Item No. 143.13 : Application for environmental clearance under EIA notification dated 14.09.2006 for establishing a LPG Bottling Plant NRPL TOP, on Bathinda - Mansa Highway in the revenue estate of Village Phoos Mandi, Tehsil & District Bathinda by M/s Indian Oil Corporation Ltd. (Proposal No. SIA/PB/IND2/10718/2015)

The facts of the case are as under**:**

M/s Indian Oil Corporation Ltd. has applied for obtaining the Environmental Clearance under EIA notification dated 14.09.2006 for establishing a LPG Bottling Plant NRPL TOP, on Bathinda - Mansa Highway in the revenue estate of Village Phoos Mandi, Tehsil & District Bathinda. The project is covered under category 6 (b) of the Schedule appended to the said notification.

- The total plot area is 104 acres and the proposed Bottling Plant will be located within 16.9 acres.
- The total water requirement for the project is 4 MLD which will be met through own tubewell.
- The total load of electricity will be 410 KW which will be taken from the PSPCL.
- Used oil to be generated from the DG sets will be managed & handled as per the provisions of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008.
- The project proponent has submitted the proposed Terms of Reference (TORs).

The details of the documents submitted with the application are as under:

1.	Properly filled Form 1 & pre-feasibility report	Yes
2.	Proof of ownership of land	Submitted
3.	CLU status	Not required.
4.	A copy of Memorandum of Article & Association / partnership deed / undertaking of sole proprietorship / list of Directors and names of other persons responsible for managing the day-to-day affairs of the project	Submitted.

Thereafter, Regional Office, Punjab Pollution Control Board, Bathinda was requested vide e-mail dated 12.08.2015 to visit the project site and submit report regarding latest construction status.

Now, Environmental Engineer, Regional Office, Punjab Pollution Control Board, Bathinda vide letter no. 4189 dated 03.09.2015 (received by email dated

07.09.2015) has intimated that the site was visited by the concerned AEE of his office on 28.08.2015 and observed that no construction work has been started so far for the establishment of bottling plant.

The case was considered by the SEAC in its 129st meeting held on 11.09.2015, which was attended by the following on behalf of project proponent:

(i) Sh. Jyotiprakash Chakraborti, Manager of the Indian Oil Corporation.

(ii) Sh. Harsh Nater, M/s Ultra-Tech Environmental Consultancy & Laboratory, Consultant of the project proponent

Before allowing the project proponent to make presentation, following documents/information as per observations of SEAC were submitted:

1. Copy of the acknowledgment alongwith online application submitted for seeking approval of Central Govt. under the Forest (Conservation) Act, 1980.
2. Copy of the letter no. 577 dated 07.05.2015 vide which Municipal Corporation Bathinda has given provisional NOC regarding the expansion of the Project.
3. Acreditation Certificate of the Consultant and letter of the appointment of consultant.

Sh. Haresh Nater Environmental Consultant of the project proponent presented the salient features of the project and requested that standard ToRs prescribed by Ministry of Environment, Forests & Climate Change for such type of projects may be considered as draft ToRs proposed by them.

After detailed deliberations on the presentation by the Members, it was decided to categorize the project into B-1 category and that the project proponent should submit an Environment Impact Assessment Study Report. After further deliberations on the proposed Terms of Reference (TOR) suggested by the project proponent, the Committee approved the following Terms of Reference for Environmental Impact Assessment Study of the proposed project:-

A. Construction stage

1. The project falls under category **B-1** under item 6 (b) Isolated Storage & handling of hazardous chemicals (as per threshold planning) quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules, 1989 amended 2000 and requires an Environmental Impact Assessment Study for the entire site area (core zone) and an area of 10 kms radius around the project site (buffer zone).
2. Examine and submit the details of the environmental impacts due to change of land use and land cover including aspects such as hydrological characteristics, imperviousness of land and drainage pattern being altered.
3. Examine and submit the details of the environmental impacts at the stage of construction of boundaries & fencing including its impact on the pattern of

natural drainage and flooding pattern and barriers being constructed for restricting wildlife movement into project area.

