mandrup, Tal-South Solapur, Dist- Solapur, Maharashtra.
EXECUTIVE SUMMARY	

6.0 Quantitative Risk Assessment and Mitigation Measures

Quantitative Risk for proposed project has been assessed based on ALOHA for tank storages.

Based on the unsafe distances plotted in ALOHA software output, the MCLS (Maximum Credible Loss Scenario) for proposed factory is identified for Ethanol & the anticipated effect distance is 40 from Ethanol PESO area in factory premises.

The scenario considered for assessing the impact by quantitative risk assessment was taken from Thermal radiation from pool fire

7.0 Disaster Management Plan

Disaster Management Plan will be implemented in consultation with the District Administration to take care of health and safety during any untoward incident.

In view of handling of processes in industry, On-site Emergency Plans are important and hence has been prepared for the industry. Additionally recommendations for and Off-site shall be provided to the District Administration. During operational phase, surrounding population shall be made aware of safety precautions to be taken in case of any emergency situation due to the overall project activity.

8.0 Occupational Safety & Health Management

The Project Proponent shall continue to strictly adhere to the rules of Factories Act 1948 & the Maharashtra Factories Rules, 1963 regarding the occupational health facilities to be provided to the workers of the company.

- Industry will provided decontamination facilities for the workers. The health records of the workers will be maintained.
- For the continuous and continual development, company will continue to train & educate the operators and workers with the environment, health & safety rules & regulation, procedure and measures.
- Periodic medical check-ups will be carried out to ensure the health status of the all workers.
- Job rotation will be done.

9.0 Post Project Environmental Monitoring Plan

Post project environmental status will be evaluated as per the Environmental Monitoring Plan framed in EIA along with additional parameters suggested if any Statutory Clearances/Permissions and frequency of environmental attributes including monitoring locations will be as per the guidelines provided by MoEF&CC/CPCB/MPCB. Monitoring shall be carried out by third party laboratories that are accredited by NABL and/or MoEF&CC.

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10.0 Environmental Management Plan

Conduction of Environmental monitoring program as per plan, periodic reviews & audits will be carried out for effective environmental management. Project Management along with EHS department will ensure overall effective implementation of the management plan.

Systems will be in place to ensure compliance of all environmental statutory requirements & obligations and it will be ensured.

All recommendations given in the EIA report including that of occupational health, risk mitigation and safety shall be complied. Company have allocated Indian Rs. 3317.39 Lakh for environmental pollution control measures & environment management plan activities; which is ~23.45 % of total project cost.

11.0 Project Benefits

The following benefits are expected from the proposed project:

- This project will have locale specific positive social and economic benefits.
- Some of these would be direct benefits of long term nature.
- The project will generate revenue for the State Government.
- The project will create additional direct/indirect employment at various downstream & upstream ends and largely for local people.
- Local people will be preferred for employment during the construction and operation stage.

12.0 Corporate Environment Responsibility (CER) Action Plan

Ideally CER planning is envisioned from the perspective of need based assistance in health, education, sustainable lifestyles, social mobilization, infrastructure, water harvesting, agriculture and environmental protection taking into consideration locale specific scenarios around the project area.

Company will carry out its duties under Corporate Environment Responsibility (CER) as per the MoEF&CC Office Memorandum - F.No.22-65/2017-IA.III dtd. 30th September 2020, by virtue of which the CER activities will be implemented as part of Environment Management Plan.

CER cost of 1.5% of proposed project cost viz. 2.121 Cr is allocated for implementation of need based CER activities in project area.