



Petronet LNG Limited

Survey No. 347, Puthuvypu P.O.

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CIN L74899DL1998PLC093073

PAN: AAACP8148D. GST: 32AAACP8148D1ZP

PLL/KOCHI/MOEF/2019-20/03

22nd May, 2019

Additional Principal Chief Conservator of Forests (C)

Ministry of Environment, Forest and Climate Change,

Regional Office (SZ),

Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road,

Koramangala II Block,

Bangalore – 560034.

Sub: Compliance report to Environment Clearance accorded to the LNG Terminal at Puthuvypu, Kochi.

Ref: Environment Clearance No. J-16011/26/2001-IA-III vide your letters dated 31st January 2013.

Sir,

The Six monthly compliance report for the above clearances are attached for the period ending 31st March 2019.

Thanking You,

With Regards

(T. N. Neelakantan)

Sr. Vice President (Plant Head)

CC:

- 1) The Chief Environmental Engineer,
Kerala State Pollution Control Board,
Gandhinagar, Kochi – 682 020.



Registered & Corporate Office:

World Trade Centre, First Floor, Babar Road, Barakhamba Lane, New Delhi- 110 001 (INDIA)
Tel: +91-11-23411411 / 23472525 Fax: +91-11-23472550

Dahej LNG Terminal:

GIDC Industrial Estate, Plot No. 7/A, Dahej Taluka: Vagra, Dist. Bharuch - 392130 (Gujarat)
Tel: +91-2641-257249 Fax: +91-2641-257252

COMPLIANCE REPORT of CRZ Clearance no. J-16011/26/2001-IA-III vide your letters dated 31st JANUARY 2013 for enhancing the re-gasification capacity from 2.5 to 5 MMTPA at Puthuvypeen Island, Kochi, Kerala by M/s Petronet LNG Ltd.

Point-wise compliance to stipulated terms and conditions of the above CRZ Clearance is as follows:

	SPECIFIC CONDITIONS	PLL Remark
I	"Consent for Establishment" shall be obtained from State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.	"Consent to Establish" Consent No. PCB/HO/EKM/ICE-R/03/2013 obtained from KSPCB and a copy of the same has already been submitted to the Ministry along with the six monthly compliance report dated 30 th September-2013.
II	NOC/Clearance shall be obtained confirming that all the firefighting provisions are as per standards specified by the Chief Controller of Explosives/Petroleum & Explosives Safety Organization (PESO) for the additional storage tanks.	No additional LNG storage tank is envisaged for this enhancement. We have got Approval of PESO for the existing LNG Storage Tanks and a copy of the same has already been submitted to the Ministry along with the six monthly compliance reports dated 05 th April-2013.
III	Leak detection/warning system shall be provided at strategic locations. Necessary control measures capable of remote operation to shut down the leakage, if any, should be provided.	Complied. State of the art automated FGS & shutdown system is installed to mitigate any such incidents.
IV	Appropriate safety devices such as masks should be provided for use by the workers handling the products at the site and their usage by them should be ensured.	Complied. Safety Helmets, Safety Shoes, Safety Goggles, SCBAs, Cryogenic suits are provided to all relevant workers and Dust mask are provided to the workers involved in activities which has potential to generate dust.
V	Project proponent should implement all the recommendations stipulated in the EIA, EMP and Risk Assessment reports pertaining to the project.	PLL is complying with all the recommendation stipulated in the EIA, EMP and Risk Assessment reports pertaining to our project.
VI	The commitments made during the Public Hearing and as recorded in the Minutes shall be complied with letter and spirit.	Noted. Public Hearing commitments are incorporated in Final EIA Report for further necessary implementation. Public hearing commitments are fulfilled details has already been submitted along with the six monthly compliance report dated 02 nd June-2016.
VII	All the conditions stipulated in the earlier Clearance including the recommendations of Environment Management Plan, Disaster Management Plan shall be strictly complied with.	Complied. All the conditions stipulated in the earlier clearance including the recommendations of EMP and DMP are strictly complied with.

VIII	<p>The Committee noted the proponent's statement that augmentation of the capacity from 2.5 MMTPA to 5.0 MMTPA will not induct additional environmental issues and that the planned system will take care of the overall requirements of the facility. However, impacts if any arising out of increased activities to meet the additional capacity shall be brought to the notice of the Ministry with appropriate mitigation measures that will be put in place, to ensure that the given commitment of 'no additional impact' is maintained in letter and spirit.</p>	<p>Noted. However, Augmentation of the capacity from 2.5 MMPTA to 5.0 MMTPA will not induct additional environmental issues.</p>
IX	<p>At least 5% of the total cost of the project shall be earmarked towards the Corporate Social Responsibility (CSR) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry prior to the commencement of the project. Implementation of such program shall be ensured accordingly in a time bound manner.</p>	<p>5% of the total cost of augmentation of the capacity from 2.5 MMTPA to 5.0 MMTPA project is earmarked towards community development and other infrastructure related as well as CSR projects. A separate fund for CSR is kept aside by PLL and we have carried out various activities for the community development and welfare, a brief description of our CSR activities with photographs are enclosed as Annexure # 1.</p>
X	<p>It shall be ensure that the proposed activity shall not cause any disturbance to the Fishing activity.</p>	<p>The proposed augmentation/enhancement of plan capacity do not involve any modification in current marine facilities. Hence will not cause disturbance to fishing activity.</p>
Xi	<p>The smooth and safe operation of the system will be ensured by incorporating a computerized SCADA (Supervisor Control And Data Acquisition) system. Any leakage in the pipeline shall be immediately detected by the Computer system and product pumping shall be immediately cut off.</p>	<p>Complied. Computerized SCADA (Supervisor Control And Data Acquisition) system, FGS (Flame, Gas and Spill) detection system and ESD (Emergency Shutdown system) system has already been installed to ensure smooth and safe operation, for early detection of any leak and for safe shutdown in case of any emergency respectively. Regasified NG pipeline belong to GAIL and cut off of the gas supply is ensured by them and on intimation to PLL, we may stop the supply.</p>

Xii	Regular patrolling of the pipelines needs to be done. This will help in identifying any activity that have the potential to cause pipeline damage or to identify small leaks whose effects are too small to be detected by instrument.	Complied. Regasified NG pipeline belong to GAIL and PLL has no any role related to these pipelines. However, the pipelines within the terminals are equipped with temperature and pressure sensors designed to raise alarm in case of abnormalities, in additions to this all pipelines are continuously guarded with relevant detectors capable of activating ESD if situation demands.
Xiii	The project shall be carried out as per international standards in vogue and duly certified by competent authorities before commissioning.	Complied. The project was carried out in accordance with relevant international and national standards. All equipments have been inspected and certified by competent third party or by competent authorities as per requirements.
Xiv	Oil Spill Contingency Management Plan shall be put in place along with the dedicated staff to deal with Oil spill in and around the port area shall be provided in the port. No oily wastes shall be discharged into the water bodies/mangrove areas.	<p>Contingency plan is formulated to take care of the eventualities; a copy of the same has already been submitted with six monthly compliance reports dated 05th April-2013.</p> <p>PLL is having one FIFI 1 tug with required boom barrier and other oil spill control related equipments. PLL jetty falls under the Cochin Port Trust (CPT), and the Oil Spill Contingency Management Plan is prepared by CPT. PLL has provided the information required from the terminal to be incorporated in the Oil Spill Contingency Management Plan. Coast guard is also part of the Oil spill contingency plan.</p> <p>No oil waste will be discharged in to water bodies/mangrove areas. Oily waste will be collected and send to Hazardous waste handling agency.</p> <p>We have entered in to agreement with KEIL (Kerala Enviro Infrastructure Ltd) for handling and treatment of our Hazardous waste and the latest agreement copy has already been submitted along with six monthly compliance report for the period ending March -2018.</p>

Xv	Regular mock drills shall be conducted to check the effectiveness of the on-site Disaster Management Plan. The recommendations made in the Environmental Management Plan and Disaster Management Plan, as contained in the Environment Impact Assessment and Risk Analysis reports of the project, should be effectively implemented.	Regular mock drills are conducted for both On-site as well as Off-site emergency scenarios. All mock drills are conducted as per ERDMP plan. For Off-site emergencies, an effective Mutual aid arrangement is in place; all parties in the Mutual aid actively participate in Off-site Mock drills. PLL has a Mutual Aid agreement with FACT-UD and BPCL-STF to provide resources during emergency. All recommendations made in the Environmental Management Plan and Disaster Management Plan, as contained in the Environment Impact Assessment and Risk Analysis reports of the project are covered while preparation of ERDMP (Emergency Response and Disaster Management Plan) which is effectively implemented.
xvi	No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.	Noted. No any other construction work will be done in CRZ area.
Xvii	The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	PLL has set up Environment Management Cell under Sr. Vice President – (Plant Head), other members of the team includes GM (Operations & Maintenance), Head of Operation department, C&P (Contracts & Procurement) department, Technical department, HSE department, Civil Department, Lab operation & a representative from HR department for effective implementing the stipulated environment safeguards. The SOP of the Environment Management Cell was revised on 23/04/2018 and the copy of the same has already been submitted along with six monthly compliance report for the period ending March-2018.
xviii	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.	The funds earmarked for environment management plan is included in the budget and will not be diverted for other purposes.

