EXECUTIVE SUMMARY

1.0 Introduction

M/s. Raja Rum Rye Pvt. Ltd. (RRRPL) proposes Establishment of 3 KLPD Mahua Flower Based Distillery Unit along with Liquor Bottling unit of capacity 334 Cases per day for manufacturing of Potable Alcohol.

(RRRPL) is a registered company incorporated as company limited on 31.07.2024 with Corporate Identity Number – **U11012PN2024PTC233166**. **Project Location**

The proposed project would be located at Gat No. 670-A-2, Plot No. 85, 86, 87 and 117, Shree Samarth Sahakari Audyogik Vasahat Ltd., Pimpalgaon Baswant, Taluka Niphad, District Nashik, State Maharashtra, Pimpalgaon Baswant Taluka Niphad D, Nashik, Maharashtra, 422209.

As per geographical co-ordinates of the project site, the proposed activity is majorly covered under SOI Toposheet No.- 47 H/15 & 47 H/16, 47 L/3 & 47 L/4., while the study area of the project (10 km radius) is falling under SOI Toposheet No: 47 H/15 & 47 H/16, 47 L/3 & 47 L/4. The project is located at elevation of 614 meters above mean sea level (AMSL).

2.0 Project Description

As mentioned above, it is a new establishment project having capital investment of **Rs. 9.5657 Crores**.

This project requires prior environmental clearance under **schedule 5(g)** of the Environment Impact Assessment Notification published by MoEF&CC vide S.O. 1533 dated 14th September, 2006 and its amendment till date. RRRPL will be appraised as **Category B1** project which mandates obtaining prior Environmental Clearance from State Expert Appraisal Committee (SEAC) and State Environment Impact Assessment Authority (SEIAA). As per Office Memorandum dated 04.04.2016 regarding exemption from public consultation for the projects located or to be located in notified industrial areas, **Public Hearing is applicable** for this project.

Accordingly, **RRRPL** has issued **granted ToR** on **20.09.2025** vide reference number **SIA/MH/IND2/543987/2025** for preparation of draft EIA report.

Table No. 2: Salient Features of Project

Sr. No.	Component	Details
1	**Name & Address of Company**	M/s. Raja Rum Rye Pvt. Ltd. Gat No. 670-A-2, Plot No. 85, 86, 87, 117, Shree Samarth Sahakari Audyogik Vasahat Ltd., Pimpalgaon, Baswant, Taluka Niphad, District Nashik, State Maharashtra.
2	**Product Type**	Proposed Establishment of 3 KLPD Mahua Flower Based Distillery Unit along with Liquor Bottling unit of capacity 334 Cases per day

Sr. No.	Component	Details	
		for manufacturing of Potable Alcohol	
3	**Project Type**	New	
4	**Schedule of project as per EIA Notification, 2006**	5(g)	
5	**Category of Project***	'B1'	
6	**Plot Area Details**		
	Particulars	**Area in Sq. m.**	**% of Total Plot Area**
a	Built up	420.00	37.6 % of total plot area
b	Greenbelt	370.00	33 % of total plot area
c	Parking	120.00	10.73 % of total plot area
d	Internal Road	208.00	18.6 % of total plot area
•	**Total Plot Area**	**1118.00**	**100%**
7	**Production Details**		
	Name of Product/ By-product		
1	Mahua Liquor	3000 Litres/Day @ 43 % v/v of alcohol	
2	Bottling Unit	334 Cases/Day (180ml x 48 Nos. per case)	
	By-products		
3	Fusel Oil	0.015 KL/D	
8	**Budgetary Estimation**		
a	Project Cost (Indian Rs.)	Rs. 9.56 Crores	
b	EMP Cost (Indian Rs.)	Capital: 81.7 Lakhs, Recurring/Annum: 10.4 Lakhs Demolition Cost: Rs. 10 Lakhs.	
9	**Power Requirement**		
a	Existing Connected Load	Proposed Operating Load : 150 KW Proposed Connected Load : 170 KW	