4. Examine and submit the details of the environmental impacts due to leveling and landscaping including aspects such as excavation & filling of soil, clearing of vegetation, change of topography, development of plantation, green belt, lawns & parks and development of impervious areas.
5. Examine and submit the details of the environmental impacts due to excavation, transportation and filling of earth including aspects such as excavation, filling, sourcing, transportation and disposal of soil.
6. Examine and submit the details of the construction material to be used at the construction stage including aspects such as quarries and transportation, stone crushing and screening, mining & transportation of sand, soil excavation, transportation and filling.
7. Examine and submit the impacts being caused due to transportation of construction materials and men such as increase in traffic and load on public transportation facility, destruction and damage of transportation infrastructure, increase of risk due to road accident, pollution caused due to dust and tail pipe emissions and consumption of fuel by transport vehicles.
8. Examine and submit the details of the temporary housing and amenities to be created and used by the work force including aspects such as water supply, electrical energy and fuel supply.
9. Examine and submit the details of the environmental impacts at the stage of creation of roads, transportation facility and other physical infrastructure including aspects such as use of construction materials, excavation and /or filling of soil, generation of construction waste, creation of impervious surfaces, noise & suspended dust pollution and accidental risk.
10. Examine and submit the details of the noise pollution, air pollution, consumption of fuel and generation of scrap being caused due to operation and maintenance of construction machinery and equipment.
11. Examine and submit the details of the source and supply of water for construction activity.
12. Examine and submit the details of the source and quantity of power for construction activity.
13. Examine and submit the details of the fuel consumption, noise pollution, emissions of the exhaust gas, engine & coolant oil and batteries being discarded due to captive and emergency power generation.
14. Examine and submit the details of the handling of wastewater during construction including the domestic wastewater being generated from amenities.
15. Examine and submit the details of the environmental impacts at the stage of development of residential buildings, commercial, institutional and industrial infrastructure including aspects such as construction materials to be used, earth work (excavation and/or soil filling), generation of construction waste, lighting, HVAC units, waste generation from packaging, residual paints and chemicals and their cans, Generation of wooden, glass, metal and other scrap materials, plumbing and sanitary waste generation, creation of impervious surfaces, noise pollution, suspended dust pollution and risk of accidents.
16. Examine and submit the details of the environmental impacts due to the laying of the water supply system including aspects such as use of piping, fittings ad pumps, water pumping stations, earth work and water treatment plant.
17. Examine and submit the details of the environmental impacts due to the laying of the sewerage and sewage treatment and disposal system including

aspects such as use of construction material, piping, fittings ad pumps, earth work, laying of sewers & manholes, sewage pumping stations and sewage treatment plant.

18. Examine and submit the details of the environmental impacts due to the laying of the storm water drainage system including aspects such as use of construction material, piping, fittings and pumps, earth work, storm drains, storm water inlets and catch basins and storm water outfalls.
19. Examine and submit the details of the environmental impacts due to the electrical power system and street lighting to be provided including aspects such as construction materials to be used, distribution lines, cables, control panels, transformers and meters.

B. General

1. The study area will cover entire site area (core zone) and an area of 10 km radius around the proposed project site (buffer zone).
2. EIA procedure as given in the EIA Manual of MOEF will be followed.
3. Baseline environmental quality within 10 km radius of the project site will be assessed based on secondary data collected from various sources supplemented by data generated at site. Baseline data will be generated for post-monsoon season, for following environmental components:
    a) Land Environment: Information on ecologically sensitive locations within the study area will be collected through field visits (archaeological monuments, monuments of cultural and historical importance, drinking water sources, water bodies, places of scenic beauty, biosphere reserves, national park, wildlife sanctuaries, migratory corridors, defense installation and other ecologically sensitive areas). Reserve and protected forests that falls in the study area and its direction and distance from the project site will be noted. Land use pattern of the area / block to be collected from revenue records. Various physiographic landforms as per SOI map will be provided. Satellite Imagery of the area to establish latest landforms of the study area and core zone will be procured form Google Earth / Wikipedia.
    b) Meteorology: Meteorological data for wind speed, wind direction, relative humidity and ambient temperature will be generated close to the site. Readings will be noted on hourly basis for one season. Historical met data from IMD will be obtained to assess the climatic trend.
    c) Ambient Air: AAQ data of the study area will be generated by following the guidelines for ambient air quality monitoring published by CPCB (Guidelines for Ambient Air Quality Monitoring). Respirable particulate matter, sulphur dioxide and nitrogen dioxide and all other parameters / pollutants as prescribed in the National Ambient Air Quality Standard notified by MoEF vide notification dated 16.11.2009, will be monitored for one season. Carbon monoxide level in the ambient air will be checked using online monitor (grab sample). The monitoring locations will be selected based on historical wind speed and direction data obtained from IMD and screen modeling. Monitoring stations will be located in downwind direction where maximum / significant ground level concentrations from the project are anticipated. Monitoring location will be established inside the forest, in the adjacent village and in the upwind direction with respect to the proposed project.

