



Petronet LNG Limited

Survey No. 347, Puthuvypu RO.

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CIN L74899DL1998PLC093073

PAN: AAACP8148D. GST: 32AAACP8148D1ZP

PLL/KOCHI/MOEF/2019-20/01

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 2nd June 2003.

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 02nd JUNE 2003 for the Construction of LNG Import Terminal at Puthuvypeen Island, Kochi, Kerala by M/s Petronet LNG Ltd.

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

i. All the conditions stipulated by the Science Technology and Environment Department, Government of Kerala vide their Letter No. 4215/B1/2000/STED, dated 9th February-2001 should be effectively implemented.

- **Conditions mentioned in the Letter No. 4215/B1/2000/STED, dated 9th February-2001 does not specifies and conditions for compliance.**
- **Conditions mentioned in the Letter No. 1143/A2/2005/STED dated 14th October-2005 from Kerala coastal Zone Management Authority and PLL compliance remarks are as under:**

Sr. No.	Conditions mentioned	PLL Compliance remarks
1.	No activities will be undertaken in the Mangrove area or in the buffer zone of the mangrove. The route of the pipeline and other activities shall have minimum of 50m from the nearby mangroves and forest land if any in the CRZ area.	PLL's plot is not in the mangrove area, it is about 100 m away from the buffer zone. All activities including the laying of pipelines are confined within the PLL's plot.
2.	Expansion of existing service road in the Costal Regulation Zone-I shall not be carried out.	Expansion of the existing service road in the Costal Regulation Zone-I belongs to Panchayat and PLL will not do any expansion of the service road.
3.	No groundwater shall be tapped for the project	PLL will not tap any ground water during operation of the terminal as water requirement will be met from the condensed water from air. During construction stage, requirement of water was met by outsourcing. At present the water requirement is met by procuring the water from vendors.
4.	The proponent shall obtain necessary No Objection Certificate (NOC) from Kerala State Pollution Control Board.	PLL has obtained required NOC from Kerala State Pollution Control Board in 1999 vide NOC No. PCB/NOC/EK/117/98 dated 17th September-1999 which

		was renewed every time (mostly 2 years) before expiry of its validity period. We have obtained Consent to Operate with No. PCB/HO/EKM-1/ICO-R/18/2018 dated 10th October 2018, and was valid up to on 31st March 2023 , a copy of the same is enclosed as Annexure#1.
5.	EIA document including risk analysis and disaster management plan should be submitted directly to MoEF for environment clearance, under intimation to this office.	Comprehensive EIA of 2.5 MMTPA Terminal and EIA with QRA and Site emergency response plan of 5 MMTPA terminal has already been submitted with vide letter ND/LNG/K22/2K1 dated 16 th Feb-2001 and letter dated 22 nd Sept-2011 respectively.

ii. All the conditions stipulated by Kerala Pollution Control Board in their NOC No. PCB/NOC/EK/117/98 dated 17.9.99 should be effectively implemented.

- **Conditions mentioned by KSPCB in the CTE No. PCB/NOC/EK/117/98 dated 17.9.99 are and PLL compliance remarks are as under:**

Sr. No.	Conditions mentioned	PLL Compliance remarks
1	No.3: The applicant shall comply with the instructions that the Board may issue from time to time regarding prevention and control of air, water, land and sound pollution.	PLL will comply with any such instructions from the Board regarding prevention and control of air, water, land and sound pollution.
2	No.4: The effluent treatment facilities proposed namely sewage treatment plant/septic tank, oil traps, hot water cooling facilities etc. shall be provided before commissioning the industry. Addition facilities required, if any to achieve the effluent standards laid down by the Board under section 17(1)(g) of Water (Prevention and Control of Pollution) Act'1974 shall also be made along with.	PLL is generating only sewage waste and is being handled through septic tank and soak pit in individual building; details of STP have been submitted to KSPCB. PLL will comply with effluent standard of Water Act and if additional facilities are required then PLL will provide those facilities for treatment of effluent.
3	No.5: Air pollution control devices required shall be installed before	PLL is using Natural Gas as fuel for GTGs. GTGs are inbuilt with

	commissioning the industry for controlling air pollution. Minimum stack/chimney height shall be as detailed below:	DLE burner (Low NOx burners) and CEMS.
	69.0 m above ground level for flare stack	PLL had received letter from KSPCB dated 18-10-2010 regarding change in this condition, wherein the flare stack height reduced from 69.0 m to 43.2 m, a copy of this letter had already been submitted with six monthly report dated 30 th September-2013.
	5.5 meter above the roof level of Generator room for the Gensets of capacity 750KVA	PLL has provided the stack discharge at 3.5 meter above the roof level of Generator room.
4	No.6: For bringing into use any outlet to discharge and for the discharge of sewage/trade effluent, the applicant shall obtain consent to discharge from the Board under the Water (Prevention and Control of Pollution) Act'1974 before commissioning the industry.	PLL is generating only sewage waste and is being handled through individual building's septic tank and soak pit. PLL has obtained Consent to Operate with No. PCB/HO/EKM-1/ICO-R/18/2018 dated 10th October 2018, and was valid up to on 31st March 2023 , a copy of the same is enclosed as Annexure#1.
5	No.7: The applicant shall obtain the "Consent to Operate" from the Board under the Air (Prevention and Control of Pollution) Act'1981 before commissioning the industry.	PLL has obtained Consent to Operate with No. PCB/HO/EKM-1/ICO-R/18/2018 dated 10th October 2018, and was valid up to on 31st March 2023 , a copy of the same is enclosed as Annexure#1.
6	No.8: The sign board showing the name of the industry shall be displayed at the entrance of the site.	PLL has displayed the sign board showing name of the industry at the entrance of the site.
7	No.9: Suitable species of trees shall be planted and maintained within and along the periphery of the factory premises, forming a green belt to improve the environment.	Green Belt area has been developed along the periphery of the factory premises with trees like Gulmohar, Amaltas, Neem etc.

8	No.10: The date of commissioning of the industry shall be intimated to the Head Office and Regional office concerned of the Board at least one month in advance.	PLL had informed the date of commissioning of the industry vide letter no PLL/KOCHI/KSPCB/2013-14/C-06 dated 07 th August-2013, A copy of this letter has already been submitted with six monthly report dated 30 th September-2013.
9	No.11: There shall not be any fugitive emission from the plant/premises.	There will not be any fugitive emission from the plant/premises.
10	No.12: The location of the industry shall be as shown in the drawing attached. No change or alteration to the above shall be made.	There is no change made in the location of the industry, Location of the industry is as per the drawing.
11	No.13: The temperature difference between cooling water discharged and the receiving water body (sea water) temperature shall not be more than 50C and monitoring arrangements for the same shall be provided.	PLL will not discharge cooling water into sea or any other water body.
12	The ambient sound level measured at a distance of 1 m away from the boundary shall not exceed 65 dB (A) during day time and 55 dB (A) during night time.	Ambient sound levels measured at a distance of 1 m away from the boundary walls are well within the limits. Ambient sound level monitoring is done every month by KSPCB approved agency and the compiled report for the period of October-18 to March-19 is enclosed as Annexure#2 .
13	Consent to establish shall be obtained prior to setting up of captive power plant in futures.	PLL has incorporated the details of GTG, used for captive power generation, in the subsequent application of the renewal for Consent to Establish.

- iii. No change in scope of work shall be made without prior approval of this Ministry.
- **Any change in scope would be carried out only with the prior approval of the Ministry.**
- iv. Project proponent shall take all safety measures and take into account the dynamics of the marine/coastal area before constructing the break waters. The recommendations made by CWPRS shall be duly

implemented. The dredged materials shall be disposed of as per the recommendations by CWPRS.

- **The location and size of the basin has been arrived at after detailed model studies conducted by CW&PRS and further revalidated by HR Wallingford. The dredged material is being disposed off at the prescribed off-shore dumping ground identified as per CWPRS recommendations for Cochin Port Trust.**
 - **The Cutter suction Dredger's dredging material is dumped on the western side of the terminal as per the Cochin Port Trust allocated area for dumping. The Trailer Suction Dredger's dredging material is being dumped at the designated dumping site of Cochin Port at outer sea, about 15.6 km from the shore.**
- v. No activities will be undertaken in the mangrove area or in the buffer zone of the mangroves. The route of the pipeline and other activities shall have minimum of 50 meters distance from the nearby mangrove and forest lands, if any, in the CRZ area. Expansion of existing service road into Coastal Regulation Zone-I (I) shall not be carried out.
- **PLL plot is not in the mangrove area and is at about 100m from the buffer zone. All activities and pipelines are confined to this plot. The existing service road which belongs to Panchayat has not been expanded into the Coastal Regulation Zone-I (i) area.**
- vi. The laying and commissioning of the pipelines shall be in accordance with the established procedures; practices and rules. LNG facilities shall be designed, constructed and operated as per existing international standards. The pipelines shall be provided with in-built gas leakage detection and warning system. Adequate measures for monitoring pressures in excess of those for which the pipeline is designed shall be ensured to prevent leakage of gas.
- **The terminal construction complies with all existing International codes and best practices. Sufficient safety measures and warning systems are being in built into the system for detection of gas leakage, overpressure and other deviations in operating parameters. Details regarding the same has already been submitted with six monthly report dated 30th September-2013.**
 - **Standards such as OISD-194, EN: 1473, NFPA 59A and others are followed during the terminal construction.**
- vii. Design and alignment of the pumping platform/jetty and other structures should be chosen in such a way that it causes minimum resistance to the flow of tidal waters.
- **Jetty structure was designed and constructed after due consideration of this aspect. Jetty foundation is built on piles structure to cause minimum disturbance to tidal waters.**