6.	GENERAL CONDITIONS	PLL Remark
I	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	Noted. PLL have taken appropriate measure while undertaking digging activities. We conduct ground water analysis periodically and latest report is enclosed as Annexure#2 .
ii	Full support shall be extended to the officers of this Ministry/Regional Office at Bengaluru by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	PLL will extend full support to the officers of this ministry's Regional Office, Bangalore and the officers of the Central and State Pollution Control Board during the inspection for monitoring purpose by furnishing full details of analysis reports and action plans for environmental protection
iii	A six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bengaluru regarding the implementation of the stipulated conditions.	Noted. Six monthly reports regarding the implementation of the stipulated conditions are regularly been submitted to regional MoEF office for all CRZ Clearance obtained for Kochi LNG Terminal project.
IV	Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.	PLL will comply with additional conditions, if any suggested by the ministry or any other competent authority in writing.
V	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.	PLL is aware of the Ministry's right to revoke clearance for not complying with the conditions stipulated in the clearance.
Vi	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.	Noted.
Vi i	The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	Site appraisal clearance obtained on 28 th Feb 2011. No separate land developmental work was required, as this involved only augmentation of equipment in the same land.
Vi ii	A copy of the clearance letter shall be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal.	PLL has written letter to concerned Gram Panchayat vide letter no. PLL/Kochi/MoEF/GP/2013/001 dated 07 th March-2013; A copy of the letter has already been submitted with six monthly compliance reports dated 05 th April-2013.

ix	State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/Tahsildar's office for 30 days.	Action need to be taken by State Pollution control board.
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Other Conditions mentioned in the Environment Clearance dated 31st January 2013.

7	These stipulation's would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.	Noted.
8	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	Noted. Copies of all relevant approvals/NOCs have already been submitted along with the six monthly compliance reports dated 05 th April-2013.
9	The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental and CRZ Clearance and copies of clearance letters are available with the Kerala Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at http://www.envfor.nic.in . The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bengaluru.	PLL had advertised regarding environmental clearance accorded by the Ministry of Environment & Forest in two local newspapers widely circulated in the region around the project. Copy of the advertisement given in the two local newspapers has already been submitted along with the six monthly compliance report dated 30 th September-2013.
10	This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.	Noted.
11	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.	Status of the compliance, of various stipulated environmental conditions and environmental safeguards are uploaded in PLL's website.

12	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.
13	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	PLL has written letter to concerned Gram Panchayat vide letter no. PLL/Kochi/MoEF/GP/2013/001 dated 7 th March-2013, we have already submitted a copy of the letter with six monthly compliance report dated 5 th April 2013.
14	The proponent shall upload the status of compliance of the stipulated Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	This is uploaded in the website. www.petronetlng.com .
15	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	Noted.
16	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of Clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	We have uploaded Form-V (Environment Statement) along with the status of compliance of clearance conditions in our company's website. Compliance of the clearance conditions is regularly sent to MoEF's regional office by e-mail. The latest Form-V (Environment Statement) for the period of FY 2017-18 is enclosed as Annexure#3 .

Thanking You,

With Regards

(T. N. Neelakantan)
Sr. Vice President (Plant Head)

CORPORATE SOCIAL RESPONSIBILITY (KOCHI)

Corporate Social responsibility (CSR) is a corporate self-regulation integrated into a business model. It is an act of giving back to the immediate and wider community in which organization carry out their business in a manner that is meaningful, valuable and relevant to the community. CSR is a process with an aim to embrace responsibility for the companies' action and encourage a positive impact through its activities on the environment, consumers, Employees, communities, stakeholders and all other members of the public sphere who may be considered as stakeholders. The world Business Council for Sustainable development (WBCSD) defines CSR as the commitment of business to contribute to sustainable economic development, working with employees, their families and the local communities.

In May 2002 the Department of Trade & Industry (DTI) published its first report on CSR. In the report CSR is defined in following terms,

A responsible organization does three things,

- It recognizes that its activities have a wider impact on the society which it operates.
- It takes account of the economic, social, environmental & human rights impact of its activities across the world.
- It seeks to achieve benefits by working in partnership with other groups and organizations.

Corporate Social Responsibility has been making meaningful contributions to the Society in different areas, for decades now. The CSR activities of Petronet LNG Limited is carried out by Petronet LNG Foundation. The CSR activities of PLF extends to various fields like education, healthcare, infrastructure development, disaster management, environment conservation etc. The CSR policy of PLF aims in bringing out a radical change in the life of people living in an around the operational areas of the company. Positive interventions are made in the areas of education, health, women empowerment, drinking water, sanitation, culture and sports etc.

PLF is focused on the holistic development of the people and improvement in their quality of life. It takes up projects/program which ensures development of the community through community participation. PLF gives priority to the needs of children and their access to quality education. It extends educational support by providing free educational kits, construction of library and improving the computer facilities and so on. The educational support is also extended to the youth to reduce the unemployment issues. Professional courses which are competency based, skill oriented and technical are offered to the youth and they are placed sucessfully in an around the state. PLF offers proper access to medical and other healthcare facilities by supporting medical camps, distribution of medicines, awareness campaigns. The company strives to keep the people and environment healthy and hygienic by supporting the healthcare initiatives around the work area.

The company involves in the Poverty eradication by supporting the project "Numma Oonu" initiated by the District Administration. The project has gained wide publicity in and around the nation. The company associates with the district administration and extends the targeted areas of operation. The company is equally concerned about environment and is always committed towards its conservation and maintenance. It takes up sustainable and environment friendly projects with the aim to generate clean and green Kerala. The environment related activities are carried out throughout the year with awareness creation, tree plantaing, construction of tree guards etc.

EDUCATION

"Education is the most powerful weapon that can be used to change the world"
Nelson Madela

Education is the building block of every society. 'It is the citizens who create societies and civilizations'. Education is the key instrument to the national human resource development. The government has been taking up plenty of initiatives to educate the children in the country, but what matters most is the quality of the education provided. A huge amount is allocated for the education of children and the youth. "Sarva Shiksha Abhiyan" has been an important milestone set up by the government to ensure education for all. The government has amended law '**RIGHT TO EDUCATION**' on 4th of August 2009, ensuring free and compulsory education for all children between the age of 6 to 14 under Article 21A of Indian Constitution. India became 135 in making 'Education' a fundamental right. The mid-day meal program, Sakshaar Bharat Mission, has been launched to increase the participation of children in schools and to reduce the number of drop outs. Regardless of all the efforts made the dropout rate of children from school remains alarmingly high. In the present scenario of education in India, the Govt. Institutions lacks quality education for the children. There is no proper infrastructure in schools including the library , computer facilities, proper toilet, drinking water facilities, safe classroom , coumpound walls etc. This can be seen more in the government and government aided schools.

Free education is given but the quality is not ensured. The current system followed by the Schools are making children less responsible and incautious. The English medium schools are meant for financially sound citizens and Govt. Schools for the poor and middle class families. The Educational system in India are slowly being commercialized , depriving right of the children to gain equally well and quality education. Several private organizations are joining hands with the Government to make that ultimate dream of offering quality education in India come true. As an important part of it, the role of corporate with their Corporate Social Responsibility (CSR) in India ,is crucial in improving the educational conditions in India. With an increasing global realization of how the business community can contribute to the social objective, education deserves a higher level of corporate involvement. The concept of development on societal level, involves multiple dimensions. While most attention and efforts provided by developed countries are focused on improving the economic development of local society, other long term impacts are possible only when the essential driving force of social advancements is present: an educated generation of local people. Such advancement include democracy, humanity, equality, and other aspects that demonstrate the maturity of a community and country thus following economic growth.

INITIATIVES ON EDUCATION

Petronet LNG Foundation has recognized education as one of the top priority towards which each human being should head. Education as the only method to eradicate poverty from the nation. Realizing this fact PLF has initiated and supported various project which can influence the students to come school and get access to the advanced learning methods.

1. Naipunyam - Skill Development Programme

PLF has supported skill development programs with an objective to impart quality training, enhance the skills of the youth and to make them employable citizens. CIPET: Institute of Plastics Technology (IPT)

- Kochi (formerly known as Centre for Bio-polymer science and Technology-CBPST) has signed a MoA with Petronet LNG Foundation for conducting a six month skill development course on Machine Operator Injection Molding & Machine Operator Plastic Processing. The Selection Committee has been made for selecting candidates through advertisement in leading newspapers & brochure distribution and screen the applications received and select the candidates according to the guidelines of LNG Petronet Limited. The skill development Programme were conducted as per the approved schedule of theory and practical sessions. Practical sessions were provided on different plastic processing and machine operating so as to achieve the skill to handle machinery independently. Students had been given exposure on plastic materials, testing and quality control, personality development classes, industrial exposure etc. In addition one day training on Fire and Safety has been arranged by Petronet LNG Ltd.

The candidates were supplied with course kit including course materials, notebooks, pen, uniform, safety shoes, safety helmets etc. All the 100 students has been trained into successful entrepreneurs and trained as technician for the market demand jobs. Theory, viva & practical test were conducted in order to assess technical knowledge and skills of the candidate after the completion of the course. 89 students has been placed altogether from Machine Operator- Injection Molding and Machine operator- Plastic Processing courses across several industries in in Kerala and Tamil Nadu

2. Providing Drinking Water Facilities In Schools

Schools must have access to safe and sufficient drinking water for the children. It protects the health and contributes to the wellbeing of the child. If the children do not drink enough water during the school day it results in the dehydration and contributes to the continence problems. In schools the children are involved in more and more activities than the other days like read, write, think, play etc. They lose their energy in all these activities, for that enough safe and hygienic drinking water is required for the children to keep them alive. PLF by recognizing this fact have supported Government LP School in Puthoor in the Installation of drinking water facilities in their schools.

3. Support to the underprivileged students of Govt. Aided Higher Secondary School for Girls, Venganoor

Petronet LNG Foundation (PLF) under its vision targets to address and promote the educational needs of the society educational support was extended towards the Govt. Aided Higher Secondary School for Girls, Venganoor, Trivandrum towards distribution of study materials to the under privileged students of the school. Govt. Aided Higher Secondary School for Girls, Venganoor has nearly 1800 female students, and a majority of them hails from the nearby coastal villages of Kovalam & Vizhinjam. Notebooks, bags, books, geometry boxes, etc. were distributed to deserving 250 students in Venganoor School. 250 students from underprivileged families are benefitted through this support.

4. Educational support to Velicham project- An initiative of distributing books and study materials to 25,000 students across 71 schools in Vypin

Petronet LNG Foundation has extended support to the project 'Velicham' initiated by Legislative assembly member along with district collector and education directorate.