Section	Operating Load (KW)	Connecting Load (KW)
Mahua Handling	5	5
Fermentation	10	10
Pot Still Distillation	10	10
Primary & Secondary ETP	30	30
Alcohol Receiver & Storage Section	5	10
Chiller/ Cooling Tower & Pumps for Ferm. & Dist.	30	30

<table>
<tr><th>Sr. No.</th><th>Component</th><th>Details</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Air Compressor & WTP</td><td>10</td><td>15</td></tr>
<tr><td>Plant & yard Lighting</td><td>5</td><td>5</td></tr>
<tr><td>Boiler</td><td>15</td><td>25</td></tr>
<tr><td>Bottling House</td><td>15</td><td>15</td></tr>
<tr><td>Miscellaneous (Fire-fighting, Weigh bridge, etc.)</td><td>15</td><td>15</td></tr>
<tr><td>Total</td><td>150</td><td>170</td></tr>
</table>
</td></tr>
<tr><td>b</td><td>Source</td><td>MSEDCL</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>10</td><td colspan="2">Fuel Requirement</td></tr>
<tr><td></td><td>Fuel</td><td></td></tr>
<tr><td>a</td><td>Wood chips Briquettes</td><td>2.6 TPD</td></tr>
<tr><td>b</td><td>HSD</td><td>30 Lit./Hr.</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>11</td><td colspan="2">Diesel Generator (D.G.) Details</td></tr>
<tr><td></td><td>DG Set Capacity</td><td>125 KVA</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>12</td><td colspan="2">Boiler Details</td></tr>
<tr><td>a</td><td>Steam Boiler</td><td>1 TPH</td></tr>
<tr><td>b</td><td>Pressure</td><td>10.5 Kg/cm^2</td></tr>
<tr><td></td><td>Temperature</td><td>180 °C</td></tr>
<tr><td></td><td>Fuel</td><td>Wood Chips Briquettes</td></tr>
<tr><td></td><td>APCD</td><td>Bag Filter</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>13</td><td colspan="2">Stack Details</td></tr>
<tr><td>a</td><td>Boiler</td><td>30 m</td></tr>
<tr><td>b</td><td>D.G.</td><td>5 m</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>15</td><td>Man Power</td><td>Skilled: 10 Nos
Unskilled: 20 Nos
Total: 30 Nos</td></tr>
<tr><td>16</td><td colspan="2">Water Requirement</td></tr>
<tr><td></td><td>Particular</td><td>Quantity (m^3/day)</td></tr>
<tr><td></td><td>Water requirement quantity & its source</td><td>Industry Process:
1st cycle : 37.12 KLD
2nd cycle : 9.80 KLD (3.26 KL/KL)
After recycling RWH water during monsoon ; fresh water requirement : 5.65 KLD (1.88 KL/KL)
Source- Ground Water and ETP Recycle Water
Domestic and Greenbelt: 1.908 KL/Day</td></tr>
<tr><td>17</td><td colspan="2">Effluent Generation & Recycle Details</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Component</th><th>Details</th></tr>
<tr><td></td><td>Effluent</td><td>Effluent in ETP 13.69 CMD ,Domestic Sewage 1.08 CMD Zero effluent is generated from industrial activities as the water used for cooling is re-circulated back into the process. RRRPL shall be adopting Zero Liquid Discharge as no any effluent will be discharged within or outside industrial premises.</td></tr>
<tr><td>18</td><td colspan="2">Details of Effluent Load</td></tr>
<tr><td>a</td><td>Effluent streams</td><td>
<table>
<tr><th>SN</th><th>Source</th><th>Quantity in KLD</th></tr>
<tr><td>1</td><td>Domestic</td><td>1.08</td></tr>
<tr><td>2</td><td>Boiler Blowdown</td><td>0.656</td></tr>
<tr><td>3</td><td>Process & Washing water (Spent Lees)</td><td>1.935</td></tr>
<tr><td>4</td><td>Cooling tower Blowdown</td><td>0.979</td></tr>
<tr><td>5</td><td>Spent wash</td><td>10.11</td></tr>
<tr><td></td><td>Total</td><td>14.76</td></tr>
</table>
</td></tr>
<tr><td>b</td><td>ETP Scheme</td><td>Spent wash, spent lees with other effluents will be treated in ETP consisting of Primary (Collection tank, Equalization tank, Primary Clarifier/Primary Settling Tank) followed by Secondary treatment Anaerobic Reactor, clarifier, aeration tank and Tertiary (MGF and ACF for treatment of 13.69 CMD of trade effluent. Treated effluent will be recycled into process for various purposes such as cooling, process with metering system so as to achieve Zero Liquid Discharge (ZLD). Domestic sewage generated will be treated in septic tank followed by soak pit.</td></tr>
<tr><td>19</td><td colspan="2">Details of Hazardous Wastes</td></tr>
</table>

