

**Executive Summary of Environmental Impact Assessment
(Draft EIA) Report**

For

**Proposed Establishment of 80 KLPD Grain based
Distillery, 10 KLPD Malt Spirit Distillery alongwith IMFL
and Country Liquor Manufacturing unit**

By

**M/s. Grand Western Distilleries Private Limited
(GWDPL)**

At

**Plot No. E-12/1, MIDC's Shirala Growth Center, Taluka
Shirala, Dist.: Sangli, State Maharashtra.**

Environmental Consultant

Element Consultancy Services, Pune, Maharashtra

QCI-NABET Accredited Organization

EXECUTIVE SUMMARY

1.0 Introduction

M/s. Grand Western Distilleries Private Limited (GWDPL) proposes establishment of 80 KLPD Grain based Distillery, 10 KLPD Malt Spirit Distillery along with IMFL and Country Liquor manufacturing unit.

GWDPL is a registered company incorporated as company limited on 19.10.2023 with Corporate Identity Number – U47221PN2023PTC225031. Copy of Certificate of Incorporation is enclosed at **Annexure-1** of draft EIA report.

2.0 Project Location

The proposed project would be located at Plot No. E-12/1, MIDC's Shirala Growth Center, Taluka Shirala, Dist.: Sangli, State Maharashtra.

As per geographical co-ordinates of the project site, the proposed activity is majorly covered under SOI Toposheet No.- 47 K4, while the study area of the project (10 km radius) is falling under SOI Toposheet No: 47 K4 & 47 L/1. The project is located at elevation of 2233 meters above mean sea level (AMSL).

3.0 Project Description

As mentioned above, it is a new establishment project having capital investment of **Rs. 146.35 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. GWDPL 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.

Industry has submitted an application for Consent to Establish at MPCB. Copy of the same is enclosed at **Annexure-2**. Moreover, in line with the statutory requirement, GWDPL had applied for obtaining Terms of References (ToRs) at Parivesh Portal, MoEFCC due to non-existence of SEAC and SEIAA Maharashtra. EDS was raised by MoEFCC on 31.05.2024 and EDS reply was submitted on 03.06.2024. Thereafter, on SEAC and SEIAA Maharashtra came into constitution on **10.06.2024** and the proposal was directly transferred to SEAC, SEIAA on Parivesh Portal on 17.06.2024. Industry once again submitted fresh Form-1 application on 02.08.2024 for grant of TORs.

Accordingly, GWDPL has issued **granted ToRs** on **05.08.2024** vide reference number **SIA/MH/IND2/490942/2024** for preparation of draft EIA report. Copy of TORs is enclosed at **Annexure-3** of this report.

Table No. 2: Salient Features of Project

Sr. No.	Component	Details	
1	Name & Address of Company	M/s. Grand Western Distilleries Private Limited Plot No. E-12/1, MIDC's Shirala Growth Center, Taluka Shirala, Dist.: Sangli, State Maharashtra.	
2	Product Type	Grain based distillery, malt spirit based distillery, IMFL and Country Liquor manufacturing unit.	
3	Project Type	Proposed Establishment Project.	
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	33975.85	33.98% of Total Plot Area
b	Greenbelt	33005.04	33% of Total Plot Area
c	Parking	10112.70	10.11% of Total Plot Area
d	Internal Road	14784.93	14.78% of Total Plot Area
e	Open Space/Margin Space	8121.48	8.12% of Total Plot Area
•	Total Plot Area	100000	100.00%
7 Production Details			
	Name of Product/ By-product		
1	Rectified Spirit/ Neutral Grain Alcohol/ Ethanol	80 KLPD	
2	Malt Spirit	10 KLPD	
3	Country Liquor	2000 Cases per day	
4	IMFL	2000 Cases per day	
	By-products		
1	CO ₂ Gas	68 Tons/Day	
2	DDGS	65 Tons/Day	
3	Fusel Oil	10 KL/Month	
8 Budgetary Estimation			
a	Project Cost (Indian Rs.)	146.35 Cr (INR)	
b	EMP Cost (Indian Rs.)	Capital: 52.5473 Crore (INR), Recurring/Annum: 83.93 Crore	
9 Power Requirement			