Velicham (meaning 'Light' in Malayalam) seeks to upgrade the level of education for the students in Vypin block near to PLL, Kochi. The project aims to nurture educated, talented, motivated and morally upright

generation, who are employable, useful and productive citizens. PLL has been supporting this initiative from past 5 years through components ranging from syllabus supporting study material, Medical/Engineering Entrance Coaching program, PSC/Bank Coaching programs etc. The Prathyasha counselling service, free medical engineering entrance coaching for the children from underprivileged family and Amrutham Morning food project are propounded in this initiative. 25000 children (pre- primary to X) studying in 71 government and government aided schools in Vypin are benefitted.

5. Smart classrooms in Ernakulam, Kozhikode and Kasargode

A classroom has students with varied power of understanding and learning. In most of the schools the teaching and learning is done in the traditional method using the textbooks, blackboards and notebooks, sometimes this becomes difficult for the students to grasp the content. Animated pictures and video presentation are more appealing to the students than the big words and sentences. The use of smart classroom and the modern technology can ease the learning process of the students. It is targeted on to the audio visual senses of the students and they can store the information fast and effectively. The learning is made more interesting with the use of technology. To ensure quality education in the interior pockets of the state, construction of smart classrooms at lower primary schools at Kozhikode, Kasargode & Parur has been done.

6. Up-Gradation of Library and Computer facilities

Petronet LNG Foundation (PLF) aims to enhance the academic performance of the students by creating an effective and friendly environment for the students to study. PLF promotes a collaborative learning and creativity among the students. Effective learning is not possible only with the traditional method of learning. Children need more equipped library and computer facilities in schools which will promote wider learning and develop independent researches. The use of computers will improve their technological knowhow in their childhood itself. It will also significantly improve the capacity of teachers to use the digital content and use the activity approach to make teaching – learning process more effective.

7. Support towards the infrastructure development in LMC Boys LP School, Pachalam

PLF has supported LMC Boys LP School in Pachalam for improving their infrastructure facilities. Through the support PLF aims at providing good education for the students from very poor economic and social background and to support the differently abled students to lead a normal life in the society. LMC Boys LP School Pachalam is in the Ernakulam district of Kerala. It is a Government aided school with 110 student enrollment. 68 students among them are studying in standard 1 to 4. The rest of the students are in pre- primary section. Public Address sound system, Urinals and Toilet, Smart Class Room Equipment's, Play Items, for IED Class Room, Furniture's were provided.

ENVIRONMENT

Environment is an integral part of the community. The conservation of environment and protection of the natural habitats require greater importance in this current era. The advent of globalization and industrialization have caused imbalance in the natural environment resulting in the loss of habitats, damage to the biodiversity etc. The practice of the unsustainable farming techniques disturbs the natural ecosystem and challenges the sustainable development. According to the Brund Hand Report

"Sustainable development is a development that meets the need of the present without compromising the ability of the future generation to meet their own needs.

Petronet LNG foundation as responsible corporate citizen has always stressed on the importance of conserving the nature. It has always focused in keeping the project surrounded areas clean and free from the pollutions. The activities and programs conducted by the company has always been environment friendly.

Importance of tree plantation has been stressed these days because of the growing pollution in the environment. Here, in the areas of operation PLF along with the Vypin Block Panchayath aim for tree plantation in the peripheral villages starting from the World Environment day and throughout the year.

Responsibility to the planet is the duty of humanity to protect earth for its uniqueness. The conservation is a pressing issue that we cannot ignore as we cut down trees and turn skies with smog we get further away from healthy sky. The initiative of Haritha Vypin came out of the same concern.

The Initiative 'Haritha Keralam' shall benefit the nearby Grama Panchayath and cover the major areas road side, hospitals and schools under Vypin Block Panchayath through the tree plantations. The planting of trees could reduce the pollution and protect the environment to an extent. The trees will be planted along with the tree guard and creating awareness on environment issues. Sapling Distribution with Tree Guards and Awareness Talks are planned with the Block Panchayath throughout six months

Activities under 'Haritha Vypin' Project

Nature Club Formation and Awareness

Under Haritha Vypin tree plantation drive, Tree Saplings Distribution and Awareness Drive was organized with the participation of 32 Govt. schools and members of Nature Clubs of these schools. Members from 32 Schools Participated in the Awareness Drive at Vypin Block Panchayath Office. The session targets to sensitize the children on Environmental issues.

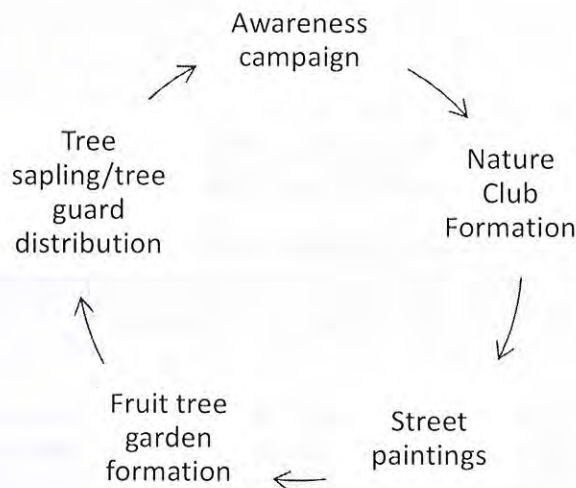
Formation of Fruit tree garden

The distribution of fruit tree and formation of fruit tree garden in Rama Varma Union LP School Cheraai.

Street Painting drive

Street painting for creating awareness on various environmental issues to the public organized in Cheraai Beach Road.

Environment is an unavoidable part of the universe. The existence of humans in the earth depends on the existence of nature. Any harm to the environment can disturb the natural balance of the universe and we may have to be the victims of various natural disasters. The disasters are not born but they are created through various human activities against nature.



HEALTH

India is the world's second largest populated country. The rising population demand a continuous growth and improvement in the healthcare sector. The existing health infrastructure is not enough to serve the needs of the growing population. Attributing to the growing incidence of lifestyle diseases there is an extreme rise in demand for the quality and affordable healthcare services in India. The medical experts attending to it is not enough. Huge amount is spend by the government in the sector but the condition gets much severe than the earlier. New epidemics, infections are being spread across the nation due to various reasons. Maternal and infant mortality rates are higher. Even though the life expectancy has increased substantially but it is very less compared to the other nation. The private hospital provide the high quality and excellent facilities for the people but they are beyond the reach of most of the people. Public hospitals are affordable but they are terribly overcrowded and lack of responsiveness.

Expecting the government to solve all the problem will be in vain. If the companies can support with their two percent of CSR fund in the healthcare sector, it would bring a huge change in the present situation. Medical camp, construction of hospitals with better facilities and affordable price, organizing awareness campaigns are most commonly done under the CSR support

Healthcare intervention by PLF

1. Fuel free incinerator at Taluk Hospital, Perambra

Petronet LNG (PLF) intends to promote and support Health Care facilities under CSR Initiatives. An incinerator was set up at taluk Hospital in Perambra as part of establishing excellent and readily available healthcare infrastructure in hospital. Incinerators are needed for managing the medical waste in hospital. Everyday a wide range of medical waste is created which requires a special disposal. The incinerators are safest and most effective means of waste management and prevents harm to the environment and health. Incinerators are now part of the advanced healthcare system which protects the people from the harmful pathogens and supports the continuity and reliability of healthcare into future.

2. Support to Old age Home with infrastructure & equipment at Guruvayoor

Old age is one of the unavoidable, undesirable, unwelcomed and the problem ridden phase of the life. It is when the people need more support and care from others which can prevent them from being more

vulnerable. Petronet LNG Foundation under its vision to address and promote the needs of the community, support has been extended to ensure better living conditions for the inmates of 'Sandeepani Seva Samithi' an old age home with nearly 20 women at the age of 70 to 80. To equip the old age home with better facilities, PLF has assisted the home with minimal necessities like Oxygen Concentrator, air bed, Hydraulic Hospital bed and Rexin cover bed.

3. Support to Family Health Centre, Kayyur with an Oxygen Concentrator for the Palliative care patients.

Oxygen concentrator has been supplied to Family Health Centre in Kayyur Cheemeni Grama Panchayath for providing oxygen therapy in home and residential care setting for the people living with the terminal illness. The medical device is useful for reducing breathlessness in people who have low level of oxygen in their blood and also useful for the people with high blood pressure, restlessness, chest pain etc.

4. Multispecialty Mega Medical Camp at Vypin

Petronet LNG Foundation (PLF) intends to promote Health Care Facilities at the nearby peripheral villages. In connection with the same PLF had supported to implement the multispecialty mega medical camp held at Vypin on 11th of November and 18th of November 2018. This medical camp has been conducted in Vypin from the past six years. This year, it got more significance due to the huge flood the state had witnessed. As the aftereffect of the flood people were prone to various kinds of diseases and epidemics. As the need of an hour it was necessary to provide people with maximum, affordable and quality medical aid.

The medical camps were arranged for the people in Kadamakkudy and Mulavukad. The camps were held at Kothad HSS of Jesus School and HIHS School. People of 6 Grama Panchayath in Vypin attended the camp held at HIHS School. Nearly 50,000 People had participated in the medical camp held at Vypin in two days

The services of more than 500 doctors and para medical staffs and other specialist were available during the medical camp. Ultra sound scanning, C T Scan, X- ray, MRI Scanning, Various lab tests, Minor surgeries, Dental operations, Retinal operations, free spectacles has been provided to those who were specially prescribed by the medical specialist.

There was special services provided to the handicapped people by medical board. Indian Medical association will provide free medical service throughout the year for those who are specially recommended by the doctors in the camp. The mega medical camp held in two days was reported to be successful with huge number of people's participation and high quality medical assistance given by the medical professionals.

PROMOTION OF ART, CULTURE & EMPOWERMENT

In most of the companies' art led CSR strategies are exceptional, with more focusing on to the areas such as community development, education, health and so on.

The art and its promotion should be integral to the CSR strategies in engaging the stakeholders. The skills, knowledge and creativity of the art and artist in this respect are a key tool in enabling business to build an effective CSR.

