114- F.6599/2018	**Proposed LPG Bottling Plant by M/s. SHV Energy Private Limited at S.F.No. 131/2 & 135/2, Kallapalayam Village, Sulur Taluk, Coimbatore District, Tamilnadu – Activity 6 (b), Category "B1" - 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) - Terms of Reference to be issued- Regarding**
	The Proponent, M/s. SHV Energy Private Limited, has applied to SEIAA-TN for Terms of Reference for the proposed LPG Bottling Plant at S.F.No. 131/2 & 135/2, Kallapalayam Village, Sulur Taluk, Coimbatore District, Tamil Nadu on 28.05.2018. The proposal was placed before the 114th SEAC Meeting held on 19.06.2018. The salient features of the project are as follows: 1. Process description: a) Receiving of LPG through Bulk tankers which carrying the LPG from ports which in turn receive the LPG from foreign countries. b) Unloading and storing of LPG in bullet c) Filling the empty bottle cylinders from the bullet d) Quality check and sealing of filled cylinders e) Dispatch of cylinders to dealers/Industrial Customers f) Loading the bulk tankers g) Dispatch of bulk LPG to industrial customers. 2. The planned storage capacity of 125MT x 4 no's = 500 MT LPG and a filling capacity of 100000 MTPA. 3. The total land area of the project 49978.67 sq.m and the area allotted for green belt is 16494 sq.m (33%). 4. It is proposed to provide DG set of capacity of 1 X 200 KVA & 1x100 KVA. 5. The total fresh water requirement for the proposed project will be 11.9 KLD. 6. The sewage generated is 1.6 KLD which will be treated and used for green belt development. 7. The trade effluent generated from cylinder cleaning, testing

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and cylinder washing before painting is 1.67 KLD which will be treated and reused for cleaning of cylinders.

8. Solid waste generation – The organic waste generation will be 21.6 kg/day and the same will be disposed through local municipality. The inorganic waste generation will be 5.4 kg/day and the same will be disposed through authorized vendors.
9. Hazardous waste generation – used oil/spent oil generation will be 1 T/annum and the same shall be reused as lubricant for the machineries.
10. List of proposed gas detection system:
    a) Filled cylinder storage shed – 02 no's
    b) Near evacuation vessels – 01 no
    c) Filled point (carousal) – 02 no's
    d) LPG pump & compressor shed – 02 no's
    e) Truck tank gantry – 04 no's
    f) Bullet area – 4 no's
11. List of proposed fire and safety system:

Sl. No.	Equipment	Quantity
a)	Firewater storage tanks 2612 KL capacity	02
b)	Fire water pump with engine	05
c)	Jockey pumps 45 cu.m/hr	02
d)	Sprinkler system for all LPG operating sheds	08
e)	QB detection system for all the LPG operating sheds	08
f)	Deluge valves for fire fighting	08
g)	Fire alarms (electrical & mechanical)	03
h)	Gas monitoring system	01

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	(15 no's sensors)	
i)	Fire fighting panel	01
j)	DCP fire extinguishers, 10 kgs	100
k)	CO2 fire extinguishers	25
l)	Sand buckets	40
m)	Hydrant valve with 2 no's hoses each 15 m long individual hydrant box	09
n)	Branch pipe with jet nozzle	20
o)	Dual pressure fog nozzle	06
p)	Water monitor	08
q)	Fire Bridget connection – 4 points	01
r)	Safety helmet	15
s)	Smart hose for tanker loading/unloading	04
t)	Rubber gloves	01
u)	Lightning arrestors	05
v)	Fire proximity suite	01

12. The surrounding features of the project site are: on all 4 sides there are vacant lands and on the western side a farm house is located. The nearest habitation is Kallapalayam which is at 1.4km on the north eastern side.
13. The proposed site falls in industrial zone as per the G. O. No. 2 (D) No. 95 dated: 02.06.2017 of Housing and Urban Development, Government of Tamil Nadu. The proponent was directed to submit a copy of the gazette notification related to the GO.
14. The proponent has a good experience and background in installing and operating such facilities of LPG bottling plants. In fact there are 2 such plants of more than 1 Lakh MT/annum capacity – one at Madurai and the other at Ahmedabad.