- viii. The pipelines related to effluent discharge, sea water intake and pumping of LNG should be laid on sea floor after trenching. Trenching operations should be restricted to minimum area to minimize damage to benthic fauna.
- **PLL has already submitted to MoEF the change of the regasification process of the terminal and Sea water intake is not required in Shell and Tube Vaporizers (STVs). It may be noted that PLL will not use sea water in any manner nor will discharge any effluent into the sea during operation of the terminal. Pipelines for LNG pumping from jetty to tanks are laid above ground along with trestle.**
- ix. Disposal facilities should be completed prior to the commissioning of project activities. As per the thermal Plume Studies by NIO, Goa, the return water should be discharged at a location having water depth of about 3 m. Post monitoring should be carried out at definite intervals in order to ensure mid-course corrections, if any, for maintenance of environmental quality.
- **PLL has already submitted to MoEF the change of the regasification process of the terminal and Sea water intake is not required in Shell and Tube Vaporizers (STVs). It may be noted that PLL will not use sea water in any manner nor will discharge any effluent into the sea during operation of the terminal. As PLL is not using sea water in any manner this condition is not applicable.**
- x. Fish eggs, larvae and small fish as well as plant and animal plankton pass through the water intake screen and at times through the trash bars. Accordingly, the water intake for regasification purpose is to be provided with a velocity cap, trash bars, and low intake velocity be maintained to minimize the entry of debris and fish.
- **PLL has already submitted to MoEF the change of the regasification process of the terminal and Sea water intake is not required in Shell and Tube Vaporizers (STVs). As PLL is not using sea water in any manner this condition is not applicable.**
- xi. No groundwater shall be tapped for the project.
- **PLL did not tap groundwater during construction stage and will not during operation phase. Water requirement during operation of the terminal will be generated and met from the condensed water from air. At present the water requirement is met by procuring the water from vendors due to running of terminal at low output.**

- xii. Specific arrangement for rainwater harvesting should be made in the project design and the rainwater so harvested should be optimally utilized.
- **Rainwater collection system is in place for LNG storage tanks top and the water collected is being used in the terminal.**
- xiii. The Bathymetric survey of the dredged material disposal site should be carried out regularly and it should be ensured that there is no navigational hazard due to reduction of navigational depth as a result of project activities. Location of dumping site should be informed to all concerned.
- **The dredged material disposal site is Common dumping site at outer sea, 15.6 km away from shore and managed by Cochin Port Trust. The survey is being carried out by Cochin Port Trust.**
- xiv. Regular surveys shall be conducted to identify changes in the channel morphology so that navigational hazards are minimal.
- **The channel belongs to Cochin Port and its Morphology survey is done by Cochin Port Trust.**
- xv. Mangrove afforestation will be promoted in consultation with the expert agencies and the local NGOs in the area. A detailed plan shall be worked out in this regard and submitted to this Ministry within 3 months.
- **A Detailed plan for Mangrove afforestation has already been submitted with six monthly report dated 30th September-2013.**
 - **In FY 2014-2015 Petronet LNG Ltd, Kochi, arrived at an agreement with Kerala State Social Forestry for a mangrove afforestation project in Ernakulum district, the total cost of the project is 71.05 lakhs. Till date, Petronet LNG Limited have already transfer fund of Rs.60.00 lakh for the Mangrove Afforestation Project which is entitled "Project for Mangrove afforestation in Ernakulam district" All details with regard to this project had already been submitted with six monthly compliance report dated 30th March-2015. An updated progress report of the project is enclosed as Annexure#3.**
- xvi. Marine environment shall be periodically monitored to assess changes, if any, in the ecology and suitable remedial measures, if any required, shall be taken.
- **PLL is conducting marine water sampling and analysis by a KSPCB approved third party M/s. Cochin test house and the report suggest no adverse change in the marine environment.**

- **Latest copy of the marine water sampling report dated December-18 is enclosed as Annexure # 4.**
- xvii. The budget allocated for environment safeguard measures shall not be diverted for any other purpose.
- **Budget allocated for environment safeguard is not diverted for any other purposes.**
- xviii. The comprehensive Environmental Impact Assessment report shall be completed early and the final report submitted to this Ministry within one year from the date of this clearance letter. Based on the comprehensive EIA report, additional environmental safeguards, as required, shall be implemented by the proponents.
- **Comprehensive EIA of 2.5 MMTPA Terminal and EIA with QRA and Site emergency response plan of 5 MMTPA terminal has already been submitted with vide letter ND/LNG/K22/2K1 dated 16th February-2001 and letter dated 22nd September-2011 respectively.**
- xix. Based on the risk analysis, Disaster Management Plan should be prepared and submitted to this Ministry within 6 months. Necessary safety norms for the movement of LNG ships are to be laid down by Cochin Port Trust Authorities within their jurisdiction and communicated to the project proponent for strict compliance with a view to prevent collision, grounding or ramming or any other major accidents.
- **EIA with QRA and site emergency response plan (for 5 MMTPA terminal) submitted to MoEF vide letter dated 22nd September-2011 for EAC recommendations.**
 - **Emergency Response and Disaster Management Plan of Petronet LNG Ltd, Kochi terminal was submitted with six monthly compliance report dated 05th April-2013.**

5. GENERAL CONDITIONS:

i.	Construction of the proposed structure should be undertaken meticulously conforming to the existing Central/local rules and regulations including Coastal Regulation Zone Notification, 1991 and its amendments. All the construction designs/drawings relating to the proposed construction activities must have approvals of the concerned State Government Departments/Agencies.	The construction drawings have been approved by the concerned State Government Department/Agencies like Department of Factories and Boilers, Fire and rescue Services etc. Copy of the approvals of Factories and Boiler, Fire rescue services has already been submitted with six monthly compliance report dated 05 th April-2013.
ii.	The proponent shall ensure that as a result of the proposed constructions,	<ul style="list-style-type: none"> ▪ PLL is continuously ensuring that there is no ingress of saline water into the

	<p>ingress of the saline water into the groundwater does not take place. Piezometers shall be installed for regular monitoring for this purpose at appropriate locations on the project site.</p>	<p>ground water by periodic analysis of ground water, and for the same we have installed two Piezometers at appropriate locations.</p> <ul style="list-style-type: none"> ▪ Sampling of the water drawn from Piezometers is being carried out by approved third party. The latest Ground water analysis report for the month of December-18 is enclosed as Annexure#5.
<p>iii.</p>	<p>Handling, manufacturing, storage and transportation of all hazardous chemicals should be carried out in accordance with MSIHC Rules, 1989 and subsequent amendments, All approvals from State and Central nodal agencies including OISD, Chief Controller of Explosives, Chief Inspectorate of Factories must be obtained. A comprehensive contingency plan in collaboration with the concerned authorities must be formulated before commissioning of the project to meet any eventuality in case of an accident</p>	<ul style="list-style-type: none"> ▪ We have applied for NOTIFICATION OF SITES to Factories & Boilers department vide letter no. PLL/KOCHI/F&B/2012-13/C-04 dated 28th November 2012 as per requirement of MSIHC rules 1989. The same has already been submitted with six monthly compliance report dated 05th April-2013. ▪ We have received final clearance from Chief Controller of Explosive for commissioning of Jetty; LNG unloading line, LNG tanks, and Regasification facilities with letters dated 04th February-2013. We have already submitted the same with six monthly compliance reports, dated 05th April-2013. ▪ Permit to construct and plan approvals were obtained from Director of Factories and Boilers. We have already submitted the details regarding the same with six monthly compliance report, dated 05th April-2013. ▪ We have received the renewed factory license dated 19th December 2018, valid till 31st December-2019; a copy of the same is enclosed as Annexure#6. ▪ We have prepared Emergency response and Disaster Management Plan and it was submitted to District collector office vide letter no. PLL/KOCHI/ERDMP/DC/2014-15/C-01 dated 5th April-2014. ▪ A comprehensive contingency plan was prepared in collaboration with the concerned authorities before commissioning of the project to meet any eventuality in case of an accident ▪ All approvals as necessary were obtained before the commissioning of the project. Terminal was

		commissioned on 20 th August-2013 and all activities related to commissioning were completed by 10 th September 2013.
iv.	Minor oil spills are likely to be caused due to ship movement in the port. Engine room waste, oil ballast and tank wash water have to be discharged to the shore reception for treatment by port authorities or by certified contractors. In case of major oil spills due to accidents, Petronet LNG Limited should interact with Kochi Port to ensure full preparedness to undertake all combat operations.	Oil spill Contingency plan is formulated to take care of such eventualities. We have already submitted details regarding the same with six monthly compliance report dated 05 th April-2013. PLL is having one FIFI 1 tug with required boom barrier and other oil spill control related equipment. 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.
v	Control room/tower should be equipped with modern communication and control device to act instantaneously if spill/leakage occurs. At the jetty, loading arm should be equipped with latest Emergency Release Systems (ERS) and monitoring device for LNG services. Articulated cargo transfer arm should be used at the unloading jetty. It shall be ensured that LPG and LNG tankers are scheduled properly to avoid bunching and also that LPG will not be unloaded from the ship when the LNG tanker is at berth.	<ul style="list-style-type: none"> ▪ Control room is equipped with modern communication and control facilities including emergency shut-down systems in the event of spill occurring. ▪ Loading arms are equipped with latest Emergency Release System (ERS). ▪ We do not handle LPG at our jetty so the condition stand complied.
vi.	Dry chemical firefighting extinguishers should be provided at all levels of the jetty to permit personnel to fight small fires. Water spray for dispersing un-ignited vapour clouds should be kept as standby. Full- fledged firefighting facilities should be provided at jetty.	<ul style="list-style-type: none"> • Full-fledged firefighting facilities is provided in the jetty to handle any emergencies in the event of a fire. • DCP extinguishers are provided at every level of jetty. Water curtain system is also provided at required locations. <p>Brief note on Fire protection facilities have already been submitted with six monthly compliance report dated 30th September-2013.</p>
vii.	A well-equipped laboratory with suitable instruments to monitor the quality of air and water shall be set up as to ensure that the quality of ambient air and water conforms to	<ul style="list-style-type: none"> ▪ A well-equipped laboratory with suitable Equipments for monitoring the quality of air and water is in place, with Qualified and competent personals. However, PLL is carrying out periodic

