



Petronet LNG Limited

Survey No. 347, Puthuvypu P.O.

Kochi - 682 508, India.

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

www.petronetlng.com

CIN L74899DL1998PLC093073

PAN: AAACP8148D. GST: 32AAACP8148D1ZP

PLL/KOCHI/MOEF/2020-21/07

18th November, 2020

Additional Principal Chief Conservator of Forests (C)

Ministry of Environment, Forest and Climate Change,
Regional Office (SZ),
Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road,
Koramangala II Block,
Bangalore – 560034.

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

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

Sir,

The Six monthly compliance report for the above clearances are attached for the period ending 30th September 2020.

Thanking You,

With Regards

Reddy
18-11-20



Yogananda Reddy

Chief General Manager & Vice President (Plant Head)

CC:

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

Registered & Corporate Office:

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

Dahej LNG Terminal:

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



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

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

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

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

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

Xv	Regular mock drills shall be conducted to check the effectiveness of the on-site Disaster Management Plan. The recommendations made in the Environmental Management Plan and Disaster Management Plan, as contained in the Environment Impact Assessment and Risk Analysis reports of the project, should be effectively implemented.	<p>Mock drills are conducted in every quarter for different emergency scenarios listed out in the risk assessment report. All mock drills are conducted as per PLL ERDMP plan. An effective Mutual aid arrangement is in place with neighboring industries, which will ensure active participation of mutual aid organizations in Mock drills. PLL has a Mutual Aid agreement with FACT-UD, ICT Terminal & BPCL-STF to provide resources during an emergency.</p> <p>All recommendations made in the Environmental Management Plan and Disaster Management Plan, as contained in the Environment Impact Assessment and Risk Analysis reports of the project were covered during the preparation of ERDMP (Emergency Response and Disaster Management Plan) and which is effectively implemented.</p>
xvi	No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.	Noted. No any other construction work will be done in CRZ area.
Xvii	The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	<p>PLL has set up an Environment Management Cell (EMC) under Chief General Manager & Vice President (Plant Head). Other members of the team includes 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 01/06/2020 and the copy of the same has been enclosed here as Annexure #2.</p>
xviii	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.	The funds earmarked for environment management plan is included in the budget and will not be diverted for other purposes.

6.	GENERAL CONDITIONS	PLL Remark
I	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	Noted. PLL have taken appropriate measure while undertaking digging activities. We conduct ground water analysis periodically and latest report is enclosed as Annexure#3 .
li	Full support shall be extended to the officers of this Ministry/Regional Office at Bengaluru by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	PLL will extend full support to the officers of this ministry's Regional Office, Bangalore and the officers of the Central and State Pollution Control Board during the inspection for monitoring purpose by furnishing full details of analysis reports and action plans for environmental protection.
lii	A six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bengaluru regarding the implementation of the stipulated conditions.	Noted. Six monthly reports regarding the implementation of the stipulated conditions are regularly been submitted to regional MoEF&CC office for all CRZ Clearance obtained for the Kochi LNG Terminal project.
Iv	Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.	PLL will comply with additional conditions, if any suggested by the ministry or any other competent authority in writing.
V	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.	PLL is aware of the Ministry's right to revoke clearance for not complying with the conditions stipulated in the clearance.
Vi	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.	Noted.
Vi i	The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	Site appraisal clearance obtained on 28 th Feb 2011. No separate land developmental work was required, as this involved only augmentation of equipment in the same land.
Vi ii	A copy of the clearance letter shall be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal.	PLL has written letter to concerned Gram Panchayat vide letter no. PLL/Kochi/MoEF/GP/2013/001 dated 07 th March-2013; A copy of the letter has already been submitted with six monthly compliance reports dated 05 th April-2013.

ix	State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/Tahsildar's office for 30 days.	Action to be taken by State Pollution control board.
----	--	--

Other Conditions mentioned in the Environment Clearance dated 31st January 2013.

