CHAPTER - 1

INTRODUCTION

CHAPTER – 1

INTRODUCTION

1.1 BACKGROUND

M/s. Rudradev Cement Limited is planning to set up cement plant at Dag No. 87 of K. P. Patta No. 40, Village Kisam – 48 No. Block, Mouza-Jamunamukh, District Nagaon, Assam. The company proposes to set up the project for manufacturing 360 TPD Cement Manufacturing Unit. As per EIA notification 2006 the proposed project is categorized as B, 3(b) Cement Plant (<1 million tonnes/annum production capacity).

This Rapid Environmental Impact Assessment study is carried out as a part of the process to obtain Environmental Clearance for the above mentioned project. A mitigation plan has been prepared and a detailed environmental management plan (EMP) is drawn out to effectively mitigate or minimize potentially adverse environmental impacts.

1.2 PURPOSE OF EIA

The purpose of the EIA study is to critically analyze the manufacturing process of different products, proposed to be manufactured with reference to types and quantity of different raw material consumption, possible source of wastewater, air emission and hazardous waste generation, control measures to reduce the pollution and to delineate a comprehensive environment management plan along with recommendations and suggestions in existing environment management system.

1.3 OBJECTIVES OF EIA

The main objectives of the study are:

1) To assess the background environmental status.
2) To identify potential sources of pollution.
3) To predict and evaluate the impact on environment along with pollution control measures taken.
4) To prepare a comprehensive Environment and Disaster Management Plan.

1.4 METHODOLOGIES FOR EIA

Taking into consideration proposed project activities and guidelines, an area of 10 km radius from the center of the project has been selected and is designated as the study area for the purpose of rapid EIA studies.

1.4.1 BASE LINE ENVIRONMENTAL CONDITION

The samples of ambient air, ground and surface water and soil are collected and analyzed as per the standard methods for establishing the baseline data and to determine the impact of proposed activity on the same.

1.4.1.1 AMBIENT AIR ENVIRONMENT

The air environment around the plant was studied by setting up locations within the study area of 10 Km radius from the project site and collection and monitoring the site specific meteorological data, viz. wind speed, wind direction, humidity, rainfall and ambient temperature was carried out. Design of network for ambient air quality monitoring locations is based on guidelines provided by CPCB. The ambient air samples were collected and analyzed for SPM, RSPM, SO_2, and NO_X for identification, prediction, evaluation and assessment of potential impact on ambient air environment.

1.4.1.2 GROUND AND SURFACE WATER ENVIRONMENT

The water required for domestic and industrial use shall be met from ground water using bore well. To assess the Physico-chemical quality of the water, a number of water samples were collected and analyzed or pollution parameters viz., pH, TDS, Turbidity, BOD_3, COD, Fluorides, Chlorides, Sulphate, Nitrates, Ammonical Nitrogen, Hardness, Alkalinity, Oil & Grease and some heavy metals in order to find out the contamination, if any.

1.4.1.3 NOISE ENVIRONMENT

Noise pollution survey was conducted in the study zone for evaluating existing status. The anticipated noise sources were industrial activities, which are likely to be increased due to proposed activity. Noise levels were also recorded in surrounding villages for evaluating general scenario of the study area. Hourly equivalent sound levels (Leq) were also recorded for calculating Day and Night noise levels in the surrounding villages.

1.4.1.4 SOIL ENVIRONMENT

Soil sampling and analysis was carried out to assess Physico-chemical characteristics of the soils and delineate existing cropping pattern, existing land use and topography, within the study area.

1.4.1.5 BIOLOGICAL ENVIRONMENT

Keeping in view, the importance of biological component of total environment due to the proposed project, biological characterization of terrestrial and aquatic environments, changes in species diversity of flora and fauna in terrestrial as well as aquatic systems were studied for impact analysis due to proposed project activity, if any.

1.4.1.6 SOCIO-ECONOMIC ENVIRONMENT

Demographic and related socio-economic data was collected from census handbook to assess socio-economic status of the study area. Assessment of impact on significant historical, cultural, and archeological sites/places in the area and economic and employment benefit arisen out from the proposed project is given special attention.

1.4.2 IDENTIFICATION OF POLLUTION SOURCE

Detailed study of manufacturing process for existing production scenario and expansion scenario is carried out along with input and output of materials, water, and wastewater as well as infrastructure facilities available.

1.4.3 EVALUATION OF POLLUTION CONTROL AND ENVIRONMENTAL MANAGEMENT SYSTEM

The qualitative and quantitative analysis of various pollution sources as well as evaluation of pollution control system is carried out.

1.4.4 EVALUATION OF IMPACT

A comprehensive evaluation of environmental impact with reference to proposed expansion activities is carried out.

1.4.5 PREPARATION OF ENVIRONMENTAL MANAGEMENT PLAN

A comprehensive Environmental Management Plan has been prepared covering all the aspects of pollution prevention measures, Air and Water Pollution Control measures, Hazardous Waste Management, Environmental Surveillance and Environmental Management Plan.

The present report is a rapid EIA conducted during the study period between October 1, 2008 and December 31, 2008. The baseline environmental conditions have been established through field monitoring and literature survey. The contents of EIA report, details of data collection and source of secondary data are presented in Figure 1.1.

1.5 STRUCTURE OF REPORT

The objective of the EIA study is a preparation of Rapid Environment Impact Assessment (R-EIA) report based on the guidelines of the Ministry of Environment and Forests (MoEF) and CPCB. It incorporates the following.

- Chapter 1 is an Introduction to the Industry, their premises and surrounding areas. It also expresses the basic objectives and methodologies for EIA studies and work to be covered under each Environmental component.
- Chapter 2 presents a Description of Project and Infrastructure facilities including all industrial and environmental aspects of M/s. Rudradev Cements Limited during operation phase activities as well as manufacturing process details of existing and proposed product. This chapter also gives information about raw material storage and handling, water and wastewater quantitative details, air pollution and control system, Hazardous Waste generation, storage facility and disposal and utilities for existing and proposed expansion of plant capacity. It also provides information about proposed Environmental Management Facilities available at the project site.
- Chapter 3 covers Baseline Environmental Status including meteorological details, Identification of baseline status of Environmental components of the surrounding area covering air, water and land environment, study of land use pattern, Biological Environment & Socio-Economic Environment giving details about District Nagaon and the study area in terms of land use pattern, biological environment, and socio-economic environment.
- Chapter 4 deals with Identification and Prediction of Impact, which provides quantification of significant impacts of the proposed expansion activities of plant on various environmental components. Evaluation of the existing and proposed pollution control facilities has been presented.
- Chapter 5 describes Environment Management Plan (EMP) to be adopted for mitigation of anticipated adverse impacts if any and to ensure acceptable impacts.
- Chapter 6 describes Risk analysis and Disaster management plan that is adopted by the company.
- Chapter 7 gives the benefits of the proposed projects.
- Chapter 8 gives the information of consultants engaged.

FIGURE - 1.1 ACTIVITIES, SOURCES OF INFORMATION AND CONTENTS OF EIA REPORT