	<p>the prescribed standards. The laboratory will also be equipped with qualified manpower including a marine biologist so that the marine water quality is regularly monitored in order to ensure that the marine life is not adversely affected as a result of implementation of the said project. The quality of ambient air and water shall be monitored periodically in all the seasons and the results should be properly maintained for inspection of the concerned pollution control agencies. The periodic monitoring reports at least once in 6 months must be sent to this Ministry (Regional Office at Bangalore) and State Pollution Control Board.</p>	<p>monitoring of environmental parameters by KSPCB approved agency.</p> <ul style="list-style-type: none"> ▪ Ambient air monitoring is carried out once in a month at four different locations and analysis report for the month of October-18 to March-19 is enclosed as Annexure # 7. ▪ PLL is conducting marine water quality analysis, once in six month. The latest test report, dated December-18 is enclosed as Annexure # 4.
viii.	<p>Adequate provisions for infrastructure facilities such as water supply, fuel for cooking, sanitation, etc must be provided for the laborers during the construction period in order to avoid damage to the environment, Colonies for the laborers should not be located in the Coastal Regulation Zone area. It should also be fuel wood purpose</p>	<ul style="list-style-type: none"> ▪ During the construction phase, PLL has provided adequate infrastructure facilities such as water supply, fuel for cooking, sanitation, etc. to the labourers. ▪ Labour colonies were not located in Costal Regulation Zone area.
ix.	<p>To prevent discharge of sewage and other liquid wastes into the water bodies, adequate system for collection and treatment of the wastes must be provided. No sewage and other liquid wastes without treatment should be allowed to enter into the water bodies.</p>	<p>Individual Septic tanks with soak pits have being provided for collection of sewage. The collected sewages are regular disposal through authorized agency of Cochin corporation.</p> <p>No sewage or waste from PLL will be allowed to enter water bodies</p>
x.	<p>Appropriate facility should be created for the collection of solid and liquid wastes generated by the barges/vessels and their safe treatment and disposal should be ensured to avoid possible contamination of the water bodies</p>	<p>Vessels and tugs will dispose their garbage as per the guidelines of Annex V of Marpol (IMO). We have already submitted the related details with six monthly compliance report dated 05th April-2013.</p>
xi.	<p>Necessary navigational aids such as channel markers should be provided to prevent accidents. internationally recognized safety standards shall be applied in case of barge/vessel movements</p>	<p>PLL has provided 4 Nos. of Buoys as instructed by cochin post trust. In future, if required, more navigation aids will be provided as per instruction/guidance of Cochin Port Trust.</p>

		All required safety standards will be applied to vessel movements as per directions of Cochin Port Trust.
xii.	The project authorities should take appropriate community development and welfare measures for villagers in the vicinity of the project site, including drinking water facilities. A separate fund should be allocated for this purpose.	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 # 8 .
xiii.	The quarrying material required for the construction purpose shall be obtained only from the approved quarries/borrow areas. Adequate safeguard measures shall be taken to ensure that the overburden and rocks at the quarry site do not find their way into water bodies.	PLL sourcing of quarrying material is only from Government approved quarries. We have already submitted the details regarding the same with six monthly compliance report on dated 05 th April-2013.
xiv.	The dredging operations to be undertaken with the prior approval of this Ministry, shall be executed with appropriate safeguard measures to prevent turbidity conditions in consultation with the expert agencies such CWPRS/NIO.	PLL has obtained Environmental clearance from the MOEF vide their order No. J-16011/26/2001-IA-III dated 16 th November-2010 for undertaking dredging operations of the basin. Dredging operations is completed and PLL has handed over the basin to M/s Cochin Port Trust for maintenance.
xv.	For employing unskilled, semi-skilled and skilled workers for the project, preference shall be given to local people.	During the project, PLL had given preference to locals while employing unskilled, semi-skilled and skilled worker wherever possible based on their qualification and merits.
Xvi.	The recommendations made in the Environment Management Plan and Disaster Management Plan, as contained in the Environmental Impact Assessment and Risk Analysis Reports of the project shall be effectively implemented.	All recommendations made in Environment Management Plan and Disaster Management Plan, as contained in Environment Impact Assessment and Risk Analysis Report of the project are effectively implemented.
Xvii.	A separate Environment Management Cell with suitably qualified staff to carry out various environment issues should be set up under the charge of a Senior Executive who will report directly to the Chief Executive of the Company.	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 the six monthly compliance report for the period ending March-2018.
Xviii.	The project affected people, if any should be properly compensated and rehabilitated.	No people affected directly as the project was on uninhabited land. Some Land was acquired by Cochin Port Trust for constructing new access road for the project and those affected were provided with infrastructure like road, drain, electricity and water as per guideline by authorities.
xix.	The funds earmarked for environment protection measures should be maintained in a separate account and there should be no diversion of these funds for any other purpose. A year wise expenditure on environmental safeguards should be reported to this Ministry.	Budget allocated for environment safeguard will not be diverted for other purposes.
xx.	Full support should be extended to the officers of this Ministry's Regional Office at Bangalore and the officers of the Central and State Pollution Control Boards by the project proponents during their inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.	PLL will extend full support to the officers of this ministry's Regional Office, Bengaluru and the officers of the Central and State Pollution Control Board during the inspection for monitoring purpose by furnishing full details and action plans including the action taken reports in respect of mitigate measures and other environmental protection activities.
xxi.	In case of deviation or alteration in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection. The project proponents should be responsible for implementing the suggested safeguard measures.	PLL has not carried out any deviation or alteration in the project. PLL will comply with this requirement and will take permit from the Ministry prior to any deviation, alteration and modification in the project.
xxii.	This Ministry reserves the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.	PLL is aware of the Ministry's right to revoke clearance for not complying with the conditions stipulated in the clearance.
xxiii.	This Ministry or any other competent authority may stipulate any additional conditions subsequently, if deemed necessary for environmental	PLL will comply with any additional conditions stipulated by the ministry or any other competent authority.

	protection, which shall be complied with.	
xxiv.	The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Committee and may also be seen at Website of the Ministry of Environment & Forests at http://www.envfor.nic.in . The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bangalore.	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 along with the six monthly compliance report dated 30 th September-2013.
xxv.	The Project proponents should 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.

Thanking You,

With Regards

(T. N. Neelakantan)

Sr. Vice President (Plant Head)



KERALA STATE POLLUTION CONTROL BOARD

FILE NO. :PCB/HO/EKM/CE/74/05

Date of issue :10/10/2018

INTEGRATED CONSENT TO OPERATE - RENEWAL

Consent No : PCB/HO/EKM-1/ICO-R/18 /2018 Valid upto:30/03/2023

Ref : 1. Consent No.PCB/HO/EKM/ICO-R/12/2016, 28/02/2016, Valid upto 31/03/2018.

2. Your application no 6144619 dated 13-01-2018.

The 'Integrated Consent to Operate' issued as per reference above to M/s Petronet LNG Limited, Light house road, Near BPCL STF, Puthuvypeen, KOCHI- 682508. is hereby renewed up to 31/03/2023 and issued to M/s Petronet LNG Limited, Light house road, Near BPCL STF, Puthuvypeen, KOCHI- 682508.

The consent(s)/ variation order(s) cited under reference are integral part of this renewal order and this order is subject to the conditions stipulated therein and the following modifications/ additions.

I. GENERAL

S.No.	Items	Description
1	Validity	31/03/2023
2	Category	Red
3	Capital Investment	434104.13 Rs in Lakhs
4	Annual fee	Rs 86,82,080/-
5	Fee remitted	4,55,27,030 /-(Including Arrears).
6	Date of application	13-01-2018
7	Date of inspection	14.03.2018 and 17.05.2018.
8	Occupier details	Mr. Rajender Singh (Technical Director),

II. Stack Details

Stack No.	Source of Emission	Emission Rate(Nm3/Hr)	Stack Height above		Control Equipment
			Ground Level(In Meters)	Roof Level(In Meters)	
as per previous consent					

III. CONDITIONS

1.The provisions of Hazardous and Other Waste Management, Rules 2016 shall be complied with.

All other conditions of the Integrated Consent to Operate issued as per reference above remain unchanged.

K SAJEEVAN

Digitally signed by K SAJEEVAN
Date: 2018.10.15 15:23:32
+05'30'

DATE :12/10/2018

SIGNATURE & SEAL OF ISSUING AUTHORITY
CHAIRMAN



To

Petronet LNG Limited,
Light house road, Near BPCL STF,
Puthuvypeen,
KOCHI- 682508.

1. This digitally signed document is legally valid as per the Information Technology Act 2000

2. For verifying this document please go to krocmms.nic.in and search using date of issue/name of the unit/Application Number in "Consent Granted Applications" link in the home page of the Board's Online Consent Management and Monitoring System.

Ambient Noise Monitoring Report, October-18 to March-19

Sr. No.	Avarage, Month	Oct-18		Nov-18		Dec-18		Jan-19		Feb-19		Mar-19	
	Location	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
	Limit	65.00	55.00	65.00	55.00	65.00	55.00	65.00	55.00	65.00	55.00	65.00	55.00
1	East side Gate Outside boundary wall	53.80	41.20	50.10	41.50	50.60	41.90	51.30	41.20	50.60	41.50	50.40	41.90
2	North side Gate Outside boundary wall	53.10	40.80	50.30	41.20	50.70	41.50	51.00	41.80	51.10	41.00	51.50	40.90
3	West side Gate Outside boundary wall	51.70	44.50	49.70	40.90	49.90	40.20	48.60	40.40	49.80	40.30	49.40	40.70
4	South side Gate Outside boundary wall	50.30	40.30	48.40	40.10	48.10	40.60	49.20	40.30	50.10	40.80	49.60	40.30
	Avg (Year)	52.23	41.70	49.63	40.93	49.83	41.05	50.03	40.93	50.40	40.90	50.23	40.95



Officer HSE



Manager- HSE

SOCIAL FORESTRY

Ernakulam Division & LNG Petronet

PROJECTS



No. E2-461/18

Office of Assistant Conservator of Forests
Social Forestry Division, Ernakulam
Manimala Road, Edappally
Ph:0484 2344761
Email: acf.sf-ekm.for@kerala.gov.in

Date: 06..12..2018

From

Assistant Conservator of Forests
Social Forestry
Ernakulam.