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

12	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.
13	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	PLL has written letter to concerned Gram Panchayat vide letter no. PLL/Kochi/MoEF/GP/2013/001 dated 7 th March-2013, we have already submitted a copy of the letter with six monthly compliance report dated 5 th April 2013.
14	The proponent shall upload the status of compliance of the stipulated Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	This is uploaded in the website. www.petronetlng.com .
15	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	Noted.
16	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of Clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	We have uploaded Form-V (Environment Statement) along with the status of compliance of clearance conditions in our company's website. Compliance of the clearance conditions is regularly sent to MoEF&CC's regional office by e-mail. The latest Form-V (Environment Statement) for the period of FY 2019-20 is enclosed here as Annexure #4 .

Thanking You,

With Regards

Y Reddy
18.11.20



Yogananda Reddy

Chief General Manager & Vice President (Plant Head)



CSR UPDATE KOCHI

**Major Highlights
April 2020- September 2020**

HEALTHCARE & DISASTER MANAGEMENT



5000 nos. of food and sanitization kits distributed for fishermen families across 6 panchayats in Vypin through the Kerala State Coastal Area Development Corporation (KSCADC).



Distributed Personal Protective Equipment's (PPE's) for Healthcare workers in Kalammasery Medical College (COVID hospital) worth Rs. 18.50 lakhs through Indian Medical Association (IMA)

HEALTHCARE & DISASTER MANAGEMENT



Distributed 1080 nos. of Personal Protective Equipment (PPE) kits to the Customs officers deployed at three airports (Kannur, Kozhikode, Calicut) in Kerala.



Distributed 500 nos. of Personal Protective Equipment (PPE) kits, Face shields, N95 masks to the Health care workers in Medical College Hospital, Kottayam

EDUCATION



Distribution of ladies bicycles to 2000 girls students of fisher folk community in the 9 coastal districts of Kerala



Construction of School library for Arumughavilasam LP school, Kannur



Skill training classes for Person with Disabilities (PWD's) in association with NHFDC.

PROMOTION OF ARTS



Promotion of the art form of Kathakali through Thripunithura Kathakali Kendram.

ENVIRONMENT



Planting trees at the periphery of Vypin Block panchayat under the Haritha Vypin Project along with Vypin Block panchayat



T
H
A
N
K
S



KOCHI LNG TERMINAL
QHSE PROCEDURE MANUAL
Environment Management Cell

Issue No:02	Doc. No: PLK/HSE/DOC/05	Reference: PLK/HSE/PM/01
Revision No:00	Effective Date: 01.06.2020	Page 1 of 7

ENVIRONMENT MANAGEMENT CELL

Prepared By / Reviewed by. DM (HSE) / SM (HSE)	Approved by Terminal Head	MR SM (TS)
---	----------------------------------	-------------------



KOCHI LNG TERMINAL
QHSE PROCEDURE MANUAL
Environment Management Cell

Issue No:02

Doc. No: PLK/HSE/DOC/05

Reference: PLK/HSE/PM/01

Revision No:00

Effective Date: 01.06.2020

Page 2 of 7

REVISION HISTORY

Date of Issue	Revision / Amendment	Details	Page No
10-02-2014	Rev-00		
26-08-2016	Rev-01	Inclusion of Sr.Mgr (Operations) and Change of Head (HSE) and Head (Projects)	02
20-03-2017	Rev-02	Inclusion of Mgr.(Materials) & Mgr.(Technical)	04
03.06.2017	Rev-03	Inclusion of GM (O&M) and Ms. Selsa Rajesh name is replaced with Mr.Biju from Lab	04
01.05.2018	Rev-04	1. VP (O & M) is replaced with Sr VP (plant head) and Inclusion of Sr Officer (HR) 2. Environment management cell structure also reorganized.	04
01.06.2020	Rev-05	EMC committee members and Head (EMC) names & designations are updated	07



KOCHI LNG TERMINAL
QHSE PROCEDURE MANUAL
Environment Management Cell

Issue No:02	Doc. No: PLK/HSE/DOC/05	Reference: PLK/HSE/PM/01
Revision No:00	Effective Date: 01.06.2020	Page 3 of 7

