

Executive Summary

English

Proposed 60 KLPD Grain based distillery

At Survey. No. 126, 127 & 110 Village Kadwa Mahalungi, Post. Valkhed, Tal. Dindori, Dist. Nashik,
Maharashtra.

PERNOD RICARD INDIA (P) LIMITED



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EXECUTIVE SUMMARY

0.1 Introduction

Pernod Ricard India is the largest multinational beverage alcohol company in India. It is world's leader in the wines and premium spirits industry. The company proposes a new unit of 60 KLPD grain based distillery at Kadwa-Mahalungi, Taluka Dindori, District Nashik, Maharashtra.

As per EIA Notification dated 14th September, 2006 and as amended from time to time; this project falls under Category "A", Project or Activity 5 (g) ii [All non-molasses based distilleries \geq 60 KLPD], hence Environmental Clearance is required from MoEF&CC, New Delhi.

The project has been considered in front of Expert Appraisal Committee (EAC) (Industry) for its First Technical Presentation (for ToR approval) on 20th July, 2016. ToR Letter was issued by MoEFCC, New Delhi vide file no. J-1101/171/2016-IA II (I) dated 7/09/2016 for the preparation of EIA / EMP Report.

0.2 Project at a Glance

Table 1: Project Highlights and Environmental Settings

Sr. No.	Particulars	Details
1.	Project proponent	M/s. Pernod Ricard India (P) Ltd.
2.	Nature & size of the Project	Proposed new 60 KLPD grain based distillery unit.
3.	Project location	At Sr. no. 126,127&110, Village Kadwa-Mahalungi, Tal. Dindori, Dist. Nashik, Maharashtra.
4.	Geographical Coordinates	20°14'25.15"N, 73°48'42.38"E
5.	Elevation	659 m
6.	Topo-sheet number	46 H/11, 46 H/12, 46 H/15 & 46 H/16
7.	Total area of plot	132709 sq. m.
8.	Greenbelt area	48761 sq. m. (36% of total plot area)
9.	No. of working days	330 days/ Annum
10.	Nearest Village	Kadwa Mahalungi (at 0.88 km in north direction)
11.	Nearest River	River Kadwa (at 2.5 km in north-east direction) and River Kolwan (at 2.55 km in south direction)
12.	Nearest Road	Kadwa-Mahalungi road (at 0.3 km in east direction) and Sapurata-Nashik road (at 3.5 km in east direction)
13.	Nearest Railway Station	Odha railway station, Thakurli (at 26.5 km in south-

		east direction)
14.	Nearest Airport	Ozar (HAL) (at 16.85 km in south-east direction) and Gandhi Nagar airport (at 30.66 km in south direction)
15.	Nearest Habitation	Kadwa Mahalungi (at 0.88 km in north direction)
16.	Nearest religious place	Bhaktidham temple (at 25.35 km in south direction)
17.	Nearest Reserved forest/ Wildlife Reserve	Bhimshankar Wildlife Reserve (at 120.90 km in south-west direction)
18.	Nearest National Park/ Sanctuary	Vansda National Park (at 57.74 km in north-west direction) and Nandurmadyameshwar Bird Sanctuary (at 42.21 km in south-east direction)
19.	Nearest Defence installation	None within 10 km radius of the project site
20.	Nearest CRZ	None within 10 km radius of the project site
21.	Nearest Historical site	Hatgat fort, Hatgat (at 34.54 km in north-west direction)
22.	Nearest Archaeological site	Pandavlena Caves (at 34.25 km in south-west direction)
23.	Seismic Zone	Zone III, Moderate

0.3 Requirements for the Project

0.3.1 Details of Product and raw material requirement

The details of product and basic raw material requirement for the proposed project are as given below in **Table 2 and Table 3**

Table 2: Product Details

Sr. No.	Product	Quantity (KLPD)
1.	Grain Alcohol/ Total Spirit	60
	Or	
2.	ENA/ RS	57
3.	TA (5% of Total Spirit)	3

Table 3: Details of Raw Material Requirement

Sr. No.	Raw material	Quantity	Storage Capacity	Source	Mode of Transportation
1.	Grains	160 MT/day	3000 MT		
2.	Alpha Amylase	60 Kg/ day			

3.	Amyloglucosidase	80 Kg/ day			
4.	Neutrased	10 Kg/ day			
5.	Viscozyme	20 Kg/ day			
6.	Sodium Hydroxide	70 Kg/ day	Average two months storage	Local market	Truck
7.	Antifoam Agent	200 L/ day			
8.	Sulphuric Acid	70 Kg/ day			
9.	Urea with 46% Nitrogen	150 Kg/ day			
10.	Dry Yeast	1 Kg/ KL			

0.3.2 Other Basic Resource Requirements for the Project

Other basic resource requirements for the proposed new grain based distillery are as follows:

Table 4: Resource Requirement

Sr. No.	Particulars	Quantity	Source
1.	Land	132709 sq. m.	NOC from gram panchyat is obtained. Land agreement is attached as Annexure .
2.	Water	597 KLD	Karanjwan Dam
3.	Electricity	1690 kW	(Captive: T.G. set of 2 MW capacity)
4.	Fuel	Agro Husk: 7 TPH Coal: 3.5 TPH	Local market
5.	Steam	14.5 TPH	(Captive: 18 TPH boiler)
6.	Man power	230-250 Nos.	Local area
7.	Total cost	Rs. 100 Crore	-
8.	EMP	Rs. 4.5 Crore	-

0.4 Process Description

Distillery Unit - Production from Grain

The process largely comprises of the following steps:

- Grain receiving and storage
- Grain cleaning, milling and flour handling
- Slurry preparation & liquefaction
- Saccharification cum Fermentation
- Multi pressure distillation
- Decantation

- MEE
- DWGS Dryer
- DDGS

0.5 Description of the Environment

The study area as per awarded model TOR, 2015 is earmarked to be 10 km from the project site. The study period conducted was from October 2016 to December 2016.

Table 5: Frequency of primary data collection

Environmental Attributes	Frequency of monitoring	Parameters	Observed Results (Oct 2016- Dec 2016)
Meteorology	Microprocessor based Weather Monitoring Station Continuous hourly recording	Wind speed,	1.48 m/s
		Wind direction	East & North East
		Max. Temp.	31.16 °C
		Mini. Temp.	15.13 °C
		Relative Humidity	40.30%
	Precipitation	-	
Ambient Air Quality	9 Locations 24 hourly samples Twice a week for 3 months (in µg/m ³)	PM10	60.2 to 79.6
		PM2.5	30.2 to 51.36
		SO ₂	6.1 to 17.2
		NO _x	13.8 to 24.8
		CO	0.7 to 4 mg/ m ³
Water Quality (Ground & Surface)	Once in season at 16 locations (Physical, chemical and biological parameters)	Colour	All parameters are within limit except MPN count and E-Coli in surface water as well as ground water.
		pH	
		TDS	
		COD	
		E-Coli	
Soil Quality	Once in season at 11 locations	Soil type and texture, Physico-chemical properties, NPK	Dark brown to black, clay loam, soil is medium in fertility, good water holding capacity, heavy metal contamination signs not seen.
Noise Quality	Once in season at 9 Locations (Noise levels in dB(A))	Average Day	48.31
		Average Night	39.56
Land use Pattern	One time visit of the study area for ground truthing	Identification & classification of land use	Most of the land is Agricultural land followed by Barren land
Geology and hydrogeology	Once in study period	Geology and hydrogeology of the study area	Basaltic lava flows, the ground water in deccan trap basalt occurs mostly in the upper weathered and fractured parts down to 20-25 m depth, alluvium occurs in small areas.
Ecology	General in 10 km radial study area and data collected around the project site through field visits	Flora	Alstonia scholaris, Cassia tora, Senna siamea etc.
		Fauna	Common mormon, Lemon pansy, green bee-eater, drongo etc.

Socioeconomic Data	General in 10 km radial study area and data collected around the project site through field visits	Socio-economic characteristics of the affected area	Sanitation facilities are unsatisfactory, Power supply facility is available in almost villages and town, Drinking water sources is mostly from PWD water supply, Medical facilities in terms of primary health center and primary health sub centers in the rural areas are good.
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0.6 Anticipated Environmental Impacts

Anticipated environmental impacts due to operation of the proposed grain based distillery are given in below **Table 6**

Table 6: Anticipated Impacts

Environmental Facets	Anticipated Impacts
Air Environment	Probable increase in concentration of air pollutants due to process, fugitive and utility emissions.
Water Environment	Generation of industrial & domestic wastewater.
Land Environment	Impacts on land due to improper disposal of hazardous/ solid waste.
Ecological Environment	Positive as greenbelt of appropriate width will be developed and maintained by the company in the area. No impacts are envisaged on aquatic flora & fauna as there will be zero effluent discharge outside the plant premises.
Social Environment	Overall development of the area in respect of the infrastructure development, educational growth, health facilities etc.
Economic Environment	Positive impacts on economy of the region and the country as the Alcohol will be exported and revenue generation.
Noise Environment	Minor increase in noise level within the project area.
Occupational Health & Safety	Major health hazards are identified in worst case scenario.

0.7 Environmental Monitoring Programme

Details of the environmental monitoring frequency, which will be undertaken for various environmental components, are given below in **Table 7**

Table 7: Post Project Monitoring

Environmental Facets	Parameter	Frequency of Monitoring	Methodology
Drinking water	To monitor quantity of water consumption of Karanjwan Dam.	Daily in-house monitoring.	IS 10500 : 2012
Fresh water for Industrial Use	pH, EC, TDS, BOD, COD, Oil & Grease, Total Hardness, Total	Quarterly 3rd party monitoring.	Standard methods for examination of water and wastewater