To

The Vice President (O & M)
Petronet LNG Limited

Sir,

Sub: Project on mangrove afforestation in Ernakulam
District - progress report - reg.

Ref: That office letter no. PLL/KOCHI/HSE/13-14/C2.

I am submitting herewith the progress report for mangrove afforestation project funded by Petronet LNG Limited as on 31.03.2018 for your kind perusal and necessary action. The Malippuram mangrove park has been inaugurated and functioning very well. I request your goodself to kindly deposit the next installment of the project fund so that we can continue ^{the}~~our~~ project.

Yours faithfully,



Assistant Conservator of Forests

Report of mangrove afforestation project in Ernakulam District Kerala as on 01.12.2016 to 31.03.2018 & 01.04.2018 to

History of the project

As the coastal area of the Kerala, the Ernakulam district coastal region also blessed with natural heritage of mangroves were severely damaged and destructed for various reasons such as development project, the density of population and shottage of land for newly construction of houses, changing in lifestyle, lack of information to maintain the importance of mangroves and eco system etc. By the improvement of the coastal mangrove ecosystem through the afforestation project we can maintain our coastal area better. Petronet LNG limited has provided financial assistance to Kerala Forest Department through the implementation of the project called "Mangrove afforestation in Ernakulam District" . This project implemented by Social Forestry Division Ernakulam and the major work done by the project are

- 1 Planting of mangroves
- 2 protection of mangrove by taking up habitat improvement programmes.
- 3 Establishment of mangrove information centre (Mangrove park) etc.

Implementation of the project

First installment of the project Rs. 30 lakhs was handed over to Kerala Forest Department on 16.03.2015 and 15 lakhs 2nd installment was handed over on 16.06.2017.

lucy

I. Planting operation of 2017-18

Forest Department raised mangrove seedlings suitable to the locality and carried out planting through the local people especially Fisherman community with the help of ward members and Kudumbasree.

Sl.No.	Name of place and status of land	Species planted	No. of seedlings
1	Wetland area near Valappu beach	<i>Bruguiera gimorrhiza</i>	1350
2	Narakal Fish Farm	Do	1100
3	Kadamakudy	Do	1000
4	21 flowerpot at Malipuram mangrove park	do	21

2. Protection of existing mangroves by taking up habitat improvement programme

Sl. No.	Date	Venue	Topic	Name of faculty	No. of participants
1	08.03.18	Kuzhuppilly GP ward.I	Importance of mangrove and how nurseries arising	Mathews Puthusserry & Murukesan	53
2	18.03.18	Malipuram Mangrove park and chappa beach	Awareness class of mangroves and cleaning of the mangrove park and Chappa beach	Mathews Puthusserry	82

3. Establishment of Mangrove information centre (Mangrove Park)

A mangrove information centre was developed in two acre mangroves forest owned by fisheries Department adjacent to Malipuram Fish Farm were a large number of people are visited everyday as part of Eco Tourism. The mangrove park is on the way to the Malipuram fish farm. This park will give good information on ecologically

Lee

importance of mangrove ecosystem and necessity for conserving mangrove forests. This park is opened to the public with a wide range of information about the importance of mangrove forests and its ecosystem on 02.09.2017 by Hon' ble Vypin MLA. Sri. S. Sharma with the presence of Hon 'ble' Senier Managing Director of LNG Petronet and staff..In this park people can enjoy the beauty of mangroves and also can collect the details of plants , animals, birds found in the mangroves will be exhibited scientifically inside the park. Two team of Range Officers trainees from Deradun are visited in this park after the inauguration, and they can collect wide range of information from this park.

Activities of 2017-18

Expenditure incurred from 01.12.2016 to 31.03.2017 & 01.04.2017 to 31.03.2018

Sl.No.	Particulars of work	Quantity
1	Planting and maintenance cost of seedlings	3471
2	Conducting awareness classes and cleaning of mangrove park etc	2 class
3	The beautification work such as landscaping, Thatching hut, Artistic painting , Construction of foot bridge, Construction of walkway , Construction of Ticket counter, Flooring of tiles, construction of artistic bench, awareness board with sculpture of birds, crocodile leopard . Signages and opening ceremony of the Malipuram Mangrove Park	

Expenditure and photo graphs of the projects for the financial year 2017-18 are enclosed along with this report

Seen

Progress report of mangrove afforestation and protection Project funded by Petronet LNG limited from 01.04.2017 to 31.03.2018

Total outlay of project : 71.50 Lakhs
 Amount deposited in A/c. : 45 Lakhs
 Expenditure from 31/03/2018 : 44.57 Lakhs

Physical

Sl. No.	Particulars of work 2017-18					
	Name of work	Qty.	Name of work	Qty.	Expenditure incurred	Remarks
1	Production of mangrove seedlings	12500 Nos.	Producton of mangrove seedlings	3000	74948	
2	Palnting of mangrove seedlings	12971 Nos.	Planting of 15000 mangroves at Kadekurisu River Bit I, Bit II, Pasuvekkar Fish farm, Vijaan Canal, Anjilithara areas, Kadamakkudy ,Sreevaraham fish farm Kumbalangi, Njarackal Fish Farm & Valappu Beach wetland	3471	351311	4700 seedlings raised under forest department scheme
3	Habitat improvement including climber cutting, waste and plastic removal etc.	3 sites	Habitat improvement works done at Kumbalanghi, Kadekurisu & Malippuram	3 sites	5000	
4	General awareness & extension activities	32 nos.	Awareness class, seminar etc. and other extension activities	15 awareness classess 2 Seminars and procurements of documentisation and aids	71850	

5	Signages	24 nos.	Acrylic board for mangrove conservation message, board of mangrove areas etc.	6 nos.	63100	
6	Silvi-fisheries	LS	Silvi-fisheries	0	0	
8	Incentives to existing mangrove owners	LS	Mangrove planting in private land and incentives by supplying fishes	Nil	0	
7&9	Eco tourism activities involving the local community and other entry point activities	LS	A mangrove information centre has developed at Malippuram owned by Fisheries Department Mangrove area (2 Acre) Construction of walk way, bridges, entrance arch, toilet, information centre and ticket counter Etc.	1 nos.	886582	
10	Over head charges and other office expences	LS	TA of staff and other office expences	LS	6279	
11			Engaging Man Mazdoor for conducting survey of Mangrove areas in Ernakulam District	LS	0	
TOTAL					1459070	

Devi
 ASST. CONSERVATOR OF FORESTS
 SOCIAL FORESTRY ERNAKULAM










കണ്ടൽ വനങ്ങൾ എന്തിനു നമ്മൾ സംരക്ഷിക്കണം?