Sr. No.	Component	Details	
a	Existing Connected Load	2800 KW	
b	Source	MSEDCL	
10 Fuel Requirement			
	Fuel	During availability of bagasse	During unavailability of bagasse
a	Bagasse	9.36 TPH	--
b	Coal as auxiliary fuel (15%)	0.675 TPH	0.675 TPH
c	Cashew Nut Shell Cake	--	4.17 TPH
	HSD (D.G. Set)	259 lit./hr.	
12 Diesel Generator (D.G.) Details			
	Capacity & No.	1 x 1250 kVA	
13 Boiler Details			
a	Boiler	28 TPH	
14 Stack Details			
a	Boiler	Stack of 40 m height is proposed APCD: ESP with 99.5% efficiency	
b	D.G.	Stack of 7 m height is proposed	
15 Man Power			
		Skilled: 277 Unskilled: 100 Total: 377	
16 Water Requirement			
	Particular	Quantity (m ³ /day)	
	Water requirement quantity & its source	Proposed Distillery : Grain based (80 KLPD) & Malt Spirit (10 KLPD) and IMFL & Country Liquor Bottling Unit 1 st Cycle: 2383.17 KLD 2 nd Cycle : 825.21 KLD	
17 Effluent Generation & Recycle Details			
	Effluent	Domestic sewage @ 13.6 CMD from proposed grain based distillery shall be treated in aeration tank of CPU. Effluent from Grain based Distillery: 1126.047 CMD Spentwash will be treated in MEE and other effluents will be treated in proposed CPU. Zero effluent is generated from industrial activities as the water used for cooling is re-circulated back into the process. GWDPL shall be adopting Zero Liquid Discharge as no any effluent will be discharged within or outside industrial premises.	

Sr. No.	Component	Details				
18	CPU and MEE Capacity					
a	CPU	975 CMD				
b	MEE	725 CMD				
19	Details of Hazardous Wastes					
Sr. No.	Particulars	Category*	UOM	Quantity	Method of Disposal/Management	
1.	Used Oil/Spent Oil	5.1	KL/A	0.23	Disposal through MPCB authorised recycler	
20	Details of Non-Hazardous Wastes					
1.	Boiler Ash	--	MT/D	2.52	Inhouse Brick manufacturing unit	
2.	CPU Sludge	--	MT/D	0.98	Sold or used as manure	
3.	Broken glass	--	Kg/M	5	Sold to recyclers	
4.	Dry Waste	--	Kg/Day	56.55	Sale to authorized vendor	
5.	Wet Waste	--	Kg/Day	37.7	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.	Category*	Schedule	Electrical & Electronic Equipment Code	Nos.	Quantity Kg/Yr.	Method of Disposal/Management
1.	Personal Computing: Personal Computers (Central Processing unit with input and output devices)	Schedule – IIB	ITEW2	1	40	Sale to authorised recycler by CPCB
2.	Personal Computing: Laptop Computers (Central Processing unit with input and output devices)	Schedule – IIB	ITEW3	1	4	
3.	Printers including cartridges	Schedule – IIB	ITEW6	2	13	
4.	Telephones	Schedule – IIB	ITEW12	5	4.5	
5.	Cordless telephones	Schedule – IIB	ITEW14	3	2.5	
6.	Inverter	Schedule – IIC	ITEW25	1	55	
7.	Video Cameras	Schedule – IIC	CEEW9	2	4	
8.	Video Recorders	Schedule – IIC	CEEW10	2	3	
9.	Electric fans	Schedule – IIC	LSEEW14	4	20	
Total				21	146	

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 2024 to May 2024.

4.1 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 & Talavs. 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.

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 7.51-8.12; which indicated slightly alkaline nature of soil samples. The organic matter content in soils was varying between the range from 2.12-2.68 percent. The values for Nitrogen at all locations varied between 234.6 – 348.6 mg/Kg. & maximum concentration of Nitrogen was observed at location S4. Concentrations of Phosphate were found to be in the range of 41.3 to 65.4 mg/kg. Whereas highest concentration was observed at location S4, while the lowest concentration was observed at location S3. Concentration of potassium amongst all locations was found to be ranging between 46.3 to 96.8 mg/kg. Heavy metals viz. As, Cr, Hg & Pb were below detection limit. whereas the concentration of Ni & Zn varied in the range of 2.34 to 6.24 mg/kg and 1.12-8.64 mg/kg respectively.