Sr. No.	Particulars	Category*	UOM	Quantity	Method of Disposal/Management
1.	Used Oil/Spent Oil	5.1	KL/A	0.5	Disposal through MPCB authorised recycler
20	**Details of Non-Hazardous Wastes**				
1.	Boiler ash (from burning wood chips briquettes)	-	TPD	0.30	Sold to brick manufacturing unit
2.	ETP Sludge	-	TPD	0.036	Sold or used as manure
3.	Waste from Cooking Process (Solid residue of mahua flower)	-	TPD	0.50	Used as manure
4.	Broken glass	-	Kg/M	2	Sold to recyclers
5.	Dry Waste	-	Kg/Day	4.5	Sale to authorized vendor
6.	Wet Waste	-	Kg/Day	3	Used as manure
7.	Spent Mahua	-	TPD	4.51	Used as manure
	*Schedule I of The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.				
21	**Details of E-Waste Wastes**				

Sr. No.	Component		Details			
	a	Personal Computing: Personal Computers (Central Processing unit with input and output devices)	Schedule – IIB (Code: ITEW2)	Kg/ Year	15	Sale to authorized CPCB recycler
	b	Personal Computing: Laptop Computers (Central Processing unit with input and output devices)	Schedule – IIB (Code: ITEW3)	Kg/ Year	4	Sale to authorized CPCB recycler
	c	Printers including cartridges	Schedule – IIB (Code: ITEW6)	Kg/ Year	6	Sale to authorized CPCB recycler
	d	Telephones	Schedule – IIB (Code: ITEW12)	Kg/ Year	1	Sale to authorized CPCB recycler
	e	Inverter	Schedule – IIC (Code: ITEW25)	Kg/ Year	55	Sale to authorized CPCB recycler
	f	Video Cameras	Schedule – IIC (Code: CEEW9)	Kg/ Year	4	Sale to authorized CPCB recycler
	g	Video Recorders	Schedule – IIC (Code: CEEW10)	Kg/ Year	3	Sale to authorized CPCB recycler
	h	Electric fans	Schedule – IIC (Code:	Kg/ Year	13	Sale to authorized CPCB recycler

Sr. No.	Component	Details				
			LSEEW14)			
			Total	**101**	--	

3.0 Description of the Environment

Primary baseline environmental monitoring studies in 10 Km radius study area were conducted through NABL approved laboratory – Ultra Tech Environmental Consultancy and Laboratory Pvt. Ltd during October 2025 to December 2025.

3.1 Topography, Land use & its Classification

The elevation of the region varies from 473 m to 777 m. The physical setting of study area shows a relatively regular pattern with patches of higher elevations as well as lower elevations. Patches in the South Western region shows a relatively lower elevation feature. A portion extending from North to South East shows a higher elevation region. This elevation pattern also affects the drainage pattern of the region. The region is occupied by Rivers & Lakes. The area shows a variation of approximately 29 m-198 m from North East to South West and approximately 50 m-220 m from North West to South East.

The topographical setting of the study area shows a regular pattern with certain regions having high and low elevations. The elevation in the region ranges between 473 m to 777 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 Barren Land covers 47 % of the study area. The Agriculture land (19 %), Built-Up Area (34 %), as well as the Waterbody (less than 1 %) covers the remaining regions of the study area (approx. 53%). It is also observed that the study area is well connected to roads but not railway lines that are passing within the 10 km radius of the study area.