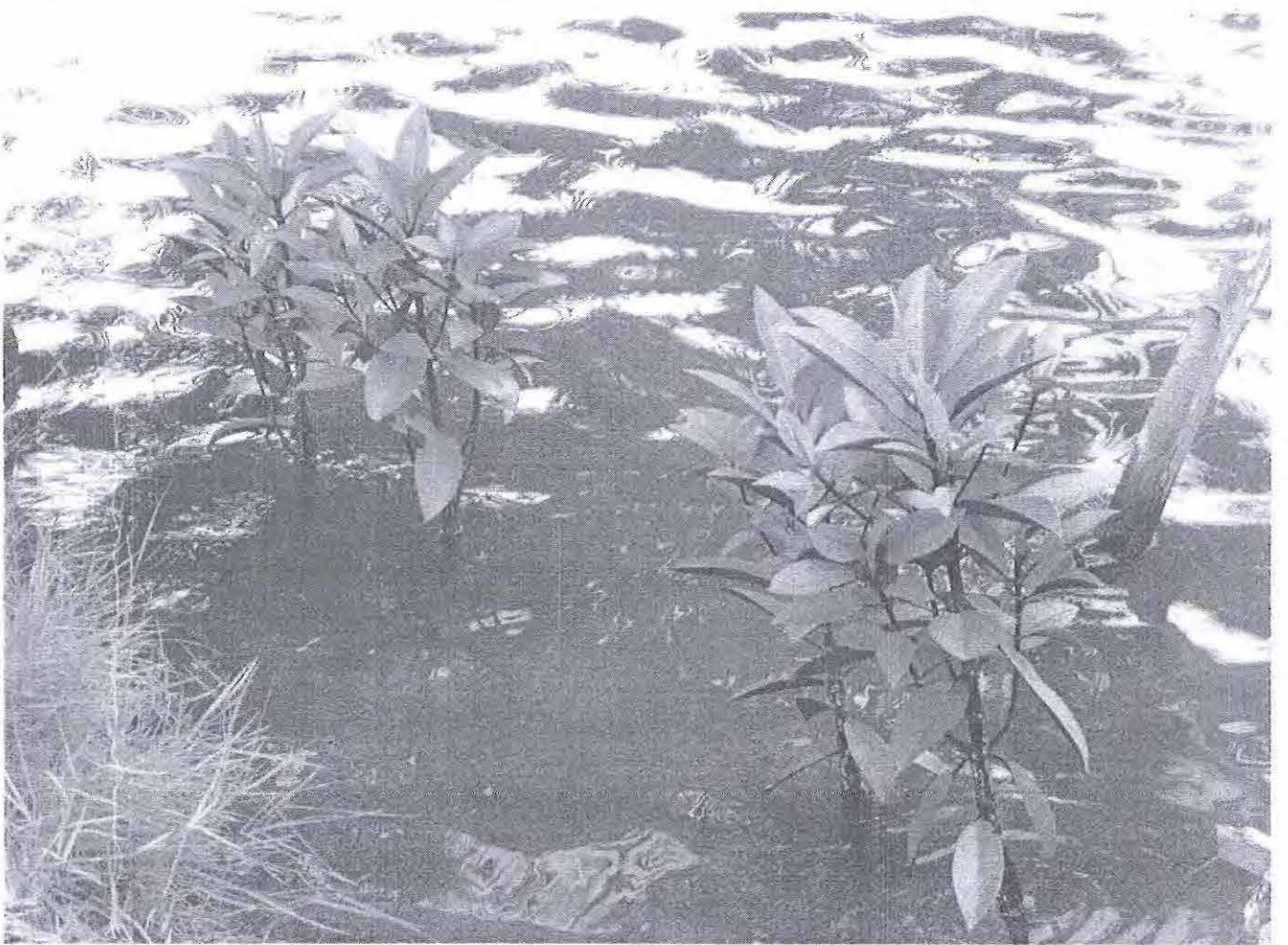
- 1. കണ്ടൽ വനങ്ങൾ ആയിരക്കണക്കിന് ജീവജാലങ്ങളുടെ വാസസ്ഥലമാണ്. നിത്യജീവിതം പറ്റിച്ചിടാൻ മത്സ്യങ്ങൾ, ഉരഗങ്ങൾ, പക്ഷികൾ, സസ്തനികൾ എന്നിവ ഇവിടെ ജീവിക്കുന്നു.
- 2. വിവിധവിധമുള്ള വിവിധയിനം മത്സ്യങ്ങൾ, മധുവിത്ത്, താണ്ട് എന്നിവയുടെ പ്രധാനോട്ടനവും, സമൃദ്ധമായ കണ്ടൽ വനങ്ങൾ കടലിന്റെ ആക്രമണത്തിൽ നിന്ന് കരയെ രക്ഷിക്കുന്നതിനുള്ള ഒരു രക്ഷാകവചമായി കണ്ടൽവനങ്ങൾ പ്രവർത്തിക്കുന്നു. കടലിൽനിന്നും കരയെ സ്വീകിക്കുന്നതിനും ഇവയ്ക്ക് കഴിവുണ്ട്.
- 3. ശക്തമായ കാറ്റിൽ നിന്നും, സൂര്യപ്രകാശം പ്രകാശം, മഴക്കാലത്ത് നിന്നും മിക്കവാറും എല്ലാ വർഷവും നഷ്ടപ്പെടുന്ന കായലുകളിൽ അടിഞ്ഞുകൂടുന്ന അപകടകാലികളായ മണലിനിയന്തളയും മലാപ്പുഴയ്ക്കടുത്തുള്ളതും കണ്ടൽവനങ്ങൾ വളർത്തിയെടുത്ത മലാപ്പുഴയ്ക്കടുത്തുള്ളതും സംരക്ഷിക്കുന്നതിനു സഹായിക്കുന്നു.
- 4. ചിലയിനം കണ്ടൽവൃക്ഷങ്ങൾ സലിനീമിതാനം, വിട നിർമ്മാണം, കാലിത്തീറ്റ, വിവിധ ഏനീസയ്ക്കായി ഉപയോഗിക്കുന്നു.
- 5. പട്ടണപ്രദേശത്തെ അന്തരീക്ഷ മലിനീകരണം കുറയ്ക്കുവാനുള്ള സാധ്യ പ്രദാനം ചെയ്യുന്നു.
- 6. കണ്ടൽവനങ്ങൾ ഇടക്കാടുനിർമ്മാണത്തിന് ഏറ്റവും അനുയോജ്യമായ ഒരു സ്ഥലമാണ്.

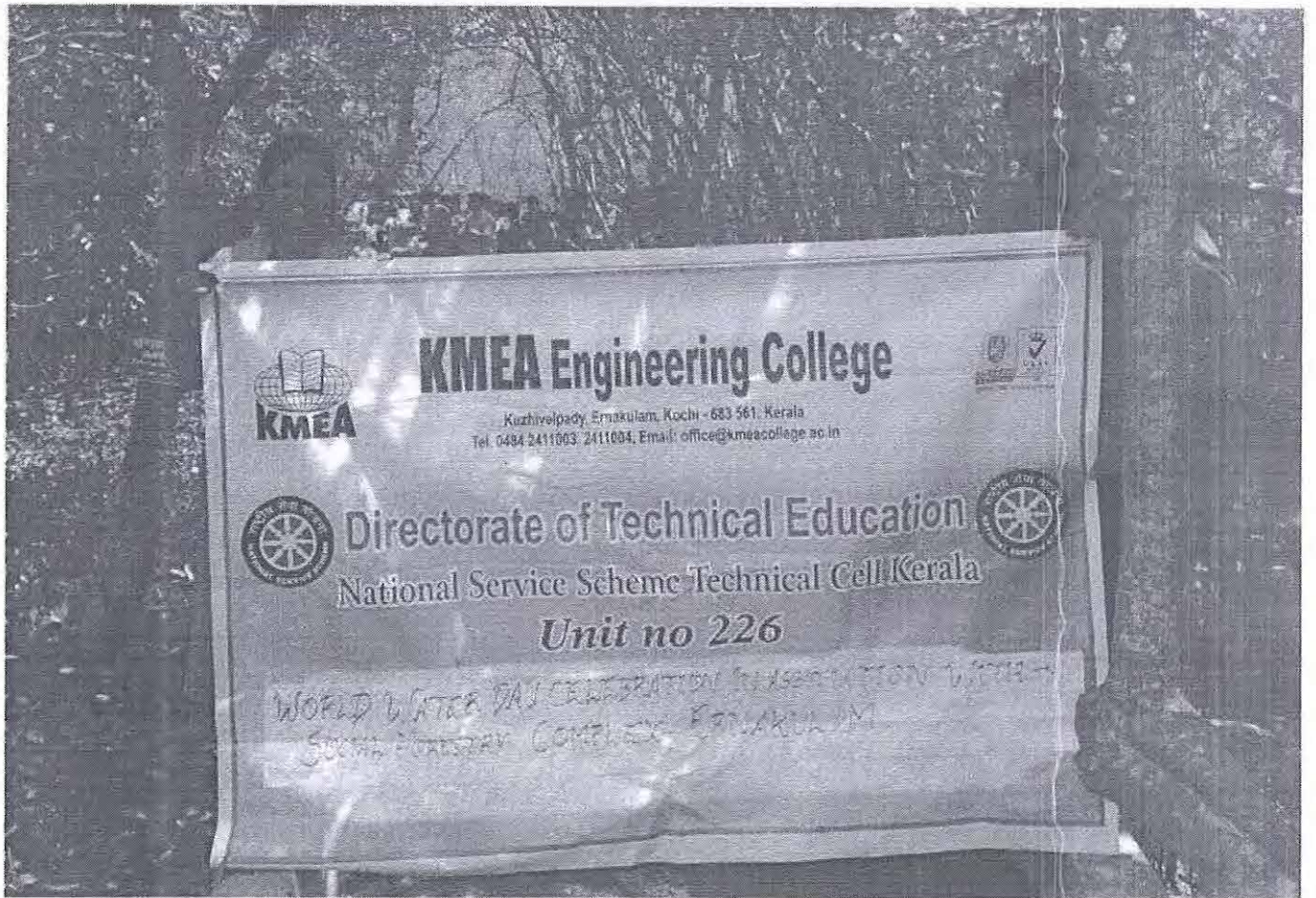


Mangrove Afforestation Project
 Initiated By
Petronet LNG Ltd.
 Social Forestry, Ernakulam, Kerala Forest Department