India being a country with rich culture, arts and tradition there is an immediate need for the CSR initiatives to preserve its cultural root in the country. The state of Kerala is home to a stunningly unique variety of art forms which have impacted the social and cultural life of the state. The rich and vibrant culture of the state has been continuing to fascinate people worldwide. The traditional classic and folk songs and dances of the people, their ballads, rituals and intellectual pursuits form the real treasure of the state which contributes to its rich cultural heritage.

The art form of Kerala reflect the life and outlook of its people. Kathakali, Koodiyattam, Ottam thullal, Mohiniyattam, Chakiyar Koothu, Padyani, Theyyam are the complete art forms.

1. Support towards the promotion of the Art form of “Koodiyattam” through the Organization Nepathya

Nepathya is a Centre for excellence in promoting Koodiyattam through teaching and imparting training to students and the future generations on performing the rare Art form of Koodiyattam in Ernakulam.

Koodiyattam** form of Sanskrit drama, considered to be at least 2000 years old. It means “performing together”. Only surviving art form that using drama from ancient Sanskrit theatre. Minimum of 10 to 15 years of training is required to be a professional. Requires sophisticated breathing control and subtle muscle shifts of face and body. This art was performed in specially designed temples called Koothambalams. The makeup for Koodiyattam is a very time taking process, requires minimum of 3 hours. Patterns of colors drawn on the face is influenced by the art of Kalamezhuthu. Colors are generated from the basic colors Yellow, White and Black. Same actor can take up multiple roles in the narration. **UNESCO proclaimed Koodiyattam as the master piece of an intangible heritage of humanity in 2001. Koodiyattam is a universal theatre language.

2. Wheels for Women

Petronet LNG Foundation as a responsible corporate citizen has always promoted gender equality and empowerment of women through various CSR initiatives. PLF has supported the implementation of “Wheels for Women” project – providing an auto- taxi for the residents of Shanti Bhavan” in order to ensure the freedom of mobility for the women in difficult circumstances

Transportation facility is one of the most significant need of the shelter home during the time of emergencies viz. inmates going to court, CWC, SJPU’s Psychiatrist, hospitals, etc. Most of the children in the home are facing threat to their life from the abusers who roam in an around the city. There are risk factors associated with their travelling in public transportation mode and ensuring their security is a great challenge. Travelling of women and children can be made more safe and secure by having own mode of transportation of the Shelter Home. The auto taxi shall ply in between the shelter home with the inmates across the city for different purposes.

POVERTY ERADICATION & DISASTER RELIEF

“NUMMA OONU” Ensuring Hunger free Ernakulam

Poverty is a destructive situation which deprives an adequate way of living for the people. It is a threatening time when the people are denied of their basic rights to live. Poverty entails more than the lack of income and productive resources. The manifestations of poverty include hunger, malnutrition,

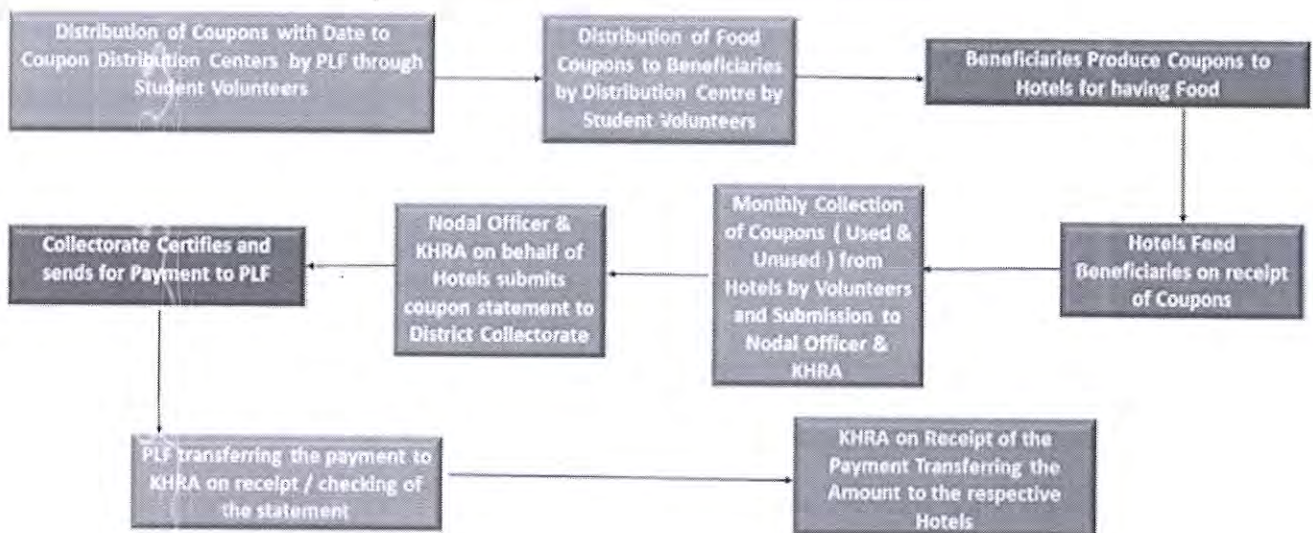
limited access to education and other basic services, social discrimination, exclusion from the public domain, lack of participation in decision making. Majority of the rural population in India bears disproportionate burden of poverty. Petronet LNG Foundation (PLF) intends to provide free meals to anyone denied or deprived of this basic necessity in the district of Ernakulam. With reference to the idea of feeding hungry in the city the project 'Numma Oonu' meaning 'Our Food', was launched on **January 26**. A pilot for 3 months was implemented at the beginning phase. Thereafter by looking into the response of the people and the statistics the project was expanded to provide 500 meals per day from 100 meals across 20 locations in the city. The locations like Taluk Head Quarters, major KSTRC stands & Taluk Hospitals have been identified. The project strives to keep alive the dream of a hunger free Kochi by providing free meals for the hungry without sacrificing his/her dignity. It was the good will and humaneness of all and dream of making Kochi the city of benevolence where no one goes to bed on an empty stomach.

“Numma Oonu” has been launched in collaboration with Petronet LNG Foundation & Ernakulam District Administration as well as Kerala Hotel and Restaurant Association (KHRA). A total of 100 food coupons per day were provided from the two selective counters at Ernakulam Collectorate and at South Railway Station. A total of around 64000/- meals have been served to the people through “Numma Oonu”. These locations are mostly in rural and semi urban areas where the needy people like migrant workers, and other poor segments which are closely populated.

MECHANISM- HOW IT WORKS



NUMMA OONU - FLOWCHART



'Numma Oonu' was presented as a model project on hunger eradication before the office of honourable president of India along with the district collector Ernakulam.

KERALA FLOODS

Disasters are sudden, and it disrupts the normal functioning of the society. It causes great losses for human, materials, economy and environment. India has a long history of disasters. Earthquake, Tsunami, cyclone, flood, are being affected in India from centuries. The state of Kerala has witnessed 2 huge disasters in the present year. The disaster with high intensity was the Ohcki cyclone that hit during the month of December, 2017 and another is the heavy flood in the month of August 2018. The two natural disaster has resulted in the loss of life, damage to properties, and loss of livestock and deterioration of health conditions due to water borne diseases. There were relief camps set in different parts of the state. In some places even the relief camps were under water and the camps had to be shifted to safer places. The flood victims were brought from various flood hit areas by the rescue operators. The continuous downpour of the rain was making the people more stressful. Many people were rescued some others were not even identified and remained isolated for nearly one and half weeks devoid of food and drinking water, proper toilet facilities. The electricity, transportation, telecommunication system were stopped during the time period. The people had no means to contact with the rescue teams. One sixth of the total population of the Kerala had been directly affected by flood. The Union government had declared this as 'Level 3 Calamity' or 'Calamity of a severe nature'.

Flood Relief activities by PLF

Petronet LNG Foundation as a responsible corporate citizen and seeing the emergency situation from the plant level, CSR initiative for the disaster relief across the state as per the need of an hour towards the food supply, drinking water facilities & preventive medical care services were provided. The procurement and distribution of the relief materials were done as per the requirements from the affected areas. Day and night efforts were done by the company with the employee participation.

Awarding ceremony for the Rescue Operators in Flood

Petronet LNG Foundation along with Elankunnapuzha Grama Panchayath facilitated one hundred unflinching fishermen who were involved in the rescue operations, supplying of food, drinking water and medicines to the victims, evacuating and rehabilitating the people trapped in the buildings and various water filled spaces.

Good Samaritan Initiative

Aims to help those who are working with our Contractor and aims to provide support at their time of great need or crisis. Petronet LNG Foundation (PLF) with all the support of the PLL employees is making all efforts to give fresh life to this by engaging deeply with all our contractors to discover genuine cases which are supported.

All of us would fondly recall our dear parents, an aunt, an uncle, a sister, a brother, a neighbor or a friend who supported us in times when we were overwhelmed with our problems. This is an opportunity for us to become that person, again. The "GIVING" person is always remembered with gratitude and fondness. He or she goes out of their way, as a habit to provide support or help those in need – sometime for a very selfish purpose – to positively invest in the cycle of karma. More often than not these people exude extreme confidence and satisfaction of living a complete life.



