1.0 INTRODUCTION

Indian Oil Corporation Limited (IOCL), the project proponent, is one of India's largest PSU Maharatna oil company. IOCL is involved in the refining and retailing of petroleum products. IOCL produces a diverse range of products, from petrochemicals and solvents to aircraft fuel (ATF) and specialty lubricants and markets them through its wide network of Oil Depots, Petrol Stations, Kerosene Dealers, etc. Indian Oil closed the year 2013-14 with a sales turnover of Rs. 4,73,210 crore and profits of 7,019 crore, as compared to 4,47,096 crores recorded in 2012-13 with profits of 5,005 crore.

The Ramanagar Depot of IOCL is located in Silchar, the district headquarter of Cachar District of Assam State. The Ramnagar POL Storage Depot, commissioned in the year 1987 with a product storage Tankage of 18664 KL was constructed in a land area of 8 acres and with two spur MG Railway siding. The demand of petroleum products to Barak valley is met through Meter Gauge (MG) movement from Lumding POL depot which in turn receives POL products in BG BTPN rakes from the Assam based Refineries namely Digboi Refinery, Guwahati Refinery, Numaligarh Refinery, Bongaigaon Refinery. The depot presently receives POL products through MG Wagons and tank trucks. The thruput of the Ramnagar depot for the year 2011-12 has recorded as 202533 KL which is expected to increase to 257960 KL in the year 2016-17 as per detailed given below:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Product</th>
<th>Thruput for 2011-12 (KL)</th>
<th>Expected thruput 2016-17 (KL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>MS</td>
<td>39790</td>
<td>63791</td>
</tr>
<tr>
<td>02.</td>
<td>SKO</td>
<td>46445</td>
<td>46445</td>
</tr>
<tr>
<td>03.</td>
<td>HSD</td>
<td>116298</td>
<td>147724</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>202533</td>
<td>257960</td>
</tr>
</tbody>
</table>

As per GOI decision, all the BG rail lines in North-eastern states have been decided to be converted into MG rail lines. As per recent growth in demand of petroleum products, Ramnagar depot is unable to meet the present requirement. Hence, expansion of Ramanagar depot needs urgent attention. Ramnagar depot is spread over a land of 8 acres area. No vacant area is available around depot for further expansion. In view of this, shifting of Ramanagar depot to Moinarband is one of the best available options before IOCL Management.
INTRODUCTION

As per decision taken by the Cabinet of Secretaries vide their Minutes dated 19/11/2010 and document no: 75/2010-CA IV, it has been decided to increase days coverage to 60 days in the NE Depots/POL depots.

IOCL Management has no option but to accord approval for resitement of existing Ramanagar Depot to Moinarband which falls in the route of BG network. Based on approval of IOCL Management, DC Cachar, Govt. of Assam was requested to provide land for IOCL depot to accommodate full rake BG railway siding at Moinarband. Govt. of Assam, on priority basis, allotted land of 45.74 acres to IOCL after payment of compensation of Rs. 15.74 crores. Moinarband shall be a grass-root railfed POL Depot for storage of petroleum products namely MS, HSD, SKO & ATF.

In view of the above, IOCL proposes for construction of a new grass-root BG Railfed POL Storage Depot with a gross tankage capacity of 30,768 KL to take care of petroleum demands of North East.

As per EIA Notification, published in Gazette of India, Extraordinary Part-II, Section-3, sub-section (ii) of Ministry of Environment & Forest dated 14.09. 2006 and subsequent amendment in December, 2009, the proposed project falls in Activity 6(b), Category-B of the List of Projects or Activities Requiring Prior Environmental Clearance. As per the above notification, the proposed project requires environmental clearance from State Environmental Impact Assessment Authority (SEIAA) or State Environmental Appraisal Committee (SEAC).

Based on the above requirement, IOCL has engaged Projects & Development India Limited (PDIL), a Government of India Undertaking, for preparation of EIA/RA Reports vide its WO No. NEISO/OPS/PDIL/LOI dated 17th October, 2012. PDIL is a QCI-NABET accredited EIA Consultancy Organisation.

1.2 PROJECT PROPOSAL

The proposal relates to setting up of a new grass-root BG Railfed POL Storage Depot on 45.74 acres of land falling under Udharbond tehsil of Cachar district near Silchar Town. Brief description of the project proposal may be summarized as under:
INTRODUCTION

Table - 1.1
Details of Project Proposal

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Product</th>
<th>Dimension (m)</th>
<th>Capacity (KL)</th>
<th>No. of Tanks</th>
<th>Total Cap. (KL)</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>MS</td>
<td>10 ø x 12 (Ht.)</td>
<td>1810</td>
<td>3</td>
<td>5430</td>
<td>IFR</td>
</tr>
<tr>
<td>02.</td>
<td>SKO</td>
<td>20 ø x 12 (Ht.)</td>
<td>3754</td>
<td>2</td>
<td>7508</td>
<td>CR</td>
</tr>
<tr>
<td>03.</td>
<td>HSD</td>
<td>20 ø x 12 (Ht.)</td>
<td>3754</td>
<td>4</td>
<td>15016</td>
<td>CR</td>
</tr>
<tr>
<td>04.</td>
<td>ATF</td>
<td>10 ø x 12 (Ht.)</td>
<td>938</td>
<td>3</td>
<td>2814</td>
<td>CR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
<td>30768</td>
</tr>
</tbody>
</table>

1.3 PROJECT COST

The total cost of the proposed project has been estimated as Rs. 202 Crores (approx.) and it is expected to be completed within 36 months from the date of grant Environmental Clearance.