Based on the presentation made by the proponent, the SEAC Members interacted with the proponent about the project. The

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following are the key observations and recommendations:

1. In order to substantiate the approval for the site as industrial zone, the proponent should submit a copy of the gazette notification.
2. During discussion, it was revealed by the proponent that in the existing plants, there have been minor LPG gas releases (4 or 5 per annum). The SEAC directed the proponent to take all preventive measures to further minimize / eliminate such gas releases in the proposed plant.
3. The Kallapalayam habitation is very nearby and the proponent should ensure that any gas release should not affect the safety of the people in the Kallapalayam Village. Green belt and LPG gas monitoring should be strengthened along the boundary on the village side.
4. Risk assessment studies should be conducted with reference to Kallapalayam Village which is about 1.4 km from the project boundary.
5. Details of the annual profit should be submitted with necessary documents.
6. For CER: The project proponent shall furnish the CER proposal for the proposed expansion and the CER amount spent for the existing LPG plant.
7. The proponent promised that safety and monitoring devices for the proposed plant will be more modernized when compared to the existing plants. The proponent should ensure this promise.
8. The organic content of the MSW should be treated locally in a OWC and used as manure.
9. The green belt development area (33%) shall be clearly designed and marked with DGPS coordinates along with species list, which should be included as a separate chapter in the EIA report.

The SEAC decided to recommend to SEIAA-TN the proposal for the grant of Terms of References (ToR) (Annexure) for preparing EIA / EMP

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	report with Public Hearing for the proposed LPG Bottling Plant by M/s. SHV Energy Private Limited at S.F.No. 131/2 & 135/2, Kallapalayam Village, Sulur Taluk, Coimbatore District. The key observations and recommendations should form part of additional ToR in addition to the standard ToR.

S.No	Name	Designation	Signature
1	Dr. K. Thanasekaran	Member	
2	Dr.K.Valivittan	Member	
3	Dr.Indumathi M. Nambi	Member	
4	Dr. G. S. Vijayalakshmi	Member	
5	Dr. M. Jayaprakash	Member	
6	Shri V. Shanmugasundaram	Member	
7	Shri B. Sugirtharaj Koilpillai	Member	
8	Shri. P. Balamadeswaran	Co-opt Member	
9	Shri. M.S. Jayaram	Co-opt Member	

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ANNEXURE

6(b):STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR 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 INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

A. STANDARD TERMS OF REFERENCE

1) Executive Summary

2) Introduction

   i. Details of the EIA Consultant including NABET accreditation

   ii. Information about the project proponent

   iii. Importance and benefits of the project

3) Project Description

   i. Cost of project and time of completion.

   ii. Products with capacities for the proposed project.

   iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.

   iv. List of raw materials required and their source along with mode of transportation.

   v. Other chemicals and materials required with quantities and storage capacities

   vi. Details of Emission, effluents, hazardous waste generation and their management.

   vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)

   viii. Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided

   ix. Hazard identification and details of proposed safety systems.

   x. Expansion/modernization proposals:

      a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as

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an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing lexisting operation of the project from SPCB shall be attached with the EIA-EMP report.

b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4) Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)

iii. Details w.r.t. option analysis for selection of site

iv. Co-ordinates (lat-long) of all four corners of the site.

v. Google map-Earth downloaded of the project site.

vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

viii. Landuse break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)

ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area

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x. Geological features and Geo-hydrological status of the study area shall be included.

xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)

xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.

xiii. R&R details in respect of land in line with state Government policy

5) Forest and wildlife related issues (if applicable):

ii. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)

iii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha)

iv. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.

v. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.

vi. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.

vii. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6) Environmental Status

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account

the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.

v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.

vi. Ground water monitoring at minimum at 8 locations shall be included.

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio-economic status of the study area.

7) Impact and Environment Management Plan

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling - in case of discharge in water body

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard,

options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control

vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8) Occupational health

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers

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ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

iv. Annual report of heath status of workers with special reference to Occupational Health and Safety.

9) Corporate Environment Policy

i. 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.

ii. 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.

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

iv. Does the company have 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 shall be detailed in the EIA report

10) Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

11) Enterprise Social Commitment (ESC)

i. Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.

12) Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment

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(Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

13) A tabular chart with index for point wise compliance of above TOR.

B. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR 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)

1. Details on list of hazardous chemicals to be stored along with storage quantities at the facility, their category (as per MSIHC Rules), MSDS.
2. Mode of receiving hazardous chemicals in isolated storages and mode of their dispatch.
3. Layout plan of the storage tanks and other associated facilities.
4. Details on types and specifications of the storage facilities including tanks, pumps, piping, valves,
   flanges, pumps,monitoring equipments, systems for emissions control safety controls including relief systems.
5. Arrangements to control loss/leakage of chemicals and management system in case of leakage.
6. Risk Assessment & Disaster Management Plan
   - Identification of hazards
   - Consequence Analysis
   - Details of domino effect of the storage tanks and respective preventive measures including distance between storage units in an isolated storage facility.
   - Onsite and offsite emergency preparedness plan.

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