EDUCATION

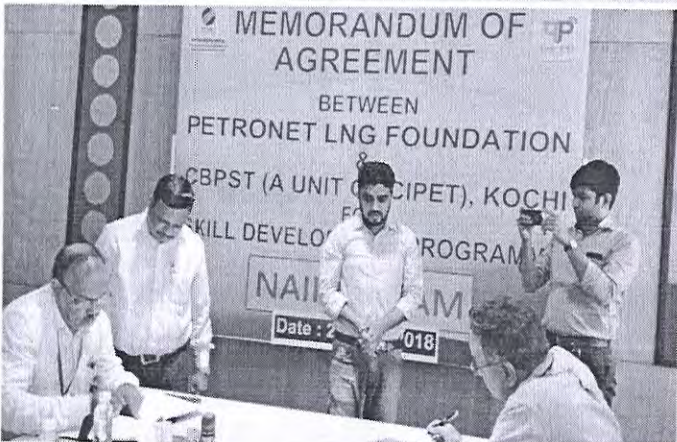
1) 'Naipunyam' Vocational Skill Development Course



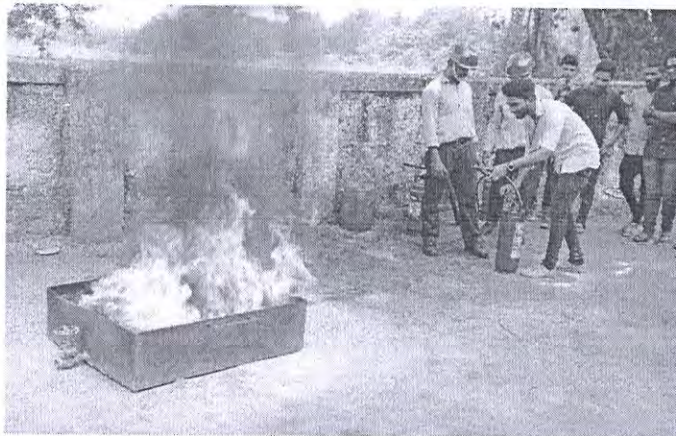
'Naipunyam' Skill Development programme inauguration



Educational Kit distribution



MOA Signing ceremony of Naipunyam



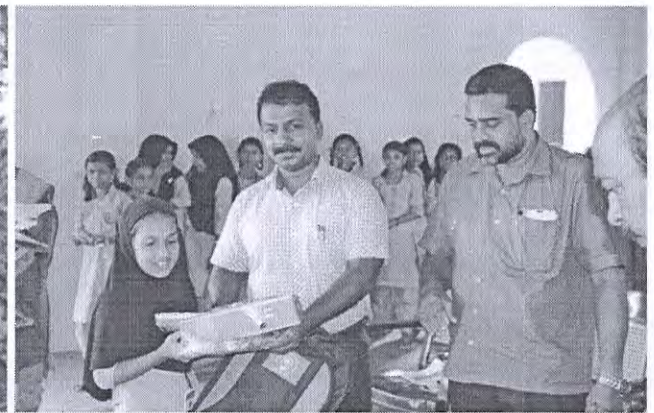
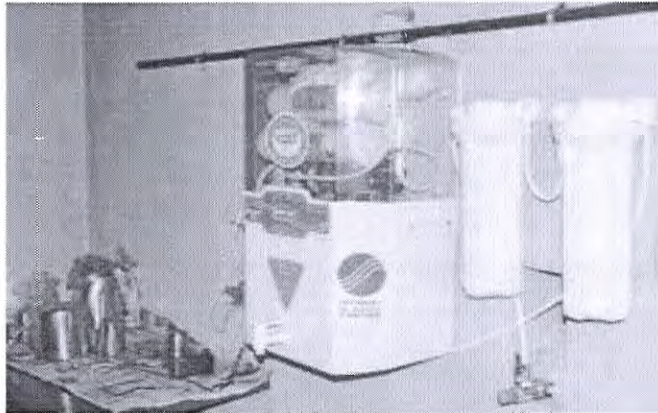
Fire and Safety training for the students



Certificate distribution and Valedictory function

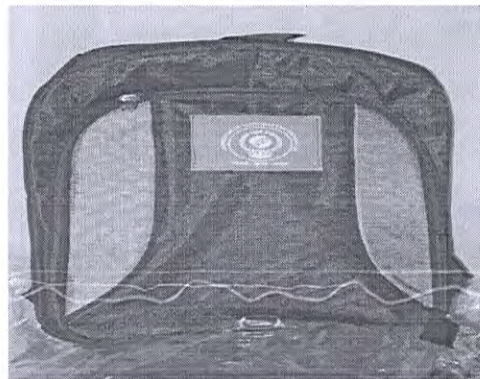


2) Installation of Drinking water facility in Government LP School , Puthoor



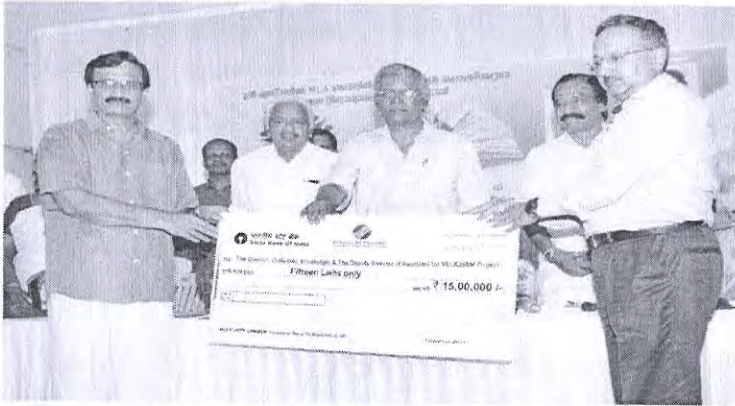
3) Educational Kit Distribution in Govt. Aided Higher Secondary School for Girls, Venganoor

Educational kit distribution

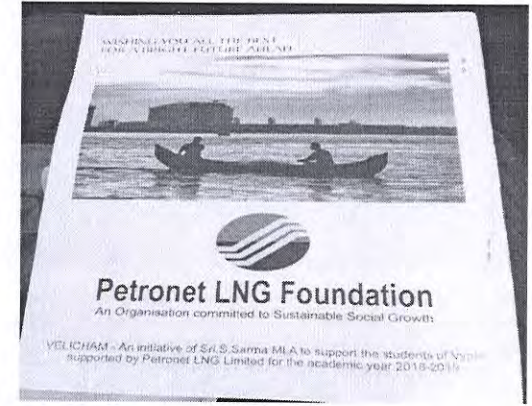




4) Educational support to Velicham project- An initiative of distributing books and study materials to 25,000 students across 71 schools in Vypin

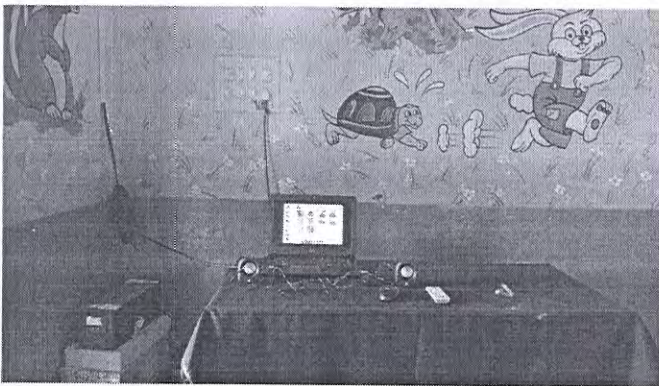


Handing over the Support for 'Velicham' to the Minister of Education, Kerala



Study material for Velicham

5) Building of Smart Classrooms at Ernakulam, Kasargode and Kozhikode





6) Up-Gradation of Library and Computer facilities in Chovva and Cheemeni Schools



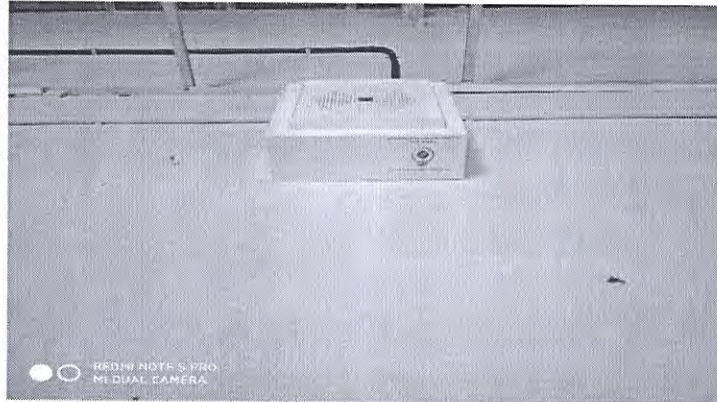
Newly up graded computer lab and school library in GHSS Cheemeni in Kasargode



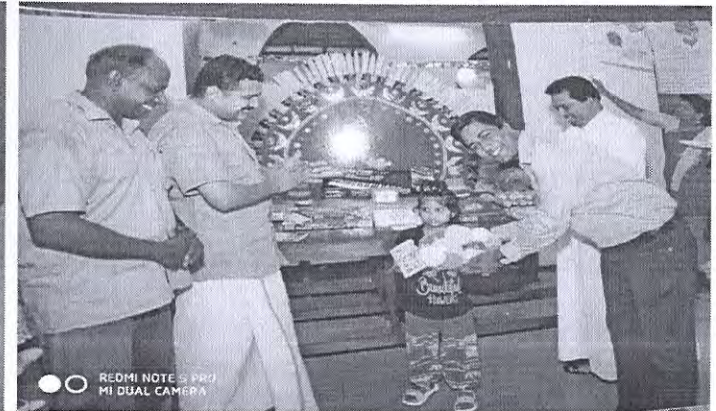
Newly up graded school library in Chovva Higher Secondary School, Kannur



7) Infrastructure development in LMC Boys LP School, Pachalam



1) Smart classroom equipment's 2) Sound system 3) Furniture's 4) Play materials 5) Separate urinal Complex for boys and girls



Inauguration of the educational support



ENVIRONMENT

1) Environment conservation through 'Haritha Vypin' Project


**HARITHAM VYPIN PROJECT
AT
VYPIN BLOCK PANCHAYATH,
ERNAKULAM, KERALA**

Supported by


Petronet LNG Foundation
An Organisation committed to sustainable Social Growth
YEAR - 2018-2019