The water resource in the region is well distributed with respect to drainage pattern in the 10 km radius study. The region is occupied by a few water bodies. 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 agriculture land, barren land and waste 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.

3.2 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 7.1-7.9; which indicated slightly alkaline nature of soil samples. The organic matter content in soils was varying between the range from 0.8-1.6 percent. The values for Nitrogen at all locations varied between 283 – 356 mg/Kg. & maximum concentration of Nitrogen was observed at location S4. Concentrations of Phosphorous were found to be in the range of 21 to 39 Kg/Ha. Whereas highest concentration was observed at location S2, while the lowest concentration was observed at location S8. Concentration of potassium amongst all locations

was found to be ranging between 53 to 64 mg/kg. Heavy metals viz. As, Cr, Hg & Pb, Ni and Zn were below detection limit.

3.3 Air Environment

Ambient Air quality for criteria pollutants viz. PM_{10}, $PM_{2.5}$, NOx, SO_2 and CO was monitored at eight (8) locations in study area whereas additional parameters viz. NH_3, C_6H_6, BaP, O_3, Pb and Ni, along with criteria pollutants were monitored at proposed project location.

Particulate Matter (PM_{10})

The study reveals that maximum concentration was observed to be in the range of 51-75 $\mu g/m^3$. The highest 24-hourly concentration was recorded at sampling location A2. At the same time minimum concentration was observed at location A4. The average concentration of PM_{10} can be said to be ranged between 49 - 66 $\mu g/m^3$. The high concentration of particulate matter is recorded at A2 may be due to local vehicular movement as the location is nearest to highway. It should be noted that the concentration of PM_{10} 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 $PM_{2.5}$ (33 $\mu g/m^3$) during the study period was recorded at location A2, whereas the minimum value (13 $\mu g/m^3$) concentration was recorded at A7 location . The average concentration of $PM_{2.5}$ during the study period was computed to be in the range of 18 to 27 $\mu g/m^3$.

Sulphur Dioxide (SO_x)

High level of SO_X in ambient air indicates the presence of combustion of fossil fuel in the vicinity. The maximum of SO_X (19 $\mu g/m^3$) during the study period was recorded at location A9, whereas the minimum value (8 $\mu g/m^3$) concentration was recorded at A4 location. The average concentration of SO_X during the study period was computed to be in the range of 6 to 14 $\mu g/m^3$.

Oxides of Nitrogen (NOx)

The various forms of Nitrogen in NO, NO_2 and N_2O are collectively called as Oxides of Nitrogen. The highest value of NO_X during the monitoring period was observed at location A9 while the minimum average was recorded at A8. The average concentrations were in the range of 10 to 20 $\mu g/m^3$.

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 1.4 mg/m^3.
All the parameters were found to be within the desired limits specified by NAAQ Standard.

Additional Parameters

From the monitoring results of additional parameters as given in **Table 3.20**, it is evident that Lead, Ozone, Benzene, Benzo (a) pyrene, Arsenic, Nickel and VOC's were below detection limit. Ammonia concentration ranges in between 12-18 micro mg/m^3. Thus it is concluded that the concentration of additional parameters at project was also within the prescribed NAAQS, 2009.

3.4 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 60.1 dB (A) while during night time the noise level was recorded to be 51.7 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 N5, whereas the maximum noise levels can be observed at location N8. The location N8 is surrounded by industrial area hence can give rise to high noise level in the surroundings. It shall be noted that the permissible limits for noise did not exceed at any of the locations selected for sampling.

3.5 Ground Water Environment

The above results revealed that values/ concentrations of various parameters amongst all the samples were in the range of pH – 7.3 to 8.1, TDS – 258 to 2016 mg/l, Sulphates – 38 to 488 mg/l, Phosphates – BDL, Total Hardness – 177 to 1012 mg/l, Nitrate – 0.5 to 1.4 mg/l, Bicarbonate – 160 to 611 mg/l, Calcium – 27 to 207 mg/l, Sodium – 15 to 351 mg/l, Potassium 0.5 to 4.2 mg/l, Fluoride – 0.4 – 0.7 mg/l, Magnesium – 6 to 134 mg/l, COD - <5.00 mg/l, BOD - <1.00 mg/l, Iron - BDL whereas concentrations of Arsenic, Lead were <0.01 mg/l and that of Cadmium, Chromium, Mercury, Nickel & Zinc were <0.001 mg/l, <0.05 mg/l, <0.001 mg/l, <0.01mg/l & <0.05 mg/l respectively. Total Coliforms & E. Coli were absent in all samples.

