

## Chapter – 1

# **INTRODUCTION**

### 1.1 *INTRODUCTION* ;

Industrialization is recognized as a main thrust for development due to which the scope for exploring and exploiting the natural resources has gained predominance in planning the development projects / activities. As a corollary, availability of resources coupled with infrastructural facilities, expedites rapid industrial growth.

On the other hand, rapid industrialization and associated human activities leads to waste generation, which results in an impact on the surrounding environmental components. The environment has a limited inherent capacity to support such activities and also assimilate the pollutants, beyond which the region is assumed to be polluted.

Proposed Grain Based Distillery , is a unit of Radiant Manufacturers Pvt. Ltd., having its head office at Parmeshwari Building, 05<sup>th</sup> floor, Room No. 10, Chatribari Road, Guwahati – 781 001, Assam. Management is planning to set up a 45 KLPD ENA/RS distillery plant with environment friendly and latest technology. It is a grain based distillery and will be involved in manufacturing of alcohol. The total capacity of the project will be 45 KL/Day.

### 1.2 *PROJECT JUSTIFICATION* ;

In Assam, there is no sugar cane cultivation and there is no sugar factory implying that molasses is not available in the state. If one has to set up a molasses based distillery in Assam, then molasses has to be imported from

other states i.e. U.P. and Bihar. The state governments change their export policy from time to time depending upon their own demand and supply situation. With new sugar mills and distilleries coming up in these states and increasing demand for industrial alcohol, these states may not be left with any significant quantities of molasses for export. All India Distillers Association has estimated acute shortage of molasses in the coming years. Therefore, it is not possible to plan a molasses based distillery in Assam based on its raw material supply from other states on a long-term basis.

The proposed distillery has been considered based on Grain / Starch as the main raw materials which are available in the state and from bordering areas of the neighbouring states of Nagaland, Tripura & West Bengal.

The proposed project site has been selected keeping the various factors in vision viz. raw material availability and the availability of other infrastructural facilities e.g. land, power, water, transport and communication facilities etc.

### 1.3 **SITE & SURROUNDINGS** ;

The proposed distillery project is situated at Vill. Khat Khati, Bokajan Block in Diphu Revenue Circle, Dist.: Karbi Anglong in the State of Assam. Geographically the site is within the periphery of about 93<sup>0</sup>74'6" E Longitude & 25<sup>0</sup>89'8" N Latitude. The site is well connected by road & rail network. NH – 39 passes at a distance of about 1 km. from the unit. The location map is attached herewith as fig No. 1.1. Important places of interest and their distances are as under ;

**Table 1.1: Environmental Setting (10 km. radius)**

Particulars	Details
Location	<b>Vill. Khatkhati, Block : Bokajan, Dist. Karbi Anglong, Assam</b>
Latitude	<b>25<sup>0</sup>89'8" N</b>
Longitude	<b>93<sup>0</sup>74'6" E</b>
Elevation above mean sea level	<b>95 m. (approx.)</b>
Total Plant Area	<b>15 Acres</b>

Particulars	Details
Nearest Railway Station	<b>Dimapur (8 km. SE) &amp; Bokajan (2 km. E)</b>
Nearest Highway	<b>NH – 39 (1.0 km. W)</b>
Nearest Major City	<b>Dimapur ( 8 km. SE)</b>
Nearest River	<b>River Dhansiri (2 km. E)</b>
National Park	<i>Not exists</i>
Wildlife Sanctuary	
Reserve Forests	

#### 1.4 LEGAL ASPECTS :-

M/s Radiant Manufacturers Pvt. Ltd. (RMPL) will obtain necessary No Objection Certificate as well as Consents with respect to Air & Water Acts from Assam State Pollution Control Board and comply with the prescribed limits laid down for air, wastewater and noise levels for protection of the environment under the following Acts, Rules and amendments :

1. The Water (Prevention and Control of Pollution) Act, 1974
2. The Water (Prevention and Control of Pollution) Cess Act, 1977
3. The Air (Prevention and Control of Pollution) Act, 1981
4. The Environment (Protection) Act, 1986 which is also called umbrella act or legislation
5. The Environment Impact Assessment, Notification, 1994 issued under Environment (Protection) Act, 1986 and Environment (Protection) Rules, 1986 and amendments thereafter to date
6. Factories Act, 1948

#### 1.5 ENVIRONMENTAL CLEARANCE REQUIREMENT :-

To get the Environmental Clearance from the Ministry of Environment & Forests (MoEF), Govt. of India, it is required to carry out an Environment Impact Assessment (EIA) study of the project, deliberating the positive and negative impacts on the environment. A befitting environment management and monitoring plan (EM&MP) will be prepared to mitigate or minimize the negative impact vis-à-vis retaining the positive impacts of the project.