Inauguration of the project

Nature Club Formation and Awareness drive



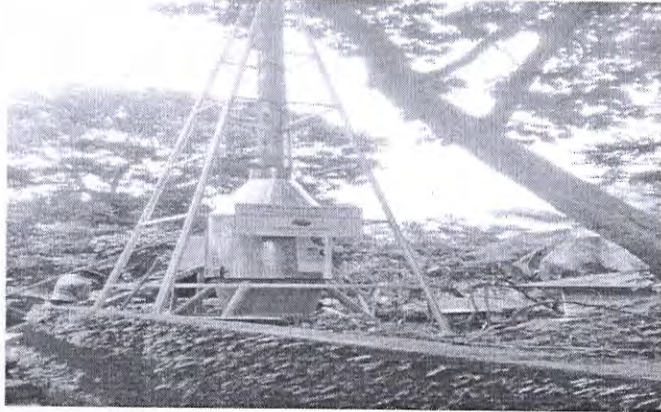
Fruit Tree Garden Formation

Street painting Drive

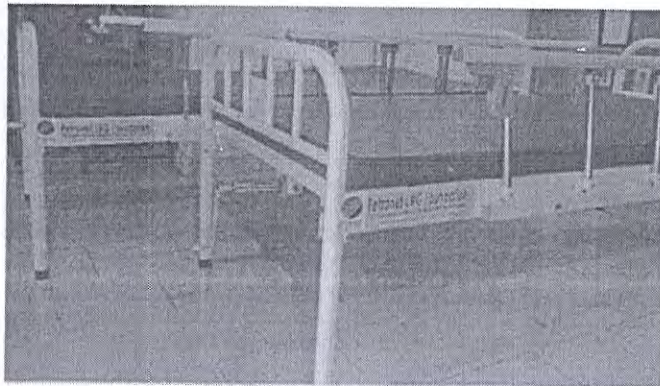


HEALTH

1) Installation of Fuel Free Incinerator at Taluk Hospital, Perambra



2) Infrastructure development in Sandeepani Seva Samiti Old age Home in Guruvayoor





3) Support to Family Health Centre , Kayyur with an Oxygen Concentrator



Inauguration of the Oxygen concentrator in FHC, Kayyur

4) Support to Multi Specialty Mega Medical Camp at Vypin



Inauguration of the camp



Beneficiaries



Newspaper Clipping

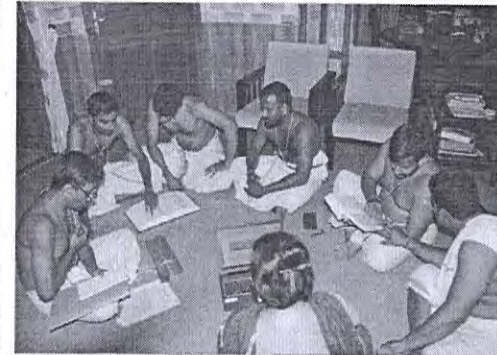


PROMOTION OF ARTS

1) Promotion of the art form of 'Koodiyattam' through the organization Nepathya



Practice Sessions



Translating Prathima Natakam



Stage Performance

WOMEN EMPOWERMENT

1) Support to "Wheels for Women" project: providing an auto taxi for the residents of Shantibhavan





POVERTY ERADICATION

1) "Numma Oonu" Ensuring Hunger Free Ernakulam



Inauguration of the project



Project Expansion Meeting



Supplying Free food



നാഴിയൂരി കരുന്ന കൊണ്ട് നാടാകെ സന്തോഷം

കൊല്ലം ജില്ലയിലെ നാഴിയൂരിയിൽ നടന്ന 'നൂമ്മ ഊണ്' പ്രോജക്ടിന്റെ ഉദ്ഘാടന ചടങ്ങിൽ പങ്കെടുത്തവർ. ഇടതുവശത്ത് നിൽക്കുന്നവർ പ്രോജക്ടിന്റെ ഉദ്ദേശ്യം വിശദീകരിക്കുന്നു. വലതുവശത്ത് നിൽക്കുന്നവർ പ്രോജക്ടിന്റെ വിശദാംശങ്ങൾ വായിക്കുന്നു.



സൗജന്യ ഭക്ഷണം: 'നൂമ്മ ഊണ്' പദ്ധതിക്കു തുടക്കം

കൊല്ലം ജില്ലയിലെ നാഴിയൂരിയിൽ നടന്ന 'നൂമ്മ ഊണ്' പ്രോജക്ടിന്റെ ഉദ്ഘാടന ചടങ്ങിൽ പങ്കെടുത്തവർ. ഇടതുവശത്ത് നിൽക്കുന്നവർ പ്രോജക്ടിന്റെ ഉദ്ദേശ്യം വിശദീകരിക്കുന്നു. വലതുവശത്ത് നിൽക്കുന്നവർ പ്രോജക്ടിന്റെ വിശദാംശങ്ങൾ വായിക്കുന്നു.

Project Expansion Meeting

'നൂമ്മ ഊണ്'; വിരക്കുന്നവർക്കു തുണയായി ജില്ലാ ഭരണകൂടം

നൂമ്മ ഊണ്

കൊല്ലം ജില്ലയിലെ നാഴിയൂരിയിൽ നടന്ന 'നൂമ്മ ഊണ്' പ്രോജക്ടിന്റെ ഉദ്ഘാടന ചടങ്ങിൽ പങ്കെടുത്തവർ. ഇടതുവശത്ത് നിൽക്കുന്നവർ പ്രോജക്ടിന്റെ ഉദ്ദേശ്യം വിശദീകരിക്കുന്നു. വലതുവശത്ത് നിൽക്കുന്നവർ പ്രോജക്ടിന്റെ വിശദാംശങ്ങൾ വായിക്കുന്നു.



Project Presentation at Rashtrapati Bhavan

DISASTER MANAGEMENT

1) Kerala Flood Relief Activities involving Employee participation in PLL



1) Awarding Ceremony for the rescue operators in Kerala Flood





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CSR EXPENDITURE SHEET, KOCHI
FY 18-19

Sl. No.	Name of the Project	Vertical	Location	Consumed (INR)	Remarks
Plant Approved Projects					
1	Numma Oonu (1st April to 10th May 2018) before Board Approval expenses of the Plant Level	Health & Nutrition	Kochi, Ernakulam	1,14,507.00	Break Up mentioned in the attached sheet (Plant level Projects)
2	Installation of an Incinerator (Solid Waste Management Facility) at the Taluka Hospital Perambra, Kozhikode, Kerala	Health	Perambra, Kozhikode	4,90,000.00	Implemented and Payment Done
3	Construction of Smart Classroom at - 1. GMUP School, Poonoor, Kozhikode 2. Govt. L.P School, Vayakode, Kasargode 3. Govt. L.P School Perumpadanna, Parur, Ernakulam	Education	Ernakulam, Kozhikode & Kasargode	3,21,270.00	Implemented and Payment Done
4	Vypin Block Panchayath - Supporting the "Haritha Keralam" Initiative	Environment	Vypin, Ernakulam	1,00,000.00	Partial Payment Done, Project under Implementation (Carry Over to FY 19-20)
5	Up-gradation of the Library in Chovva Higher Secondary School at Kannur	Education	Chovva, Kannur	4,10,943.00	Implemented and Payment Done
6	Support for the up-gradation of the school library & providing five desktop computers in Govt. Higher Secondary School at Cheemeni, Kasargode	Education	Cheemeni, Kannur	2,33,991.00	Implemented Payment to be Done
7	Support to the underprivileged students of Govt. Aided Higher Secondary School for Girls, Venganoor	Education	Venganoor, Trivandrum	3,77,375.00	Implemented Payment to be Done
8	Support towards the old aged at the Sandeepani Seva Samiti, Guruvayoor	Oldage (Health)	Guruvayoor	85,910.00	Implemented and Payment Done
9	Support to the art form of Koodiyattam, Ernakulam (Ongoing from FY 17-18)	Art & Culture	Ernakulam	250000.00	Implemented and Payment Done
10	Maintenance of School Toilets for the month of October 2017 to March 2018	Education	Kothamangalam, Ernakulam	5,00,000.00	Implemented and Payment Done
11	Support to the Multispecialty Mega Medical camp at Kothad HSS of Jesus School and HIHS School in Vypin	Health	Kothad, Ernakulam	5,00,000.00	Implemented and Payment Done
12	Request to provide financial assistance for the awarding ceremony of Rescue operators of the drastic flood that occurred in 2018.	Environment	Puthuvype, Ernakulam	50,000.00	Implemented and Payment Done
13	Proposal to implement "WHEELS FOR WOMEN" project - Providing an auto taxi for the residents of "Shanthi Bhavan" (Shelter Home)	Promoting Gender Equality	Ernakulam	4,16,311.00	Implemented and Payment Done
14	Educational Support and infrastructural development of LMC Boys LP School, Pachalam	Education	Ernakulam	3,39,888.00	Implemented and Payment Done
15	Proposal to support the Family Health Centre (FHC) Kayyur with an Oxygen Concentrator (Oxymed) for the palliative Patients at Cheemeni Grama Panchayath, Kasargode	Health	Kasargode	42,000.00	Implemented and Payment Done
16	Construction of Atal Tinkering lab - A central government initiative in St. Joseph Higher Secondary School, Meloor	Education	Ernakulam	2,80,000.00	Implemented and Payment Done
(A) SUB TOTAL				45,12,195.00	
CO Approved Projects (PLF / PLL)					
1	Numma Oonu	Health (Eradicating Hu	Ernakulam	49,32,469.66	Ongoing (Expenditure from May to Feb 2019 mentioned here)
2	Supporting the educational initiative - Velicham (through Books and Study Materials for 25,000 Students across 71 Schools) in Vypin Block for FY 18-19	Education	Ernakulam	10,00,000.00	Partial Payment Done, Project under Implementation (Carry Over to FY 19-20)
3	Flood relief activities under CSR during the Kerala floods	Disaster Management	Ernakulam	14,55,199.44	Implemented and Payment Done (From PLL)
4	Naipunyam (Skill Development Training Programme for 100 Students on Plastic Technology implemented with CBPST)	Education	Ernakulam	70,63,130.00	Implemented and Payment Done Payment Break Ups : 29,23,130.00 27,60,000.00 13,80,000.00 Approved in FY 17-18
5	X Ray Unit at CHC Malipuram	Health	Malipuram, Ernakulam	0.00	Project Could Not be Taken Up
6	Hiring of contractual manpower through Petronet LNG Foundation (PLF) for Kochi Location	Manpower Support (Documentation & Evaluation)	PLL Office	1,82,435.00	Ongoing (Nov,18 to March'19) Payment Done
(B) SUB TOTAL				1,46,33,234.10	
PLL + PLF (Plant Level & Corporate Approved) - Total Expenses (A+B)				1,91,45,429.10	