d) Ambient Noise: Baseline noise levels will be generated at locations where AAQ monitoring will be conducted. Noise readings will be taken using sound level meter once during the study period as per CPCB procedure.

e) Water Quality: Surface and ground water sampling location within the study area will be identified based on drainage pattern, water utilization and location of bore wells / dug wells. Ground water quality of the dump yard and villages around the dump yard will be tested. Parameters recommended by CPCB / IS 10500 will be analyzed following the standard methods (APHA Procedure). Sampling will be done once during the study period.

f) Soil: Soil samples will be collected from agriculture fields that are likely to be impacted from the project related air emissions, land disposal of wastewater and solid wastes. Soil quality analysis will be done for parameters like texture, moisture, organic matter, conductivity, pH, bulk density, water holding capacity and NPK values. Infiltration rate of soil samples collected from the dump yard site will be estimated. Sampling will be done once during the study period.

g) Flora and Fauna: The listing of flora and fauna will be carried out by referring to the published documents of Forest / Wildlife Department and observations recorded by the Scientists during the field visits.

h) Socio-economic Environment: Baseline information will be collected through secondary sources, mainly District Statistics Handbook / Tahsildar's Office: date on population distribution, occupational pattern, agriculture and cropping pattern, educational facility, health care facilities, literacy rate, infrastructure facility, etc will be collected.

5. Topography of the project site will be given with contours drawn. Filling / earth excavation, if done will be quantified and source of filling materials and its transportation issues will be addressed in the report. Strategies will be suggested to reuse the excavated earth generated from the project site. The impact of the project on the existing drainage pattern will be addressed and mitigation measures will be suggested to counter the adverse impact on the existing drainage pattern.

6. Quantification of air pollution load from the proposed project will be done. ..Potential environmental impacts will be assessed qualitatively and quantitatively. ..The changes in the quality of the environment will be predicted using Caline 4 ..Model. In case the ambient air quality of the surrounding area is predicted to be ..critical then additional strategies will be suggested as air pollution mitigation ..measures. The isopleths will be drawn on the location map clearly showing the ..sensitive targets and impact on it due to the proposed activity.

7. Availability of water and impact on other users on account of water drawl for the proposed plant will be assessed using historical flow data of stream. Strategies will be suggested to ensure that the wastewater does not contaminate the environment.

8. Greenery development plan will be prepared to enhance the aesthetic quality of the environment. The plan will also concentrate on measures that will be helpful in attenuating air and noise pollution levels from the project. CPCB guidelines will be followed to design the green belt. Indigenous species and those having long-term economic value will be considered for greenbelt development.