CONTENTS

1. PURPOSE.....	04
2. SCOPE.....	04
3. Environment Management Cell.....	04
A. Members of Environment management cell.....	04
B. Structure of Environment Management cell	05
C. Roles and responsibility of Environment Management cell	06
D. Functioning of Environment Management cell.....	07
E. List of team members & designation	07



KOCHI LNG TERMINAL
QHSE PROCEDURE MANUAL
Environment Management Cell

Issue No:02	Doc. No: PLK/HSE/DOC/05	Reference: PLK/HSE/PM/01
Revision No:00	Effective Date: 01.06.2020	Page 4 of 7

1. PURPOSE:

Purpose of this document is to establish an Environment Management system to monitor all plant activities, in order to ensure that they are carried out in an environmental friendly and sustainable manner.

2. SCOPE:

This document outlines the different aspects of the Environment management system like its members, structure, roles & responsibility of committee members and mode of functioning etc.

3. ENVIRONMENT MANAGEMENT CELL:

A) Members of Environment Management Cell:

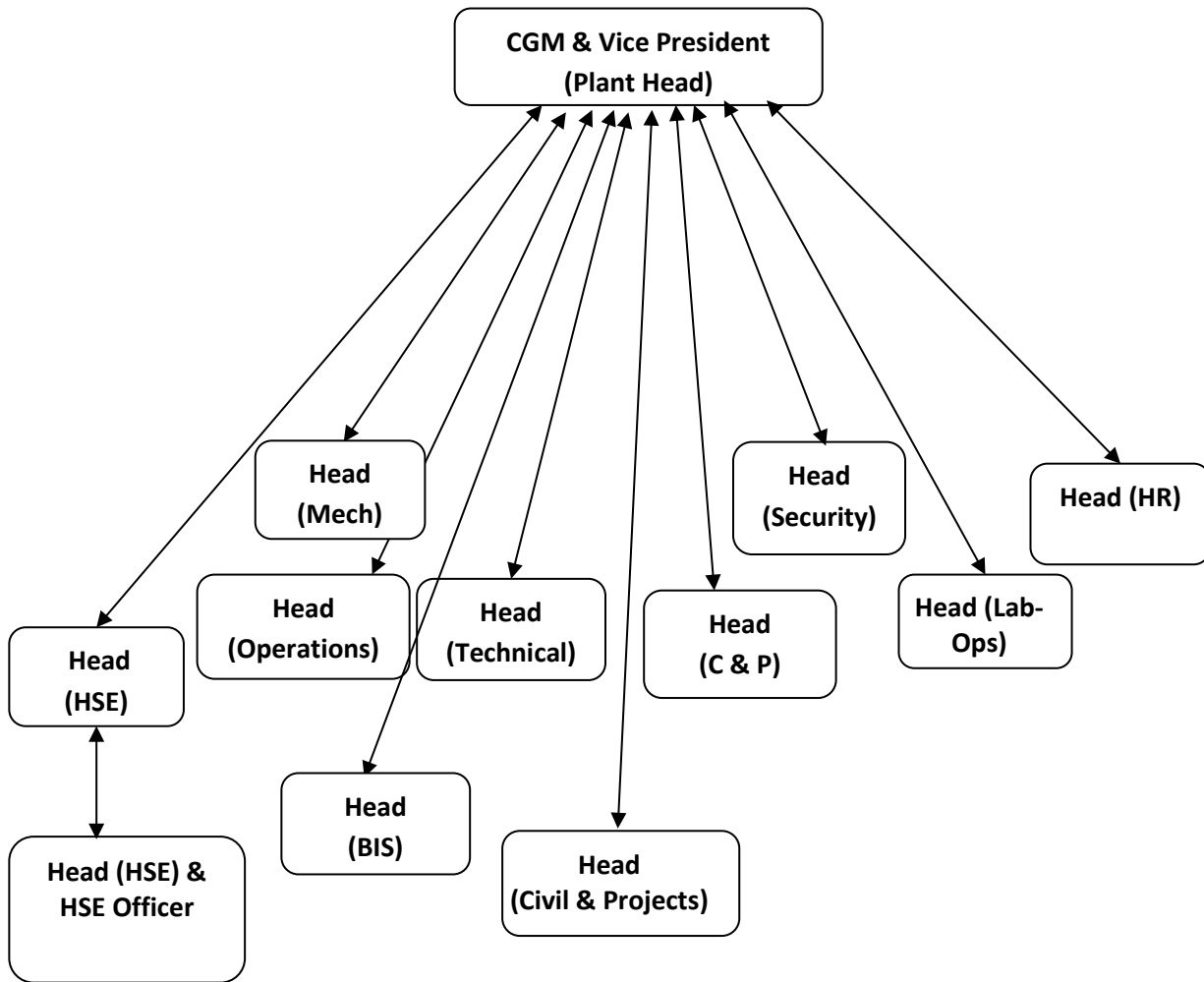
Environment management cell shall be headed by CGM & Vice president (Plant Head) and other members are Head (Operations), Head (HSE), Head (Technical), Head (C & P), Head (Lab Operations), Head (HR), Manager (HSE), Head (Mech) and Jr. Engineer (Civil &Projects); the committee shall be reporting directly to CGM & Vice president (Plant Head)