Test Report No: TC54021800000856P	Date: 24.12.2018	Page 1 of 1
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CUSTOMER DETAILS			
Customer Name & Address		M/s Petronet LNG Limited Survey No.347 ,Puthuvypu P.O Kochi - 682 508	
Customer Reference		Test Request Form Dated 17.12.2018	
SAMPLE DETAILS			
Sample Code	TC54021800000856P	Sample Received On	18.12.2018
Sample Name	Water	Sampling Procedure	---
Sample Description	Ground Water- Bore Well	Sampling Location	East Side
Identification By Customer	---	Sampling Condition	Good
Sampled On	17.12.2018	Test Started On	18.12.2018
Sampled By	Laboratory	Test Completed on	24.12.2018

SL NO	TEST PARAMETER	TEST METHOD	UNIT	RESULT	ACCEPTABLE, LIMIT (IS 10500 - 2012)
01	pH	IS 3025 Part 11:1983 RA 2017	---	6.98	6.50 - 8.50
02	Total Dissolved Solids	IS 3025 Part 16:1984 RA 2017	mg/L	157	500 (Max)
03	Turbidity	IS 3025 Part 10: 1984 RA 2017	NTU	0.30	1.00 (Max)
04	Chloride (as Cl)	IS 3025 Part 32:1988 RA 2014	mg/L	23.9	250 (Max)
05	Iron (as Fe)	IS 3025 Part 53:2003 RA 2014	mg/L	0.22	1.00 (Max)
06	Fluoride(as F)	APHA 23 rd Edition 4500-F- B D: 2017	mg/L	< 0.10	1.00 (Max)
07	Sulphate (as SO ₄)	IS 3025 Part 24:1986 RA 2014	mg/L	32.4	200 (Max)
08	Electrical Conductivity	IS 3025 Part 14:1984 RA 2013	µS/cm	253	---
09	Mercury (as Hg)	IS 3025 Part 48:1994 RA 2014	mg/L	< 0.001	0.001 (Max)
10	Lead (as Pb)	IS 3025 Part 47:1994 RA 2014	mg/L	< 0.01	0.01 (Max)
11	Copper (as Cu)	IS 3025 Part 42:1992 RA 2014	mg/L	< 0.05	0.05 (Max)
12	Total Chromium (as Cr)	IS 3025 Part 52:2003 RA 2014	mg/L	< 0.05	0.05 (Max)
13*	Zinc (as Zn)	IS 3025 Part 49:1994 RA 2009	mg/L	< 0.20	5.00 (Max)
14	Temperature	IS 3025 Part 9:1984 RA 2006	°C	27.0	---
15*	Salinity	SEAAL/SOP/06	ppm	43.2	---
16	Oil & Grease	IS 3025 Part 39:1991 RA 2014	mg/L	< 5.00	---
17	Dissolved Oxygen	IS 3025 Part 38:1989 RA 2014	mg/L	6.97	---
18	Biochemical Oxygen Demand (3 days at 27 °C)	IS 3025 Part 44:1993 RA 2014	mg/L	< 2.00	---
19	Chemical Oxygen Demand	IS 3025 Part 58:2006 RA 2012	mg/L	< 10.0	---
20*	Cyanide (as CN)	IS 3025 Part 27:1986 RA 2009	mg/L	< 0.01	0.05 (Max)
21	Cadmium (as Cd)	IS 3025 Part 41:1992 RA 2014	mg/L	< 0.003	0.003 (Max)
22*	Pesticide	USEPA 508 : 1995	---	Absent	---
23*	Insecticide	USEPA 508 : 1995	---	Absent	---

*Not Under NABL scope

Note: Parameters Lead, Mercury, Total Chromium does not meet the range of NABL Scope compare with Specification.

End of Report

For and on behalf of
Standard^S Environmental & Analytical Laboratories

Authorized Signatory

The results are related only to the samples submitted for analysis and this test report shall not be reproduced except in full, without the written approval of the laboratory.

Standard^S Environmental & Analytical Laboratories

Accreditation and Approval: NABL as per ISO 17025: 2005 & "A" Grade laboratory of KSPCB

K.J. Tower, Pathalam, Udyogamandal P.O., Ernakulam-683 501, Tel. 0484-2546660, 93 87 27 24 02, 90 74 34 14 43

Web: www.sealabs.in, E-mail: seaalab@gmail.com, info@sealabs.in



**PETRONET
LNG
LIMITED**

Petronet LNG Limited

Survey No. 347, Puthuvypu P.O.

Kochi - 682 508, India.

Tel: +91-484-2502259 Fax: +91-484-2502264

www.petronetlng.com

CIN L74899DL1998PLC093073

PAN: AAACP8148D. GST: 32AAACP8148D1ZP

11.09.2018

PLL/KOCHI/KSPCB/Form-V/2018-19

KSPCB Consent No: PCB/HO/EKM/ICO-R/12/2016.

To,

The Chief Environmental Engineer,
Kerala State Pollution Control Board,
Gandhinagar, Kochi – 682020.

Sub: Submission of Environment Statement (Form-V).

Dear Sir/Madam,

Petronet LNG, Kochi terminal was commissioned on 20th August 2013 and KSPCB Consent number is PCB/HO/EKM/ICO-R/12/2016.

Kindly find Form-V (Environment Statement) of Petronet LNG Ltd, Kochi Terminal for the financial year 2017-2018, as per Environment (Protection) Rules, 1986.

Thanking you,

For, Petronet LNG Ltd.

T.N. Neelakantan,
Sr. Vice President (Plant Head).

Enclose: Environment Statement (Form-V).

Cc:

The MEMBER SECRETARY,
Kerala State Pollution Control Board,
Pattom P. O.,
Thiruvananthapuram – 695004,
Kerala.

Regd. Office:

World Trade Centre, First Floor, Babar Road,
Barakhamba Lane, New Delhi- 110 001 (INDIA)
Tel: +91-11-23411411 / 23472525 Fax: +91-11-23472550



Dahej LNG Terminal:

GIDC Industrial Estate, Plot No. 7/A, Dahej
Taluka: Vagra, Dist. Bharuch - 392130 (Gujarat)
Tel: +91-2641-257249 Fax: +91-2641-257252

**ENVIRONMENTAL STATEMENT FORM-V
(See rule 14)**

Environmental Statement for the financial year ending with 31st March 2018

PART-A

1	Name and address of the owner/ Occupier of the industry, operation or process.	:	Mr. Rajender Singh; Director (Technical) Kochi Address: Petronet LNG Limited, Puthuvypu P.O., Ernakulam-382508 Corporate Office: Petronet LNG Limited, World Trade Center, First Floor, Babar Road, Barakamba Lane, New Delhi-110001
2	Industry category	:	Orange
3	Production category. Units.	:	5 Million TPA
4	Year of establishment	:	20 th August 2013
5	Date of the last environmental statement submitted.	:	29-09-2017

PART -B

Water and Raw Material Consumption:

I. Water Consumption (M³/Day)

Process : 10 M³/d
Cooling : Nil
Domestic : 22.74 M³/d

Name of Products	Process water consumption per unit of products	
	During the previous financial year	During the current financial year
1. RLNG	0.010 M ³ /MT	0.006 M ³ /MT

II. Raw material consumption

Name of raw materials	Name of Products	Consumption of raw material per unit of output	
		During the previous financial year	During the current financial year
LNG	RLNG	0.04*	0.017*

*Converted LNG consumed in energy units/ RLNG produced in energy units.

PART-C

Pollution discharged to environment/unit of output
(Parameter as specified in the consent issued)

Pollutants		Quantity of Pollutants discharged (mass/day)	Concentration of Pollutants discharged (mass/volume)	Percentage of variation from prescribed standards with reasons.	
(a) Water		NIL	NIL	NIL	
(b) Air	Equipment	Parameters	Quantity of Pollutants discharged (mass/day)	Concentration of Pollutants discharged (mass/volume)	Percentage of variation from prescribed standards with reasons.
	GTG-A	PM	60.31 Kg/d	63.0 mg/Nm ³	No variation from prescribed standard
		CO ₂	40.43 T/d	2.2 %	
		CO	291.00 Kg/d	243.1 ppm	
		SO ₂	0.0 Kg/d	0.0	
		NO _x	215.65 Kg/d	225.2 mg/Nm ³	
GTG-B	PM CO ₂ CO SO ₂ NO _x	GTG-B was not running during this period.			
GTG-C	PM	45.89 Kg/d	64.8 mg/Nm ³	No variation from prescribed standard	
	CO ₂	32.67 T/d	2.4 %		
	CO	199.59 Kg/d	225.6 ppm		
	SO ₂	0.0 Kg/d	0.0 mg/Nm ³		
	NO _x	187.27 Kg/d	264.5 mg/Nm ³		
Emergency DG set	PM	0.03 Kg/d	58.5 mg/Nm ³	No variation from prescribed standard	
	CO ₂	0.02 T/d	2.4 %		
	CO	0.06 Kg/d	101.5 ppm		
	SO ₂	0.01 Kg/d	27.4 mg/Nm ³		
	NO _x	0.03 Kg/d	58.4 mg/Nm ³		