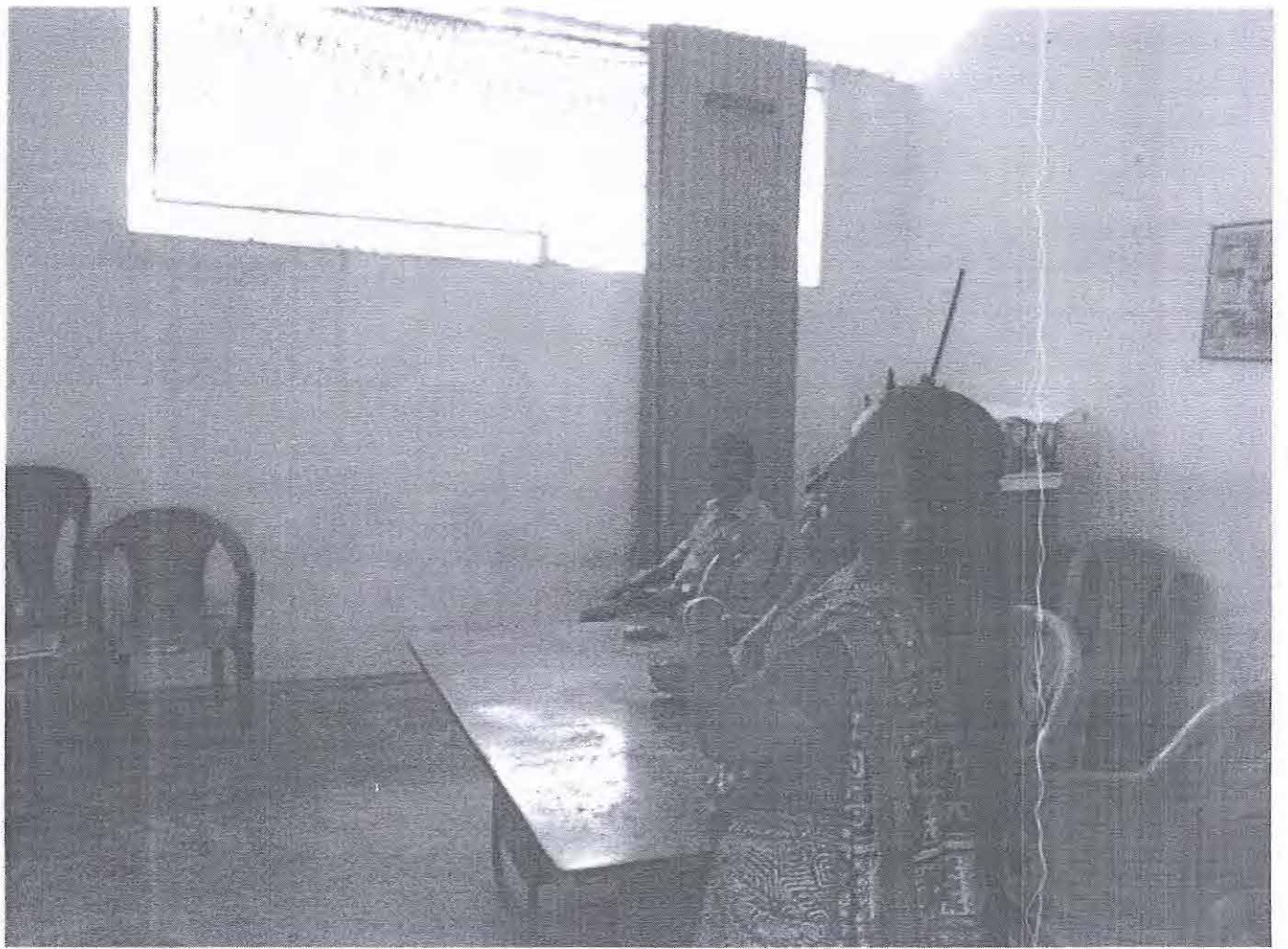


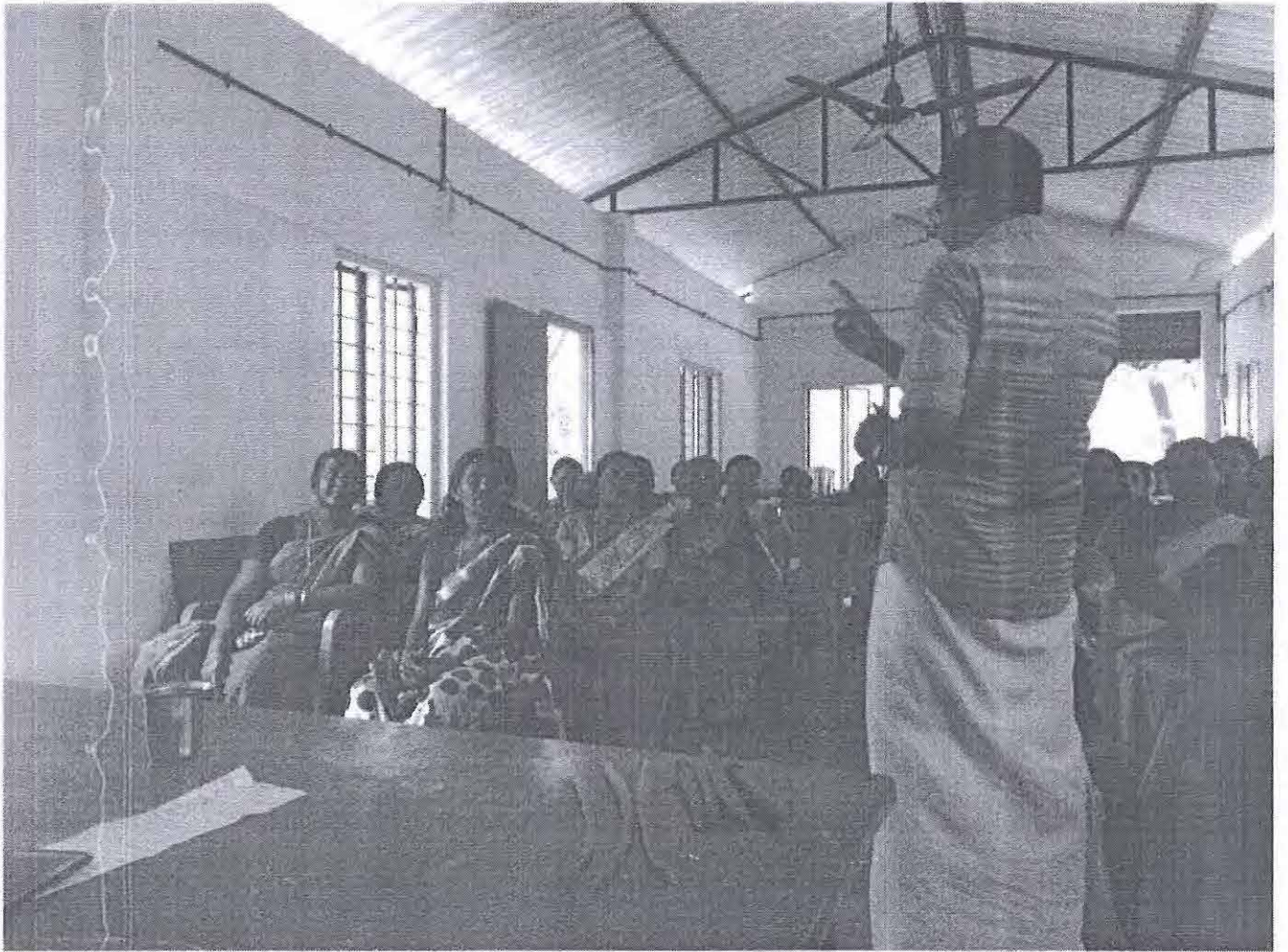


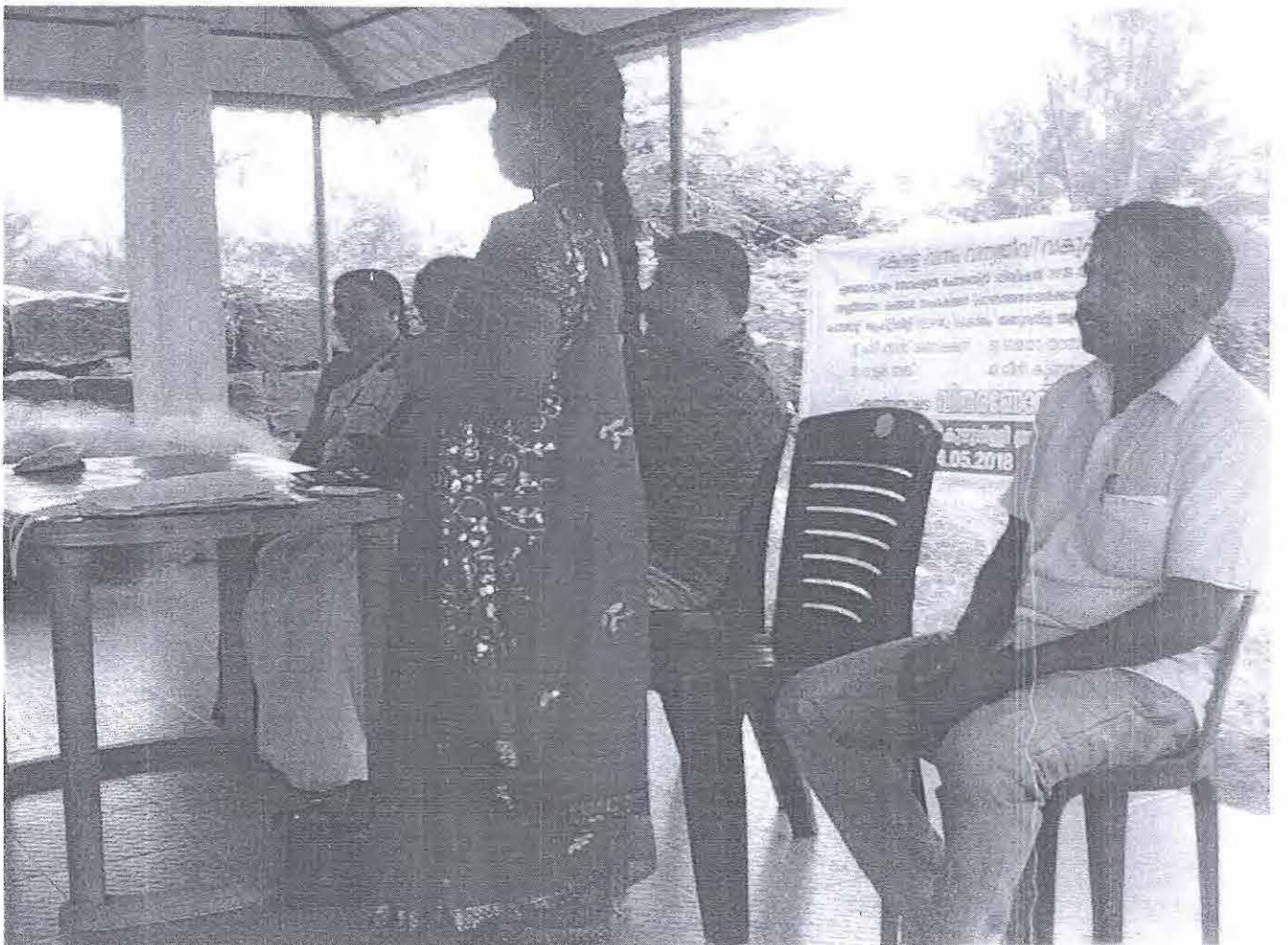












Test Report No: TC540218000000857P	Date: 24.12.2018	Page 1 of 1
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CUSTOMER DETAILS			
Customer Name & Address		M/s Petronet LNG Limited Survey No.347 ,Puthuvypu P.O Kochi – 682 508	
Customer Reference		Test Request Form Dated 17.12.2018	
SAMPLE DETAILS			
Sample Code	TC540218000000857P	Sample Received On	18.12.2018
Sample Name	Water	Sampling Procedure	SEAAL/MSP/24 & SEAAL/MBL/SOP/06
Sample Description	Marine Water	Sampling Location	Jetty Head
Identification By Customer	Jetty Head	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
01	Temperature	IS 3025 Part 9:1984 RA 2006	°C	28.0
02	Colour	IS 3025 Part 4:1983 RA 2017	Hazen	1.00
03	pH	IS 3025 Part 11:1983 RA 2017	---	7.16
04	Electrical Conductivity	IS 3025 Part 14:1984 RA 2013	µS/cm	40200
05	Total Dissolved Solids	IS 3025 Part 16:1984 RA 2017	mg/L	25800
06	Turbidity	IS 3025 Part 10:1984 RA 2017	NTU	0.60
07	Chloride (as Cl)	IS 3025 Part 32:1988 RA 2014	mg/L	18994
08*	Salinity	SEAAL/SOP/06	ppt	34.3
09	Sulphate (as SO ₄)	IS 3025 Part 24:1986 RA 2014	mg/L	781
10	Iron (as Fe)	IS 3025 Part 53:2003 RA 2014	mg/L	0.31
11	Mercury (as Hg)	IS 3025 Part 48:1994 RA 2014	mg/L	< 0.002
12	Lead (as Pb)	IS 3025 Part 47:1994 RA 2014	mg/L	< 0.20
13	Copper (as Cu)	IS 3025 Part 42:1992 RA 2014	mg/L	< 0.05
14*	Zinc (as Zn)	IS 3025 Part 49:1994 RA 2009	mg/L	< 0.20
15	Nickel (as Ni)	IS 3025 Part 54:2003 RA 2014	mg/L	< 0.10
16	Cadmium (as Cd)	IS 3025 Part 41:1992 RA 2014	mg/L	< 0.03
17*	Cyanide (as CN)	IS 3025 Part 27:1986 RA 2009	mg/L	< 0.01
18	Fluoride(as F)	APHA 23 rd Edition 4500-F- B D: 2017	mg/L	1.90
19	Arsenic (as As)	IS 3025 Part 37:1988 RA 2014	mg/L	< 0.002
20	Hexavalent Chromium (as Cr ⁶⁺)	IS 3025 Part 52:2003 RA 2014	mg/L	< 0.20
21*	Pesticide	USEPA 508 : 1995	---	Absent
22*	Insecticide	USEPA 508 : 1995	---	Absent
23	Oil & Grease	IS 3025 Part 39:1991 RA 2014	mg/L	< 5.00
24	Dissolved Oxygen	IS 3025 Part 38:1989 RA 2014	mg/L	6.87
25	Biochemical Oxygen Demand (3 days at 27 °C)	IS 3025 Part 44:1993 RA 2014	mg/L	< 2.00
26	Chemical Oxygen Demand	IS 3025 Part 58:2006 RA 2017	mg/L	2356
27	Total Suspended Solids	IS 3025 Part 17:1984 RA 2017	mg/L	8.30
28	Total Bacterial Count	IS 1622:1981 RA 2014	cfu/mL	10000
29	Faecal Coliform	IS 1622:1981 RA 2014	MPN/100ml	< 2
30	E coli	IS 1622:1981 RA 2014	MPN/100ml	< 2

*Not Under NABL scope

End of Report

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

Authorized Signatory

Authorized Signatory

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: sealab@gmail.com, info@sealabs.in

Test Report No: TC540218000000856P	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	TC540218000000856P	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: sealab@gmail.com, info@sealabs.in



Annexure - 06

GOVERNMENT OF KERALA
DEPARTMENT OF FACTORIES AND BOILERS

Form-4

(Prescribed under Rule 5)