3.6 Surface Water Environment

Surface water samples were derived from 8 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 7.1 -8.0, Total Hardness concentration varied in the range of 87 mg/l to 274 mg/l & maximum concentration was recorded at SW7, TDS concentration varied in the range of 206 mg/l to 468 mg/l respectively whereas the concentrations of Phosphates, Nitrate varied in the range of 0.12 to 0.45 mg/l, 0.4 to 1.1 mg/l respectively. Concentrations of elements such as Calcium, Sodium & Potassium were found to be in the range of 29 to 49 mg/l, 10 to 44 mg/l & 0.4 to 4.2 mg/l respectively.

Heavy metals viz. Lead, Chromium, Mercury, Cadmium, Arsenic & Nickel, Zinc were below detection limits in all samples whereas the concentration ranges of metals viz. Boron & Magnesium were 0.2-0.5 mg/l , 4-40 mg/l respectively.

3.7 Biotic Environment

Based on the field survey, Total 161 plant species were reported during survey of which, 79 are tree species, 29 shrubs, 22 herbs and 14 were climbers. 17 grass species. of which 6 were dragonflies and damselflies, 13 butterflies were also found during field visit, which shows a greater diversity. Species composition of insects is very peculiar of study area; total 10 insects were recorded of which beetles and bugs were more divers among all insect groups. 35 bird species were recorded in the study area, most of them around the water bodies and grassland. Mammals observed during field survey were 5 species. Reptiles and amphibian's diversity were also noteworthy in study area, 3 reptiles and 4 amphibian species, were documented from study area. Also, list of Schedule I species found during survey and secondary data is enclosed in the draft EIA report and proposed biodiversity conservation plan is made accordingly and submitted in the draft EIA report.

3.8 Socio-Economic Environment

The 10 km study area includes Taluka Niphad, District Nashik,. There are total 44 villages in the study area. The study area is essentially urban 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	1
No. of District	1
No. of Tehsil	3
No. of Villages	77
Total No. of Households	33,004
Total Population	1,76,870
Child Population	22,597
Scheduled Castes	15,033
Scheduled Tribes	51,916
Literacy	82.59 % (Average)

Source: Primary Census Abstract 2011(link has given above)

4.0 Anticipated Environmental Impacts and Mitigation Measures

Figure 1A: Summary of Anticipated Impacts and its Mitigation Measures (Construction Phase)