b) Air	Fire Pumps-C (Diesel Operated)	PM	0.00 Kg/d	12.8 mg/Nm ³	No variation from prescribed standard
		CO ₂	0.01 T/d	2.4 %	
		CO	0.04 Kg/d	135.8 ppm	
		SO ₂	0.01 Kg/d	29.0 mg/Nm ³	
		NO _x	0.01 Kg/d	48.5 mg/Nm ³	
	Fire Pumps-D (Diesel Operated)	PM	0.00 Kg/d	13.5 mg/Nm ³	No variation from prescribed standard
		CO ₂	0.01 T/d	2.4 %	
		CO	0.03 Kg/d	132.5 ppm	
		SO ₂	0.01 Kg/d	32.8 mg/Nm ³	
		NO _x	0.01 Kg/d	43.3 mg/Nm ³	
	Fire Pumps-E (Diesel Operated)	PM	0.00 Kg/d	12.3 mg/Nm ³	No variation from prescribed standard
		CO ₂	0.01 T/d	2.1 %	
		CO	0.04 Kg/d	131.5 ppm	
		SO ₂	0.01 Kg/d	37.3 mg/Nm ³	
		NO _x	0.01 Kg/d	53.2 mg/Nm ³	
	Fire Pumps-F (Diesel Operated)	PM	0.00 Kg/d	11.3 mg/Nm ³	No variation from prescribed standard
		CO ₂	0.01 T/d	2.2 %	
		CO	0.03 Kg/d	121.0 ppm	
		SO ₂	0.01 Kg/d	36.5 mg/Nm ³	
		NO _x	0.01 Kg/d	59.7 mg/Nm ³	
MSO C	PM	2.27 Kg/d	53.9 mg/Nm ³	No variation from prescribed standard	
	CO ₂	1.88 T/d	2.3 %		
	CO	12.10 Kg/d	229.7 ppm		
	SO ₂	0.00 Kg/d	0.00 mg/Nm ³		
	NO _x	10.74 Kg/d	254.9 mg/Nm ³		

Note: All environmental monitoring activities during the FY 2017-18 was carried out by M/s. Cochin Test House, a KSPCB approved agency.

PART-D
HAZARDOUS WASTES
(As specified under Hazardous Wastes (Management & Handling Rules, 1989))

Hazardous Wastes	Total Quantity (Kg / Nos.)	
	During the previous financial year	During the current financial year
1. Used Oil (Schedule 1, Category: 5.1)	2677.5 Kg	2898.5 Kg
2. Waste residue containing oil (Schedule 1, Category: 5.2)	NIL	254 Kg
3. Discarded containers or barrels used for handling of hazardous wastes or chemicals (Schedule 1, Category 33.3). (used for storing dosing chemicals and used oil)	579 Nos.	753 Nos.
4. Industrial use of paint, plastic and Ink wastes (Schedule 1, Category 21.1)	NIL	3330 Kg
(b) From pollution control facilities	None	None
DCP Powder	NIL	5260 Kg
Insulation waste	NIL	815 Kg
General plastic	NIL	534 Kg

Note:

- (1) We have received approval from KSPCB for storage of Hazardous waste upto 1 year, vide consent No. PCB/HO/EKM/ICO-R/12/2016 dated 28.02.16.
- (2) For converting used oil from KL to Kg, the density of used oil is taken as 850 Kg/m³

PART -E
SOLID WASTES:

Solid Wastes	Total Quantity (Kg)	
	During the previous financial year	During the current financial year
a. From process	NIL	NIL
b. From Pollution Control Facility	NIL	NIL
c. Quantity recycled or re-Utilised within the unit.	NIL	NIL

PART -F

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

SL: No	Hazardous wastes	:	Composition
1	Used oil (Cat 5.1)	:	Organic Matter – 98 – 99 %, Inorganic Matter – 1 – 2 %.
2	Waste residue containing oil (Schedule 1, Category: 5.2)	:	Hydrocarbon
3	Discarded containers / barrels and Plastic/Ink/paint wastes (Cat 33.3)	:	Plastic or metallic barrels containing chemical / oil residue.
4	Industrial use of paint, plastic and Ink wastes (Schedule 1, Category 21.1)	:	Paint pigment, solvents etc.
5	DCP Powder	:	Potassium bicarbonate with urea base
6	Insulation waste	:	Polyisocyanurate (PIR)

Storage and disposal practice:

Hazardous wastes generated inside the terminal is being disposed through an agency, authorized by Kerala state pollution control board (KSPCB). Petronet LNG Limited has made agreement with M/s. Cee Jee lubricants for disposing used oil generated in the terminal. Used oil generated is been collected in MS barrels or other suitable containers at the generation point. Collected waste is stored in hazardous waste storage area designated for the purpose with impervious flooring and proper roofing and handed over to authorized vendor for disposal.

Waste residues containing oil such as oil soaked cotton wastes generated at various locations are collected and kept in designated storage bin located inside hazardous waste storage shed. It is be disposed through an authorized agency.

Discarded containers / barrels and Plastic/Ink/paint wastes are collected & stored in hazardous waste storage area of proper roofing and concrete flooring inside the terminal and is disposed through authorised agency, M/s. KEIL (Kerala Enviro Infrastructure Limited).

Hazardous waste storage area is kept clean and display boards are provided at the site for storing hazardous waste as per the category. Records of hazardous wastes generated in the terminal are maintained in Form 3.

PART-G

Impact of the pollution control measures taken on conservation of natural Resources and consequently on the cost of production.

We have developed and implemented Environment Management Cell (EMC), the cell is headed by GM (Operations & Maintenance), and other members are the Head of Lab, Civil, Materials, Technical and HSE. Sufficient man-hours are allocated for functioning of EMC. Environment management cell meets once in a month and take review of the situation.

We have adopted Dry low emission burner (DLEB) in our GTG, this system ensures that the stringent emission standards are met.

We have installed Continuous Ambient Air Quality Monitoring Station (CAAQMS) in our terminal, which is linked to CPCB server. CAAQMS is capable of continuous monitoring of ambient air quality and the results are transmitted to CPCB server on a regular basis.

PART -H

Additional measures/investment proposal for environmental protection including abatement of pollution.

Hazardous Waste storage facility is developed with separate compartment and big storage bins for different categories of waste including e-waste, used battery, plastic waste etc. Photo of the storage facility is given below.

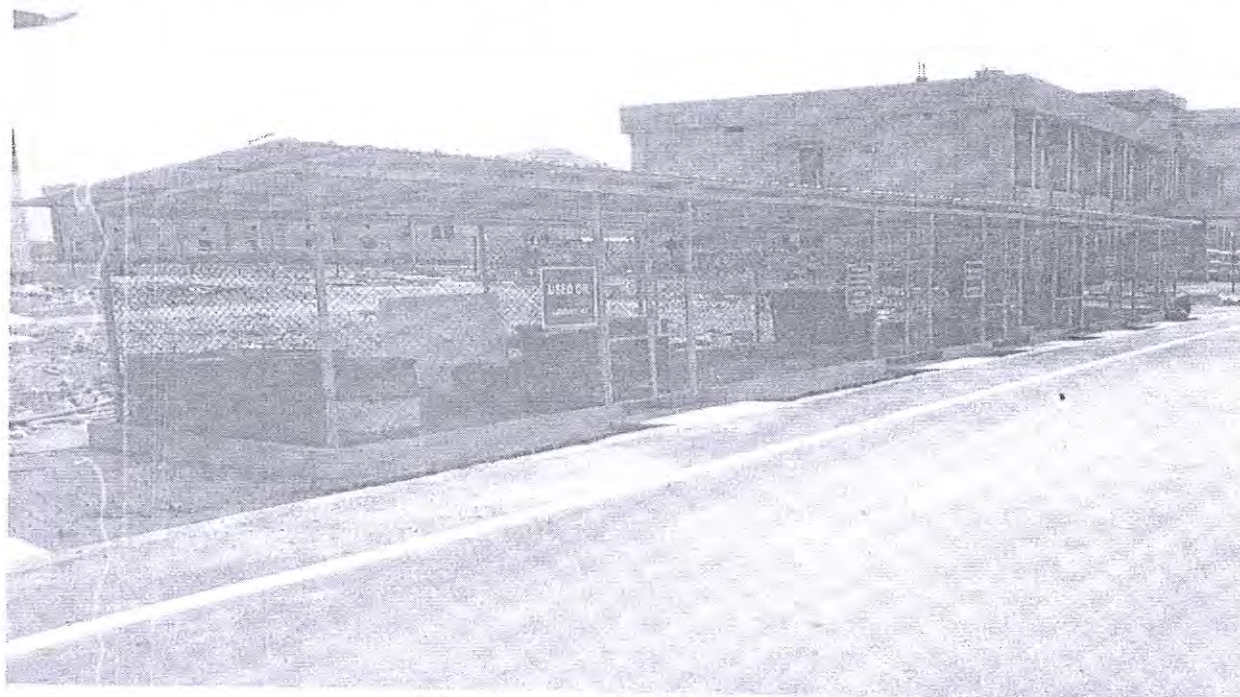


Fig-1: Hazardous waste storage facility.

Petronet LNG Limited, Kochi terminal has entered into an agreement with M/s Kerala Enviro Infrastructure Limited (KEIL) for E-waste disposal on 18th August, 2014 and this agreement is in force for a period of 5 years.

Petronet LNG Limited, Kochi terminal has implemented Environment Management System (ISO: 9001:2008, ISO 14001:2004 & OHSAS 18001:2007) and got certified in DEC-2015.

Petronet LNG Ltd, Kochi terminal has arrived at an agreement with Kerala State Social Forestry for a mangrove afforestation project in Ernakulam district, and the total cost of the project is 71.05 lakhs. Petronet LNG Limited have already transferred fund of Rs.45.00 lakh for the Mangrove Afforestation Project which is entitled "Project for Mangrove afforestation in Ernakulam district".


Petronet LNG Limited, Kochi has installed and commissioned one Continuous environment monitoring station with LED display.

PART - I

MISCELLANEOUS:

Any other particulars in respect of environmental protection and abatement of pollution.

Nil

For and on behalf of Petronet LNG Limited	
Sign	: 
Date	:
Approved By : T. N. Neelakantan	
Designation : Sr.VP (Plant Head)	