Keeping in line with the requirement of MoEF and having a high degree of concern, for the environment and in order to assess the likely impacts arising out of the proposed project, M/s RMPL has retained services of **M/s Shiva Test House, Patna, Bihar** a MoEF (Ministry of Environment & Forests, Govt. of India) Recognized Environmental Laboratory (vide Gazette Notification No. S.O. 1539 (E), 13<sup>th</sup> Sep.'2007 & Accredited by National Accreditation Board for Testing & Calibration Laboratories (NABL) (Certificate No. T-0023 dt: 16.03.2009), to carryout the study on Environmental Impact Assessment (EIA).

The assessment will cover the baseline data generation, predictions and evaluation of impact on various environmental components and preparation of adequate Environmental Management Plan.

#### 1.5.1 *Objective of EIA & EMP* ;

Objective of the Environment Impact Assessment (EIA) study is to understand the prevailing physical and biological environment and prepare an EIA report including Environment Management Plan (EMP) in accordance with the guidelines issued by the MoEF as a necessary requirement for obtaining environment clearance.

The major objectives of the EIA study are listed below:

- 1) To establish the present environmental setting
- 2) To anticipate the impacts of the proposed project on the environment
- 3) To suggest preventive and mitigation measures to minimize adverse impacts alongside maximizing the beneficial impacts anticipated from the project
- 4) To prepare a detailed action plan for the implementation of mitigation measures
- 5) To prepare a suitable monitoring plan

#### 1.5.2 *Scope of Environment Impact Assessment* ;

The study envisages characterization of the existing status of physical environment such as air, water, soil, land use, meteorology, socio-economic

and heritage etc. as well as biological environment such as flora and fauna of the study area of 10 km radius and quantifying impacts on the environmental parameters. Based on the study, the EIA evaluates the proposed control measures by the project and prepares an environment management plan, outlining additional proposed activities and delineates the requirements of environmental monitoring program. EIA study shall cover the following aspects:

- ÷ Evaluation of present environmental factors through analysis of generated and collected baseline data for one complete dry season (3 months).
- ÷ Assess the probable impact on the environmental factors due to implementation of the project with respect to existing scenario.
- ÷ Analyze the predicted impact with respect to the regulatory environmental standards.
- ÷ Assess the probable risk at the proposed plant.
- ÷ Develop an Environmental Management Plan and on site Disaster Management Plan for the proposed project to mitigate the negative significant impacts that would arise from the proposed project.
- ÷ Report shall help to obtain No Objection Certificate from the State Pollution Control Board.

The baseline data has been collected for the following environmental components, during **Mar. – May'2009**:

- Air Quality
- Meteorology
- Noise Environment
- Water Use & Quality
- Soil Quality
- Land Use, Crop Pattern, Agricultural Practices
- Demographic & socio-economic aspects
- Terrestrial & Aquatic ecology

Baseline data on parameters of the above-mentioned aspects over a season provides means for identifying possible impact-positive as well as adverse. An

environmental impact assessment and environment management plan comprising an overall assessment of the impact due to project activity over baseline condition of the existing environment and a mitigating action plan to counter the adverse impact as defined. An environmental monitoring program is also prepared to provide scientific support to future actions of environmental protection.

**1.6 METHODOLOGY :-**

A study area of 10 km radius with the RMPL at the center was considered for the present study. This study will help to determine the present environmental status and likely impacts of the proposed project operations, if any in the region. The most predominant wind direction during study period was from the South East & North west. With consideration of various facts of establishing, the monitoring stations were finalized.

**1.7 PURPOSE OF EIA / EMP REPORT ;**

As per new EIA Notification'2006 issued by Ministry of Environment & Forests (MoEF), Govt. of India vide Gazette Notification No. S.O. 1533(E) dt: 14<sup>th</sup> Sep.'2006, all projects of non-molasses based distilleries having  $\geq 30$  KLD capacity shall be treated as Category 'A' projects and 'therefore, shall require prior Environmental Clearance from Ministry of Environment & Forests (MoEF), Govt. of India. In this connection, Radiant Manufacturers Pvt. Ltd. submitted an application along with filled up 'Form 1' in the prescribed format & Project Report to MoEF for seeking Terms of Reference (TOR) for preparation of EIA/EMP Report for obtaining Environmental Clearance for its proposed project, vide letter Ref. No.: RMPL/EC/09 dt: 06.06.2009.