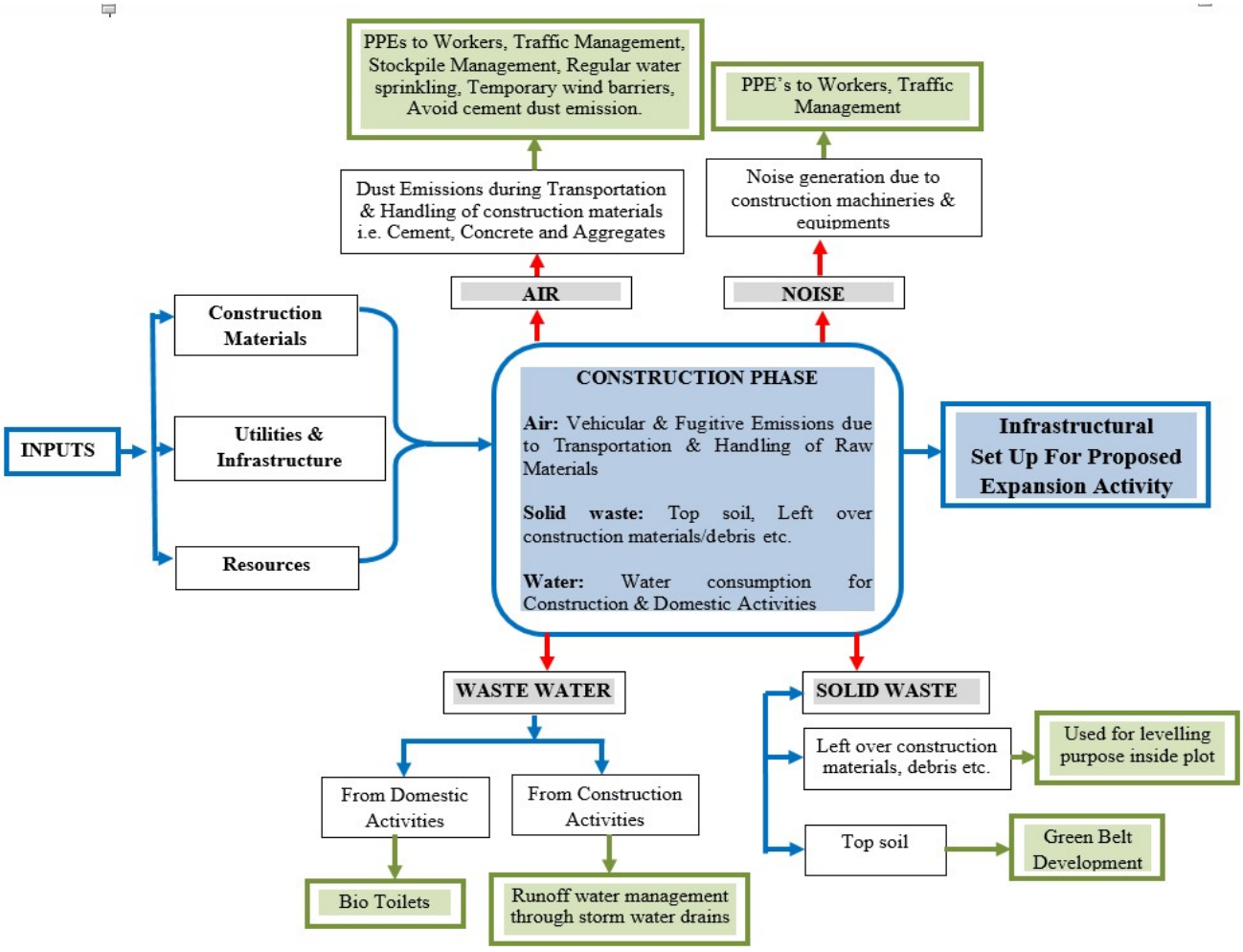

Figure 1B: Summary of Anticipated Impacts and its Mitigation Measures (Operation Phase)