License is hereby granted to Shri/Smt. RAJENDER SINGH, DIRECTOR (TECHNICAL)() for the premises detailed hereunder for the use as a factory within the limits specified in the Permit (s) and for the manufacturing process stated herein after subject to the provision of the Factories Act 1948 and the Kerala Factories Rules 1957.

The license shall remain in force till the 31st day of December 2019.

1.	Registration No	D09/CHN/03/286/2013	5.	Permit No & Date	92/2016 (31-03-2016)
2.	Name & Address of the Factory	PETRONET LNG LTD PUTHUVYPU P.O,ERNAKULAM, KOCHI, KERALA - 682 508.	6.	Name of the Region	Ernakulam
3.	Registration Date	09-05-2013	7.	Name of the Division	Kochi
4.	Details of the premises		8.	Manufacturing Process & NIC Code	
	Panchayat	Elamkunnappuzha		1. RECEIVING STORAGE RELOADING BUNKERING REGASIFICATION AND SUPPLY OF LNG & RLNG (52109)	
	Village	Puthuvaippu			
	Survey No	347			
	Taluk	Kochi			
	District	Ernakulam			

Place : Ernakulam

Date : 19-12-2018

Annexure-07

Ambient Air Monitoring Report, (October 2018 to March 2019)										
LOCATION NO.	Location of Ambient Air Sampling	Month & Date of Sampling	PM (<10 microns) in Micrograms/m ³ ; Limit 100 Micrograms/m ³	PM (<2.5 microns) in Micrograms/m ³ ; Limit 60 Micrograms/m ³	SOx as SO ₂ in Micrograms/m ³ ; Limit 80 Micrograms/m ³	NOx, Oxides of Nitrogen in Micrograms/m ³ ; Limit 80 Micrograms/m ³	Carbon Monoxide (CO); mg/m ³ 4.0 mg/m ³	OZONE Micrograms/m ³ ; Limit 180 Micrograms/m ³	Hydrocarbons (HC); Micrograms/m ³	
1	(Watch tower-2) near MGH building	Oct-18	76.9	25.1	0	0	0	0	0	
		Nov-18	70.2	23.9	0	0	0	0	0	
		Dec-18	68.4	21.8	0	0	0	0	0	
		Jan-19	63.2	20.9	0	0	0	0	0	
		Feb-19	71.3	25.1	0	0	0	0	0	
		Mar-19	79.2	28.9	0	0	0	0	0	
		Avarage	71.53	24.28	0.00	0.00	0.00	0.00	0.00	
2	Near Fire Station Building	Oct-18	54.8	22.9	0	4.98	0	0	0	
		Nov-18	61.2	24.9	0	5.16	0	0	0	
		Dec-18	74.5	28.9	0	6.39	0	0	0	
		Jan-19	70.2	25.1	0	7.14	0	0	0	
		Feb-19	80.2	29.6	0	5.38	0	0	0	
		Mar-19	83.4	30.7	0	4.72	0	0	0	
		Avarage	70.72	27.02	0.00	5.63	0.00	0.00	0.00	
3	Fire water Reservoir+ Watch Tower-5	Oct-18	69.2	21.9	0	4.16	0	0	0	
		Nov-18	73.1	24.2	0	4.98	0	0	0	
		Dec-18	69.4	21.5	0	5.29	0	0	0	
		Jan-19	64.6	19.9	0	6.17	0	0	0	
		Feb-19	70.3	24.1	0	4.91	0	0	0	
		Mar-19	76.9	28.5	0	3.76	0	0	0	
		Avarage	70.58	23.35	0.00	4.88	0.00	0.00	0.00	
4	Watch tower-3 near Tank T-101	Oct-18	72.1	23.9	0	3.96	0	0	0	
		Nov-18	69.7	22.1	0	4.36	0	0	0	
		Dec-18	73.5	26.4	0	0	0	0	0	
		Jan-19	69.4	24.1	0	0	0	0	0	
		Feb-19	79.8	28.1	0	0	0	0	0	
		Mar-19	83.4	30.6	0	0	0	0	0	
		Average	74.65	25.87	0.00	1.39	0.00	0.00	0.00	


Officer HSE


Manager HSE

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 successfully 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 planting, 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 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.

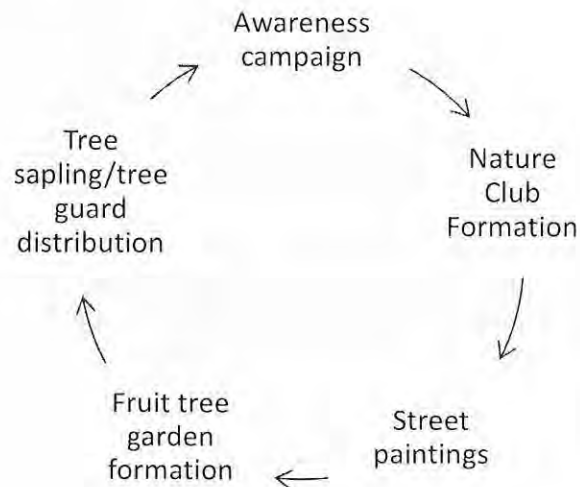
Formation of Fruit tree garden

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

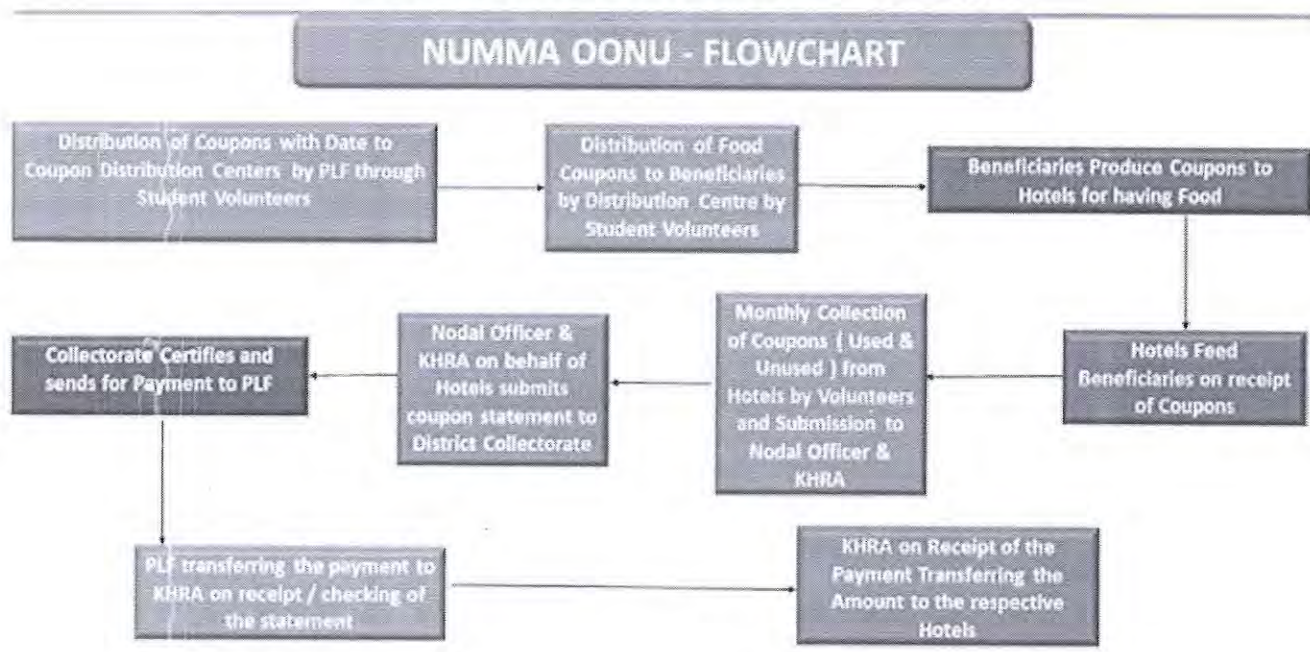
“NUMMA OONU” Ensuring Hunger free Ernakulam