KOCHI LNG TERMINAL
QHSE PROCEDURE MANUAL
Environment Management Cell

Issue No:02	Doc. No: PLK/HSE/DOC/05	Reference: PLK/HSE/PM/01
Revision No:00	Effective Date: 01.06.2020	Page 5 of 7

B) Structure of Environment Management Cell:




Environment Management Cell

	KOCHI LNG TERMINAL QHSE PROCEDURE MANUAL Environment Management Cell	
	Issue No:02	Doc. No: PLK/HSE/DOC/05
Revision No:00	Effective Date: 01.06.2020	Page 6 of 7

C) Roles and Responsibility of Environment Management Cell:

Roles and responsibility of Environment management cell are listed below, but not limited to:

- Advice management on issues related to environment.
- Identify activities which have potential to harm environment and to suggest measures to mitigate them.
- Create awareness among employees, contractors, visitors and public regarding the importance of environment protection and means to protect it by conducting tree plantations, campaigns, training programs, posters etc.
- Develop and implement the plans in order to reduce, reuse and recycle wastes.
- Plan, develop and implement environment management projects by coordinating with different departments, government agencies, NGO etc.
- Monitor and review different environment monitoring reports of ambient air, noise, vibration, stack emission, liquid effluents, and will take measures to ensure it is well below the permissible limit prescribed by central/ Kerala state pollution control board.
- Take review of the status of solid waste, hazardous wastes, battery waste, e-waste, biomedical waste, food waste, etc. that are generated either by operation or domestic activities of our plant.
- Ensure all activities of the plant are carried out in an environmentally safe manner and as mentioned in consent to establish and operate.
- Ensure Environment related statutory compliance, i.e. MoEF&CC, CRZ clearance, CPCB and KSPCB etc.
- Ensure adequate vegetation cover in the premise by develop and maintain green belt.
- Ensure plant and its premises are kept clean from waste.
- Ensure that all liquid effluent generated as a result of operation or domestic activities of our plant should be treated well to the standard as prescribed by central/ Kerala state pollution control board before discharging.
- Take measure to prevent/minimize/control plant fugitive emission, if any.
- Ensures proper handling (collecting and segregating), storage and disposal of hazardous wastes i.e. used oil, solid and biological waste.
- Identifying contactors qualified by central/ Kerala state pollution control board for disposing different categories of waste.
- Carry our work environment/industrial hygiene survey internally or externally for health hazards for employees.
- Arranging World Environment Day (WED) celebrations every year.