1.4 PROJECT LOCATION

The proposed Moinarband Depot shall be located near Bahadurpur & Gosainpur Village at a distance of about 6 Km from Silchar town under Cachar district in the state of Assam. The proposed depot shall be established over an area of 45.74 acres of land provided by Govt. of Assam. The depot is surrounded by Railway line in North, PMGSY road in the south and Agricultural land in East and West side. The entire area of 45.74 acres will be declared as prohibited area for storage of hazardous chemicals by State Government. Geographically, the depot is located at 24° 51′06.96" N latitude and 92° 50′0.86" E Longitude at an altitude of about 29 m from mean sea level (MSL). The depot is well connected with road and rail network. The National Highway, NH-54 is passing at a distance of about 1.5 km, nearest Railway station at Silchar is at a distance of about 5.0 Km and the nearest Bus Depot is at a distance of 5 Km from the project site. The nearest airport is Kumbhirgram (Silchar) at a distance of about 13 Km. Besides IOCL, POL depots, one stone crusher is located on both left & right side of the main plot. Some of the important villages located around the depot are Moinarband, Gosainpur, Dudpatil, Plantica, Rangpur, Bahadurpur etc. Location of POL depot in Google map has been shown as Plate-1.1.
1.5 JUSTIFICATION OF PROPOSED PROJECT

The justification for resitement of Ramnagar depot to Moinarband is presented as under:

- The Present Ramnagar POL Storage Depot was commissioned in the year 1987 with a product storage Tankage of 18664 KL was constructed in a land area of 8 acres and with two spur MG Railway sidings.
- With the growth of demand and the 60 days demand coverage set in the NE Depots/POL depots, it has become imperative for building up the required infrastructural facilities in compliance with the latest OISD requirements.
- Expansion of Ramanagar depot was not safe due to dense population around the depot.
- The proposed resitement will ease the constraint of space for expansion from 8 acres to 45.74 acres.
- After a detailed study of the existing available land in and around Ramanagar depot and railways gauge conversion programme from MG to BG, it was decided to resite the existing Depot to Moinarband in the district of Cachar.

1.6 SCOPE & METHODOLOGY

1.6.1 Scope of EIA Study

The area falling within 5-Km radius of POL depot has been considered as the study area for conducting studies/ baseline environmental data generation. The scope of the study is:

- To undertake environmental monitoring so as to establish the baseline environmental status of the environmental components;
- To identify various existing pollution loads due to various anthropogenic / industrial activities;
- To evaluate the predicted impacts on the various environmental attributes by using scientifically developed and widely accepted environmental impact assessment methodologies.
- To prepare Quantitative Risk Assessment Report
INTRODUCTION

- To prepare an Environmental Management Plan (EMP) outlining the measures for improving the environmental quality and environmentally sustainable development.
- To prepare post project monitoring program to monitor the probable changes in the environmental quality after the implementation of the project.

1.6.2 Methodology for EIA Study

An area of 5-km radius around the POL depot has been considered as the study area. To assess the baseline status of environment, monitoring locations were selected, keeping in mind the micro-meteorological status and existing sources of pollution in the area. Different environmental attributes for various parameters were monitored and analyzed during the study period (March, 2014 to May, 2014). Secondary data collected from different Govt., Semi-Govt. agencies were compiled, interpreted and presented. The baseline environmental studies were conducted considering the following environmental components:

**Land Environment**

The satellite imagery obtained from North Eastern Space Application Centre (NEAC), Umiam, Meghalaya has been used for the study of land use pattern in the area. The soil of the area has been characterized by collecting soil samples from six different locations within the study area.

**Air Environment**

To evaluate the baseline status with respect to air quality, a network of 06 nos. of ambient air quality monitoring stations were established within the study area. As per standard norms, two locations were kept in prevailing upwind direction and two locations in downwind direction. The other two locations were fixed at crosswind directions. The selection of monitoring locations was based on location of human settlements, availability of electricity, dominant wind direction etc. Samples were collected with a frequency of 2 days per week per location. The following air pollution parameters were monitored:

- Particulate Matter (PM$_{10}$)
- Particulate Matter (PM$_{2.5}$)
- Sulphur dioxide (SO$_2$)
- Oxides of Nitrogen (NO$_x$)
INTRODUCTION

- Carbon monoxide (CO)
- HC (Methane, Non- Methane)
- VOCs (Volatile Organic Compounds)

Water Environment
To evaluate the baseline environmental status with respect to water quality, 02 nos. of surface water samples and 04 nos. of ground samples were collected for characterization.

Noise Environment
To determine the baseline environmental status with respect to noise level, the noise monitoring locations were selected to represent the surrounding of the depot. 06 nos. of locations were selected for noise quality monitoring in the area. Noise quality was also measured inside the boundary of project site at different locations. The measurements were made continuously for a period of 24 hrs.

Ecology
Baseline status of terrestrial and aquatic ecology was evaluated through field samplings, reconnaissance surveys and secondary sources. Important flora and fauna species of terrestrial and aquatic eco-systems have been enumerated.

Socio-economic Environment
Information about baseline status of socio-economic environment has been collected from Census Report - 2011 as well as from sample surveys. The information includes demographic profile, literacy rate, employment pattern, cropping pattern, etc.
PLATE - 1.1
LOCATION OF PROPOSED POL DEPOT IN GOOGLE MAP