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 46.3 -60.2 $\mu\text{g}/\text{m}^3$. The highest 24-hourly concentration was recorded at sampling location A6. At the same time minimum concentration was observed at location A1. The average concentration of PM₁₀ can be said to be ranged between 40.66-55.42 $\mu\text{g}/\text{m}^3$. The high concentration of particulate matter is recorded at A6 may be due to local vehicular movement on unpaved roads. 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} (35.4 $\mu\text{g}/\text{m}^3$) during the study period was recorded at location A6, whereas the minimum value (12.3 $\mu\text{g}/\text{m}^3$) 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 18.35 to 29.68 $\mu\text{g}/\text{m}^3$.

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 (27.2 $\mu\text{g}/\text{m}^3$) during the study period was recorded at location A6, whereas the minimum value (10.5 $\mu\text{g}/\text{m}^3$) concentration was recorded at A1 location. The average concentration of SO_x during the study period was computed to be in the range of 13.28 to 24.40 $\mu\text{g}/\text{m}^3$.

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 A6 while the minimum average was recorded at A1. The average concentrations were in the range of 18.29 to 28.80 $\mu\text{g}/\text{m}^3$.

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 1.9 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, Ammonia, Benzene, Benzo (a) pyrene, Arsenic, Nickel and VOC's were below detection limit, whereas minimum & maximum concentrations of Ozone were 10.5 & 17.9 $\mu\text{g}/\text{m}^3$ respectively & average concentration was 13.68 $\mu\text{g}/\text{m}^3$.

Thus it is concluded that the concentration of additional parameters at project was also within the prescribed NAAQS, 2009.

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 49.38 dB (A) while during night time the noise level was recorded to be 40.42 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 N1, whereas the maximum noise levels can be observed at location N6. The location N6 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.

4.5 Ground Water Environment

The above results revealed that values/ concentrations of various parameters amongst all the samples were in the range of pH – 7.42 to 7.68, TDS – 441.6 to 541.6 mg/l, Sulphates – 61.3 to 78.3 mg/l, Phosphates – 1.66 to 2.69 mg/l, Total Hardness – 144.6 to 266.9 mg/l, Nitrate – 19.6 to 28.9 mg/l, Bicarbonate – 63.6 to 86.7 mg/l, Calcium – 41.3 to 49.6 mg/l, Sodium – 62.6 to 88.9 mg/l, Potassium 14.6 to 24.6 mg/l, Fluoride - <0.01 mg/l, Magnesium – 10.2 to 19.7 mg/l, COD - <5.00 mg/l, BOD - <1.00 mg/l, Iron– <0.05 to 0.24 mg/l 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.

4.6 Surface Water Environment

Surface water samples were derived from 7 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 7.24 – 7.46, Total Hardness concentration varied in the range of 123.8 mg/l to 144.9 mg/l & maximum concentration was recorded at SW5, TDS concentration varied in the range of 271.6 mg/l to 341.6 mg/l respectively whereas the concentrations of Phosphates, Nitrate varied in the range of 1.29 to 1.68 mg/l, 15.3 to 18.6 mg/l respectively. Concentrations of elements such as Calcium, Sodium & Potassium were found to be in the range of 35.2 to 39.7 mg/l, 38.6 to 44.8 mg/l & 12.9 to 19.8 mg/l respectively.

Heavy metals viz. Lead, Chromium, Mercury, Cadmium, Arsenic & Nickel were below detection limits in all samples whereas the concentration ranges of metals viz. Zinc, Boron & Magnesium were <0.05 mg/l, <0.01 mg/l & 8.9 to 11.9 mg/l respectively.