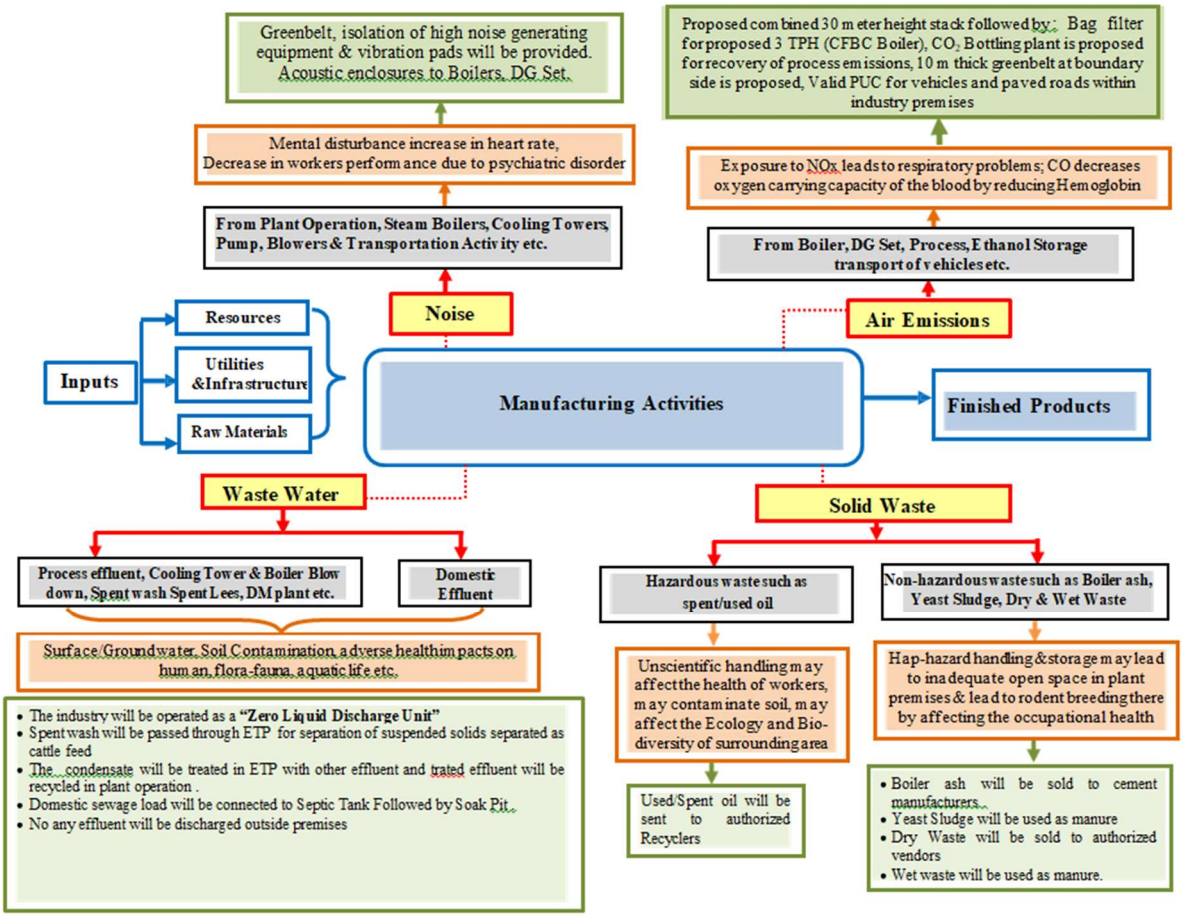

Table 3: Summary of Anticipated Impacts and its Mitigation Measures

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.	Exposure of construction workers to such dusts may lead to short term respiratory problems, whereas, prolonged & continuous exposure may lead to malfunctioning of lungs. The anticipated construction period will be 8 months after grant of all Environmental Clearance, Consent To Establish & all other Statutory Permissions.	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 Poclain, Lift Crane, Jack Hammer Drill, Digger, Compactor, Roller etc. & by use of construction equipment 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, equipment & activities at propagating at plant boundary will be within a range. 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 &	Proposed project being a green	Haphazard handling of such	Excavated/ dug soil/earth will be

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
	Demolition Wastes Management	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 are anticipated to be generated. Excavated/Dug soil/earth will be generated during site preparation activities.	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.	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, NOx & CO from boiler & D.G operations & Process emissions viz. CO_2 & VOC's. VOC emission generated due to the handling and storage of the Ethanol.	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.	1. Bag Filter will be provided as APC equipment. 2. D.G set of 125 KVA will be provided with a stack of 5 m above roof as per CPCB guidelines for proper dispersion of emissions. 3. The roads within the premises

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
		Fugitive emissions from material transport vehicles.	The health effects related to VOC's are eye, nose and throat irritation headaches. Environmental effects: 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.	will be paved to avoid the dust generation from vehicular activity. 4. It will be ensured that all the transportation vehicles have a valid PUC (Pollution under Control) Certificate. 5. Regular sweeping of all the roads & floors will be done to avoid fugitive dust. 6. The proposed thick green belt along the plant periphery will help to capture the fugitive emissions. 7. Industry to ensure that at no point of time the air emission concentrations exceed the prescribed CPCB/Consented standards.
2.	Noise Quality	Operation of Steam Boilers, Cooling Towers, Pumps, Blowers & material transport vehicles.	It is anticipated that the cumulative noise levels by all machineries, equipment & operation activities at propagating at plant boundary will be within a limit	1. Acoustic enclosures will be provided to high noise generating equipment for attenuation of noise level during operation.