	Alkalinity, Ammonia, Nitrite, Nitrate, Phosphate, Sulphate, Chloride (additional parameters as per condition of EC by MoEFCC and Consent Order by MPCB, if required/mentioned)		analysis published by American Public Health Association.
Industrial wastewater	All parameters as per Consent order of MPCB as well as condition of EC, if mentioned.	Monthly 3 rd party monitoring for wastewater	Standard methods for examination of water and wastewater analysis published by American Public Health Association.
Ambient Air	PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , CO, VOC (Additional parameters, if required, as per consent order issued by MPCB & EC issued by MoEFCC)	Quarterly for 2 stations within premises (in downwind direction)	As per relevant sections of IS 5182.
Workplace monitoring	Noise, VOC, Temperature Level	Quarterly in all plant area	NOISH
Stack monitoring	PM, SO ₂ , NO _x , CO (Additional parameters, if required, as per consent order issued by MPCB & EC issued by MoEFCC)	Monthly 3 rd party monitoring	As per relevant sections of IS 5182.
Noise monitoring	Noise levels in decibels	Monthly in-house monitoring at Spinning area, other plant area, utility area, GG room and factory boundary walls for day & night. Monthly at one location in nearest human settlement & at nearest forest area for day & night.	Noise meter
Occupation health Checkups program	As per factory act & other statutory provisions (pre-employment & postemployment).	Yearly during project operation period.	--

0.8 Additional Studies

The following Additional Studies were done in reference to the awarded Terms of References issued by MoEFCC, New Delhi vide file no. J-1101/171/2016-IA II (I) dated 7/09/2016.

- Public Consultation
- Risk Assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.

0.9 Project Benefits

The Distillery project of M/s Pernod Ricard India (P) Limited will generate a fair amount of direct, indirect and induced employment in the study region. It will help in sustainable development of the area including further development of physical infrastructural facilities. The project proponent will dedicate approx. 2.5% of project cost i.e. INR 2.5 crore for the Corporate Social Responsibility (CSR) activities, which will be utilized for various physical and social infrastructure developmental programme such as roads, educational facilities, sanitation facilities, medical facilities, welfare activities, cultural programme etc.

0.10 Environmental Management Plan

Following mitigation measures shall be adopted by Pernod Ricard to minimize the impact of project on the surrounding environment :

Table 8: EMP for various Environmental Attributes

Environmental Attributes	Mitigation Measures
Air Quality Management	<p>Process Emission</p> <ul style="list-style-type: none"> • Bag filters shall be provided for PM emissions. • CO₂ scrubber shall be provided to scrub CO₂ emissions in water. • The whole process will be carried out in closed condition so as to avoid any chances of VOC emissions. <p>Utility Emission</p> <ul style="list-style-type: none"> • Adequate stack height shall be provided to Boiler and D.G. sets. • Electrostatic Precipitator shall be provided as an air pollution control device to the boiler with approximately 99% efficiency to capture maximum boiler fly ash. <p>Fugitive Emission</p> <ul style="list-style-type: none"> • Bag filters/ Dust collectors shall be installed at loading-unloading section to minimize the PM emission at the site. • Dust suppression on haul roads shall be done at regular intervals.
Water & Wastewater Management	<ul style="list-style-type: none"> • The proposed Grain based distillery would be based on “Zero Liquid Discharge” technology. • Spent wash shall be treated through Centrifuge Decanters followed by MEE and dryer and shall be converted into DDGS which shall be used as cattle feed as it contains higher protein and fiber content. • CPU will be provided for wastewater from other streams. • Domestic wastewater will be disposed of through septic tank followed by soak pit system.

Noise Management	<ul style="list-style-type: none"> • Closed room shall be provided for all the utilities so as to attenuate the noise pollution. • Acoustic enclosure shall be provided to D.G sets.
Odour Management	<ul style="list-style-type: none"> • Odour shall be primarily controlled at source by good operational practices, including physical and management control measures. • Control of temperature during fermentation to avoid in-activation/ killing of yeast. • Regular use of bleaching powder in the drains to avoid generation of putrefying microorganisms.
Solid & Hazardous Waste Management	<ul style="list-style-type: none"> • The hazardous waste i.e. spent oil generated shall be very minor and shall be burnt in boiler along with fuel/ CHWTSDF/ sold to authorized dealer. • Solid waste such as CPU sludge shall be used as manure as it is non-hazardous. • DDGS and Yeast sludge mixed in DDGS will be used as cattle feed. • Boiler Ash shall be sold to brick manufacturer.
Traffic Management	<ul style="list-style-type: none"> • The trucks carrying raw material & fuel shall be covered to reduce any fugitive dust generation. • Good traffic management system shall be developed and implemented.
Green Belt Development / Plantation	<ul style="list-style-type: none"> • Plantation shall be done as per Central Pollution Control Board (CPCB) Norms.
Corporate Social Responsibility	<ul style="list-style-type: none"> • An amount of INR 2.5 Crore (2.5% of total project cost) will be allocated for CSR activities in the coming 5 years.
Occupational Health & Safety	<ul style="list-style-type: none"> • Pernod Ricard shall monitor the health of its worker before placement and periodically examine during the employment • All safety measure will be taken during operation of plant. • PPEs will be provided