4.7 Biotic Environment

Based on the field survey, Total 180 plant species were reported during survey of which, 49 are tree species, 28 shrubs, 87 herbs and 16 were climbers. 15 odonates of which 10 were dragonflies and 5 were damselflies, 31 butterflies were also found during field visit, which shows a greater diversity. Species composition of insects is very peculiar of study area; total

23 insects were recorded of which beetles and bugs were more divers among all insect groups. 82 bird species were recorded in the study area, most of them around the water bodies and grassland. Mammals observed during field survey were 14 species. Reptiles and amphibian's diversity were also noteworthy in study area, 9 reptiles and 4 frog 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.

4.8 Socio-Economic Environment

The 10 km study area includes Shirala and Walwa Taluka of Sangli District. There are total 77 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	2
No. of Villages	77
Total No. of Households	43,365
Total Population	2,01,578
Child Population	20,687
Scheduled Castes	22,221
Scheduled Tribes	518
Literacy	80.98 % (Average)

Source: Primary Census Abstract & DCHB 2011, Sangli District, State Maharashtra

5.0 Anticipated Environmental Impacts and Mitigation Measures

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.

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
4.	Construction & Demolition Wastes Management	<p>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.</p> <p>Excavated/Dug soil/earth will be generated during site preparation activities.</p>	<p>Haphazard handling of such wastes may lead to advent of Rodents, Reptiles within project plot, thereby causing dangers to workers working on site.</p> <p>Disposal of such wastes on land will lead to degradation of soils.</p>	<p>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.</p> <p>Inert construction wastes viz. Cardboards, Wooden Boxes, Wooden planks, Metal rods, HDPE bags will be stored in dedicated space & sold to recyclers.</p> <p>Felled Concrete, Stones, Aggregates & debris will be used as filling material for internal roads in consonance with Construction & Demolition Wastes Management Rules 2016.</p>
Operational Phase				
1.	Air Quality	<p>Utilities stack emissions viz. Particulate Matter, SO₂, NO_x & CO from boiler & D.G operations & Process emissions viz. CO₂ & VOC's.</p> <p>VOC emission generated due to the handling and storage of the Ethanol.</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</p>	<p>1. ESP with 99.5 % efficiency is proposed as an APC equipment with stack of 40 m height to boiler.</p> <p>2. D.G set of 1250 KVA will be provided with a stack of 7 m above roof as per CPCB</p>

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
		Fugitive emissions from material transport vehicles.	<p>blood by reducing the haemoglobin.</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>	<p>guidelines for proper dispersion of emissions.</p> <ol style="list-style-type: none"> 3. The roads within the premises 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 of 10 m width 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.

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
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 & operation activities at propagating at plant boundary will be within a limit</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 almost nil, thus significant impacts outside plant premises are not anticipated.</p>	<ol style="list-style-type: none"> 1. Acoustic enclosures will be provided to high noise generating equipment for attenuation of noise level during operation. 2. Steam 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 of 10 m width along the plant periphery will help to further minimise the intensity of propagating noise out of plant premises.
3.	Water Quality	<ol style="list-style-type: none"> 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.	Spent was generated will be sent treated in MEE. The condensate from MEE unit will be collected and it will be further treated in CPU along with other effluent streams like Spent Lees, Blow

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
			<p>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 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>downs from Boiler and Cooling Towers, Sealing water, 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> <p>No any effluent will be discharged within and outside premises.</p>
4.	Solid Waste Management - Hazardous	<ol style="list-style-type: none"> 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	1. Designated area for Scrap materials storage will be provided in the plant.

Sr. No	Environmental Parameters	Aspect Attributes	Anticipated Impacts	Proposed Mitigation Measures
			the occupational health & environment.	<ul style="list-style-type: none"> 2. Scrap materials will be recycled through scrap vendors. 3. Boiler ash – 756 TPA will be used in brick manufacturing unit. 4. CPU Sludge- 294 TPA will be used/sold as Manure.

6.0 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 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 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 GWDPL 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. GWDPL have allocated Indian Rs. 52.5473 Crore for environmental pollution control measures & environment management plan activities; which is ~36 % of total project cost.

11.0 Project Benefits

The following benefits are expected from the proposed project:

- This project of GWDPL 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. 2.195 Crore is allocated for implementation of need based CER activities in project area.