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 Onnu" 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 Onnu". 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' 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

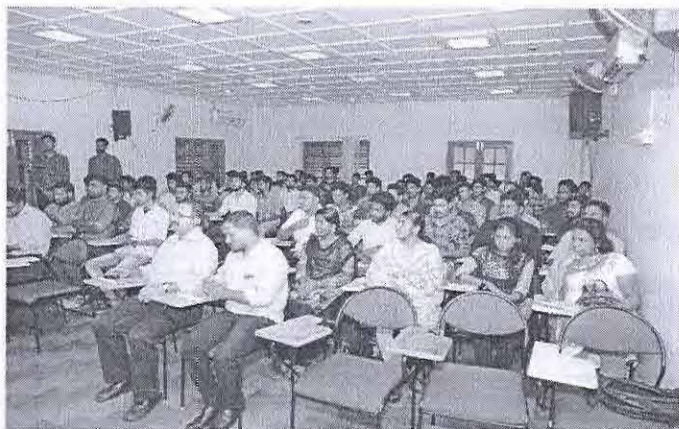
Aims to help those who are working with our Contractor and aims to provide support at their time of great need or crisis. Petronet LNG Foundation (PLF) with all the support of the PLL employees is making all efforts to give fresh life to this by engaging deeply with all our contractors to discover genuine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

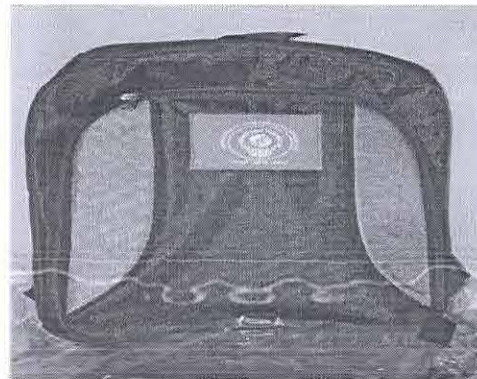


2) Installation of Drinking water facility in Government LP School , Puthoor



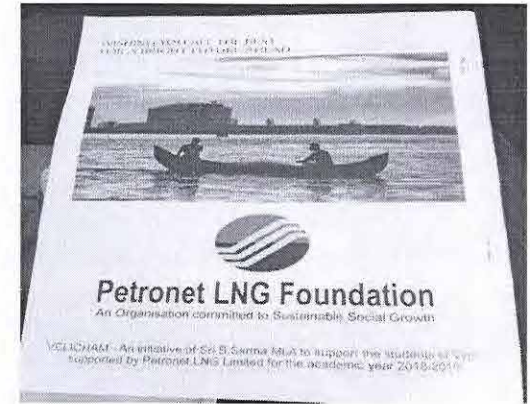
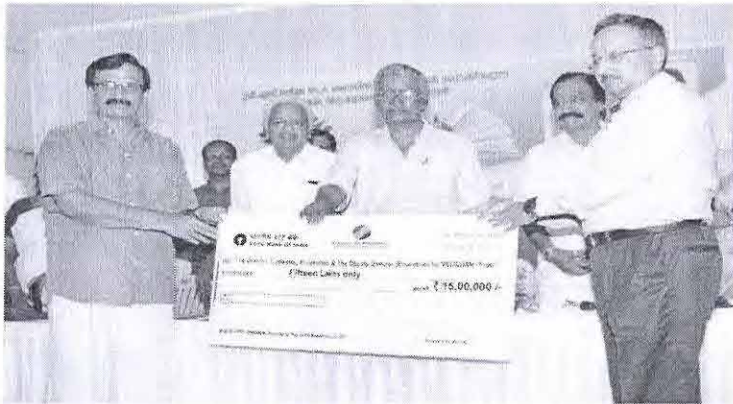
Educational kit distribution

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





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



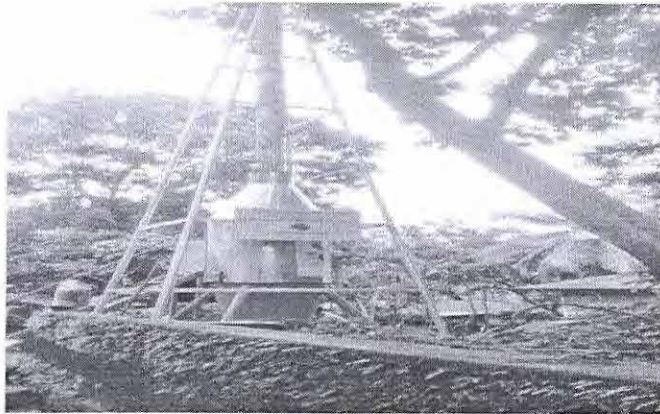
Fruit Tree Garden Formation

Street painting Drive

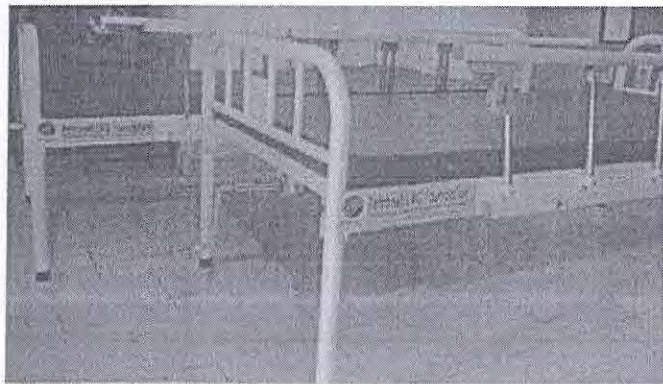


HEALTH

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

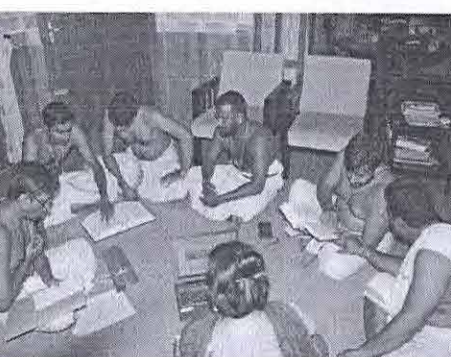


PROMOTION OF ARTS

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



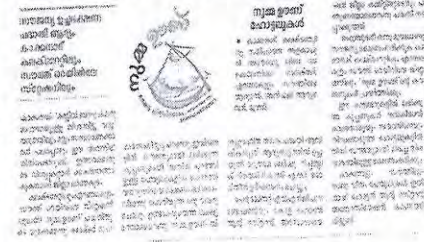
നാഴിയൂരി കരുന്ന കൊണ്ട് നാടാകെ സന്തോഷം

എറണാകുളം നഗരസഭയിൽ നാഴിയൂരി കരുന്ന കൊണ്ട് നാടാകെ സന്തോഷം. നഗരസഭയിൽ നാഴിയൂരി കരുന്ന കൊണ്ട് നാടാകെ സന്തോഷം. നഗരസഭയിൽ നാഴിയൂരി കരുന്ന കൊണ്ട് നാടാകെ സന്തോഷം.



Project Expansion Meeting

'നൂക്ക ഉണ്ണ'; വിശക്കുന്നവർക്ക് തുണയായി ജില്ലാ ഭരണകൂടം



Project Presentation at Rashtrapati Bhavan



DISASTER MANAGEMENT

1) Kerala Flood Relief Activities involving Employee participation in PLL

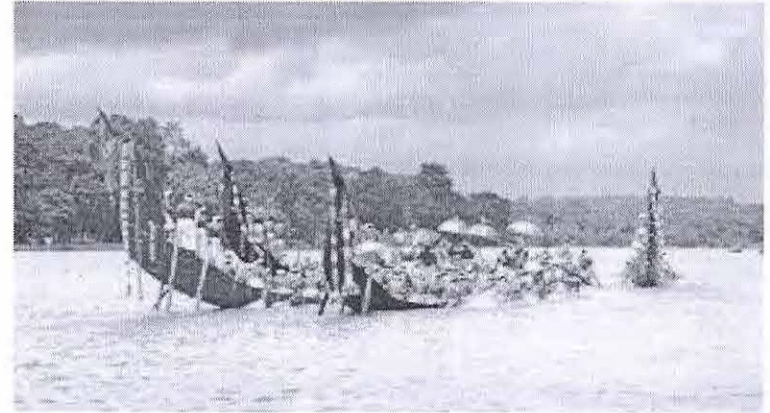


1) Awarding Ceremony for the rescue operators in Kerala Flood





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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 Hosptial Permbra, 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, Panur, 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	