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
			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. The intensity of propagating noise at a distance of 100 m from plot boundary will be almost nil, thus significant impacts outside plant premises are not anticipated.	2. Boiler will be placed in a confined space viz. boiler house where the surrounding walls will acts as a barrier for propagating noise. 3. PPE's viz. Ear muffs/plugs will be provided to workers working near noise generating equipment. 4. The proposed thick green belt along the plant periphery will help to further minimise the intensity of propagating noise out of plant premises.
3.	Water Quality	1. Effluent from process, washings, Backwashes. 2. Boiler & Cooling Tower blow-downs. 3. Domestic wastewater.	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. Accidental/Deliberate release of treated/un-treated effluents in surface water bodies may lead to contamination/ eutrophication/ acidification/ toxification of the subjected water bodies and in of case land may lead to complete	Spent wash generated will be sent treated in ETP, Blow downs from Boiler and Cooling Towers, Sealing water, and Washing effluent. Domestic effluent load will be connected and treated in Septic tank followed by Soak Pit. No any effluent will be discharged within and outside premises. It will be a ZLD unit.

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
			degradation of subjected land affecting, also may contaminate the ground water by way of percolation. Such affected soils, Surface water & ground water sources cannot be used for any purpose & depending terrestrial & aquatic ecology will be completely affected.	
4.	Solid Waste Management - Hazardous	1. Hazardous waste i.e. Spent oil generated from DG and maintenance of the plant. 2. Hazardous waste generated from maintenance operations.	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.	1. Spent oil generated from project activities will be handled, stored and disposed as per Hazardous Waste Management Rule, 2016 and its amendments till date.
5.	Solid Waste Management (Non Hazardous Inert Waste)	Non-hazardous solid waste like boiler ash, CPU sludge, Broken glass, Dry Waste, Wet waste	Haphazard handling & storage may lead to inadequate open space in plant premises & it may lead to rodent breeding thereby affecting the occupational health & environment.	1. Designated area for Scrap materials storage will be provided in the plant. 2. Scrap materials will be recycled through scrap vendors. 3. Boiler ash – 0.30 TPA will be used in brick manufacturing unit. 4. ETP Sludge- 0.036 TPD will be used/sold as Manure.

5.0 Quantitative Risk Assessment and Mitigation Measures

Quantitative Risks for the proposed project have been assessed based on ALOHA for tank storage.

Based on the unsafe distances plotted in ALOHA software output, the MCLS (Maximum Credible Loss Scenario) for the proposed factory is identified for Ethanol.

The scenario considered for assessing the impact by quantitative risk assessment was taken from Evaporating puddle of flammable chemical (All tank leakage is considered) – Toxic area of vapour cloud.

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 incidents.

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 On-site 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 due to the overall project activity.

8.0 Occupational Safety & Health Management

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

- The industry will provide decontamination facilities for the workers. The health records of the workers will be maintained.
- For continuous development, the company will continue to train & educate the operators and workers on the environment, health & safety rules & regulations, procedures and measures.
- Periodic medical check-ups will be carried out to ensure the health status of 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 has been carried out by third party laboratories that are accredited by NABL and/or MoEF&CC.

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 and 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 Corporate Environment Policies of RRRPL are strongly adhered to all time.

All recommendations given in the EIA report including that of occupational health, risk mitigation and safety shall be complied. RRRPL have allocated Indian Rs. 1.817 Crore for environmental pollution control measures & environment management plan activities; which is ~19 % of total project cost.

11.0 Project Benefits

The following benefits are expected from the proposed project:

- This project of RRRPL 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.

Industry will carry out its duties under Corporate Environment Responsibility (CER) as per the MoEF&CC Office Memorandum - F.No.22-65/2017-IA.III dated 30th September, 2020 by virtue of which the CER activities will be implemented as part of Environment Management Plan. The proposed CER activities will be carried out in consultation with the District Collector and the same shall be completed within three (3) years or by the end of construction phase, whichever is earlier.

CER cost of 2% of proposed project cost viz. Rs. 19.12 Lakhs is allocated for implementation of need based CER activities in project area.