9. The existing traffic movement pattern and intensity on the main roads will be monitored for one / two days. The impact of additional traffic due to the proposed plant will be assessed.
10. Rainwater harvesting strategies within the project premises will be suggested as a measure to augment the available groundwater resources of the area / block.
11. Based on standard procedures prescribed by the National Safety Council and provisions mentioned in the Factories Act, occupational health and safety aspects of the project will be identified.
12. Environmental Management Plan will be drawn up to maintain and enhance the environmental quality in and around the project area. In case the quality of the environment is expected to deteriorate beyond acceptable limits, additional strategies will be suggested. Such strategies include wastewater treatment and reuse, more efficient air pollution control devices, noise reduction measures and additional thrust of ash utilization. The EMP will earmarked specific staff, instruments and finances for routine environmental management as well as collection, collation and examination of various environmental data. A post-project monitoring plan will be suggested to monitor the changes in the environmental quality after implementation of the project. All necessary administrative measures will be incorporated in the EMP to achieve the following objectives:
    - Reduction of adverse environmental impacts
    - Improvement of environmental quality of the surrounding area
    - Waste minimization, reuse and resource recovery
    - Waste segregation to make the treatment and disposal cost-effective
    - Establish proper monitoring mechanism with adequate infrastructure
    - Risk assessment study will be undertaken and disaster management plan will be prepared to tackle any accident that may occur due to the proposed activity. Potential hazards that may arise out of storage / transportation of hazardous chemicals / materials or due to operation of various processes will be systematically identified using standard hazard identification procedures. Maximum credible accident scenarios will be considered for consequence analysis.
13. In the next step different possible consequence scenarios using Models such as PHAST and PHAST RISK will be worked out for the hazards identified to find out the end points in terms of radiation and over pressure. Subsequently a systematic evaluation of risks will be carried out using a Risk Assessment Matrix taking into account both consequences as well as likelihood. The Assessment will include the possible risks to onsite population (workforce within the premises of the plant) and the surrounding communities in the vicinity of the proposed power plant. Active and passive risk mitigation measures will be recommended to ensure that the risks are within the 'ALARP' level. Structural plant level Emergency / Disaster Management Plan will be prepared. The resources in terms of equipments and staffing required for acquiring control on a potential emergency situation will be addressed.
14. Social impact assessment will be carried out by assessing the various developmental potential of the proposed project in the field of employment generation, improvement in physical and social infrastructure base.

15. Environmental aspects identified under some of the project activities may not be comprehensive and some of the significant aspects under some of the

activities of the project in question might not have been identified. All such environmental aspects may be added to the list.

16. Some of the activities with their associated environmental aspects of the project in question might be of significant magnitude and not included in the list project activities. All such activities may be added to the list of project activities.

17. The project proponent may add additional project activities and environmental aspects, if any, fill the impact matrix and carryout significance analysis for identifying the significant environmental aspects. Scale, sensitivity and duration of impacts; type, size and frequency of environmental aspects; applicable legal requirements; and concerns of interested parties and local public may be used as the basis for the significance analysis of the environmental aspects.

18. In the EIA study each of the environmental aspects listed in the TOR should be quantified, their positive and negative impacts on different areas of impacts should be identified and assessed and the results of such assessment should be reported in the EIA report.

19. In the Environment Management Plan, management of each of the significant environmental aspects (with identified and assessed significant environmental impacts) for mitigating the impacts should be objectively stated.

20. Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan.

21. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

22. Does the Environment policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

23. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.

24. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the Company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

25. Delineate the concrete proposal regarding activities to be undertaken under Corporate Social Responsibility programme, which should be long lasting in nature and should be as per the needs of a particular Village/area/ local habitats/ stakeholders to be adopted by the promoter company, which can be done by involving a person having knowledge and experience of socio-economic activities.

The aforesaid 'Terms of Reference' will be valid for a period of two years from its issuance. A detailed draft EIA/EMP report should be prepared as per the above noted TOR.

The company should prepare draft rapid EIA / EMP Report for its project based on above Terms of Reference and apply to the Member Secretary, Punjab Pollution Control Board for conducting public hearing as per the provisions of EIA Notification, 2006 as amended from time to time on submitting EIA / EMP / Executive Summary Report prepared by the industry as per TORs.

After completing the process of public hearing / public consultation, the company shall submit final EIA / EMP to the State Expert Appraisal Committee after incorporating all the issues raised during public hearing / public consultation for appraisal of its project.

Accordingly, TORs have been conveyed vide letter no 5262 dated 03.10.2015 to the project proponent. Now, the project proponent has submitted the Environment impact assessment study report online on dated 15.03.2016.

The case is placed before the SEAC for consideration.