**1.8 TORs ISSUED BY MoEF :-**

The proposal was considered by the Expert Appraisal Committee in its 01<sup>st</sup> meeting, held on 24<sup>th</sup> Jul.'09 to determine the Terms of Reference (TOR) for Preparation of Final EIA / EMP Reports for obtaining Environmental Clearance in accordance with the provisions of the EIA Notification 2006. Accordingly, MoEF issued one letter Ref. F. No. J-11011/375/2008-IA II (I)

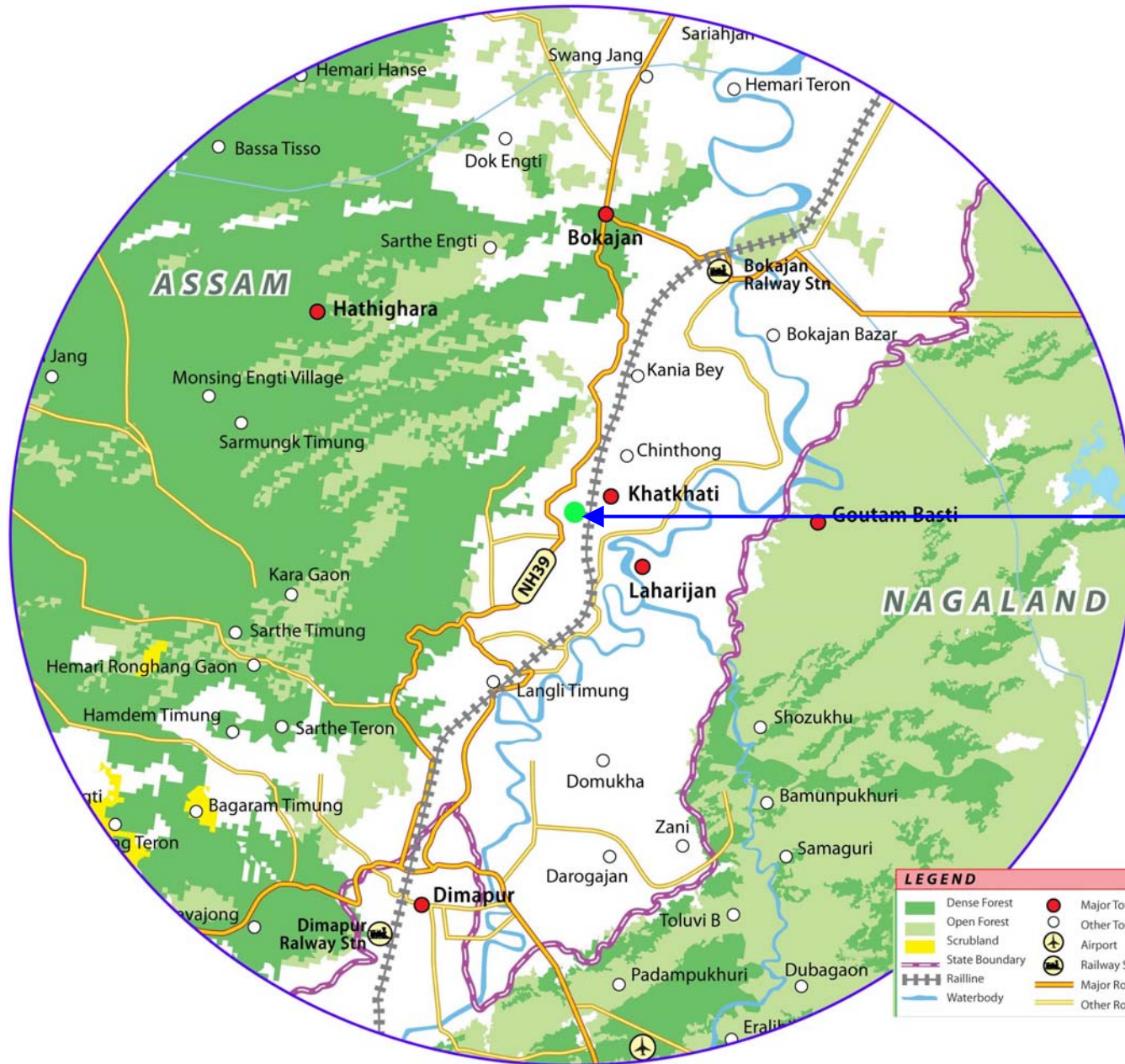
dated 07<sup>th</sup> Aug.'2009, with mentioning the finalized Terms of Reference. In addition, the Expert Appraisal Committee suggested the following TORs for the preparation of the final EIA/EMP Report:

<b>TORs issued by MoEF</b>	<b>Compliance in EIA/EMP report</b>
1. Executive summary of the project.	Attached as Annexure - I
2. Detailed break up of the project cost.	Ref. EIA Report Chapter – 2, Sec. 2.17, Page No. 2-15
3. Detailed break up of the land area including sugar unit along with photograph of the area.	Ref. EIA Report Chapter – 2, Sec. 2.3, Page No. 2-3
4. Present land use based on satellite imagery.	Ref. EIA Report Chapter – 1, Fig. No. 1.1, Page No. 1-7
5. Details of site and information related to environmental setting within 10 km radius of the project site.	Ref. EIA Report Chapter – 1, Sec. 1.3, Page No. 1-2
6. Information regarding eco-sensitive area such as national park / wildlife sanctuary / biosphere reserves within 10 km radius of project area.	
7. Source of raw material.	Ref. EIA Report Chapter – 2, Sec. 2.2, Page No. 2-2
8. Ambient Air Quality Monitoring for three months except monsoon.	Ref. EIA Report Chapter – 3, Table No. 3.11, Page No. 3-26
9. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.	Ref. EIA Report Chapter – 4, Table No. 3.13, Page No. 3-30
10. Details of the use of steam from the boiler and use of fuel.	Ref. EIA Report Chapter – 2, Sec. 2.7, Page No. 2-6
11. Hydrology of the area especially down stream.	Ref. EIA Report Chapter – 3, Table No. 3.5, Page No. 3-12
12. Ground water quality around the compost plant and spent wash storage lagoon.	
13. Noise levels monitoring at five locations within the study area.	Ref. EIA Report Chapter – 3, Table No. 3.13, Page No. 3-30
14. List of flora and fauna in the study area.	Ref. EIA Report Chapter – 3, Sec. No. 3.5, Page No. 3-15
15. Number of working days of the distillery unit	330 Days
16. Details of the spent wash treatment.	Ref. EIA Report Chapter – 2, Sec. 2.13, Page No. 2-12
17. Proposed effluent treatment system and scheme for achieving zero discharge.	

<b>TORs issued by MoEF</b>	<b>Compliance in EIA/EMP report</b>
18. Detailed water requirement and water balance.	Ref. EIA Report Chapter – 2, Sec. 2.4, Page No. 2-4
19. Water draws permission from the Irrigation Department/State Ground Water Board.	Applied For
20. Details of raw material	Ref. EIA Report Chapter – 2, Sec. 2.2, Page No. 2-2
21. Details of solid waste management including management of boiler ash.	Ref. EIA Report Chapter – 2, Sec. 2.16, Page No. 2-15
22. Green belt development as per the CPCB guidelines.	Ref. EIA Report Chapter – 5, Sec. 5.7, Page No. 5-3
23. Environment Management Plan.	Ref. EIA Report Chapter – 5
24. Rainwater harvesting measures	Ref. EIA Report Chapter – 5, Sec. 5.16, Page No. 5-8
25. Details of occupational health surveillance programme.	Ref. EIA Report Chapter – 5, Sec. 5.17, Page No. 5-9
26. Details of socio economic welfare activities.	Ref. EIA Report Chapter – 5, Sec. 5.15, Page No. 5-8
27. Post project environmental monitoring.	Ref. EIA Report Chapter – 5, Sec. 5.18, Page No. 5-10
28. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.	No litigation pending against the project and /or any direction /order passed by any Court of Law against the project
29. Action plan in the tabular form to the issues/suggestions made during the public hearing along with the implementation plan and allocation of funds.	-----

As advised, Draft EIA/EMP Report as per TORs is being submitted to Assam Pollution Control Board for Public Hearing/ Public Consultations. The issues, emerged during the Public Hearing/ Public Consultations will be incorporated in the EIA/EMP Report, which will be subsequently submitted to the MoEF, Govt. of India for obtaining the Environmental Clearance.

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LOCATION MAP OF PROPOSED DISTILLERY PROJECT

Fig No. 1.1

Proposed Distillery Project