	KOCHI LNG TERMINAL QHSE PROCEDURE MANUAL Environment Management Cell	
	Issue No:02	Doc. No: PLK/HSE/DOC/05
Revision No:00	Effective Date: 01.06.2020	Page 7 of 7

D) Functioning of Environment Management Cell:

- Environment management cell shall meet once in a month.
- Date, time, venue and the agenda of the meeting shall be identified by Head (EMC) Operations and the same will be informed to its members, at least one day in advance.
- The meeting shall be convened by the GM (Plant Head), initial discussion will be on the agenda, then on the progress of the decision taken on the previous meeting.
- Members can share any other information or raise any concerns pertaining to environment and the same will be discussed in detail.
- Minutes of the meeting points shall be recorded and a report for the same shall be prepared and documented.
- Meeting minutes shall be reviewed and concluded by the Head of the Environment Management Cell after listing out the outcome of the meeting and setting of goals.
- Members shall be responsible to execute the decision taken on the meeting, by coordinating with different departments, and the progress has to be reported in the next meeting.

E) List of team members & designation:

1. Shri. Yogananda Reddy; CGM & Vice President (Plant Head)
2. Mr.Veerasley Manimaran – DGM (Operations)
3. Mr. Suresh P – Chief Manager (C & P)
4. Mr.Jaiganesh Dakshinamurthy – Chief Manager (Technical)
5. Mr. Debi Prasad Patro – Chief. Manager (HR)
6. Mr. Kiran Joy – Sr. Manager (Security)
7. Mr. L.S.Raja –Manager (Lab Operations)
8. Mr. Vijith T V –Manager (HSE)
9. Mr. Jitin Dev. –Manager (Mechanical)
10. Mr.Dileep AV – Dy. Manager (HSE)
11. Mr.Sreeram Kumar – Dy. Manager (BIS)
12. Mr. Anish Kumar – Jr.Engineer (Civil & Projects)

Note: EMC group common e-mail id emc_kochi@petronetlng.com is created for internal communication.

TEST REPORT

Test Report No: TC540220000000884P	Date: 06.07.2020	Page 1 of 1
------------------------------------	------------------	-------------

CUSTOMER DETAILS			
Customer Name & Address		M/s Petronet LNG Limited Survey No.347, Puthuvypu P.O Kochi , Ernakulam District	
Customer Reference		Test Request Form Dated 30.06.2020	
SAMPLE DETAILS			
Sample Code	WT20060067	Sample Received On	30.06.2020
Sample Name	Water	Sampling Procedure	SEAAL/ENL/GEN/SOP/01& SEAAL/MBL/SOP/06
Sample Description	Ground Water	Sampling Location	Piezometer Well
Identification By Customer	---	Sampling Condition	Good
Sampled On	30.06.2020	Test Started On	01.07.2020
Sampled By	Laboratory	Test Completed on	06.07.2020

SL NO	TEST PARAMETER	TEST METHOD	UNIT	RESULT
01	pH	IS 3025 Part 11:1983 RA 2017	---	6.90
02	Total Dissolved Solids	IS 3025 Part 16:1984 RA 2017	mg/L	305
03	Turbidity	IS 3025 Part 10: 1984 RA 2017	NTU	4.80
04	Chloride (as Cl)	IS 3025 Part 32:1988 RA 2014	mg/L	12.2
05	Iron (as Fe)	IS 3025 Part 53:2003 RA 2014	mg/L	0.39
06	Fluoride(as F)	APHA 23 rd Edition 4500-F- B D: 2017	mg/L	0.15
07	Sulphate (as SO ₄)	IS 3025 Part 24:1986 RA 2014	mg/L	7.35
08	Electrical Conductivity	IS 3025 Part 14:1984 RA 2013	μS/cm	469
09	Mercury (as Hg)	APHA (23 rd Edition)3112-B: 2017	mg/L	<0.002
10	Lead (as Pb)	APHA (23 rd Edition)3111-B: 2017	mg/L	<0.20
11	Copper (as Cu)	IS 3025 Part 42:1992 RA 2014	mg/L	<0.05
12	Total Chromium (as Cr)	IS 3025(Part 52):2003	mg/L	<0.40
13	Zinc (as Zn)	APHA 3111B 23 rd Edn, 2017	mg/L	<0.025
14	Temperature	IS 3025 Part 9:1984 RA 2006	°C	29.0
15	Salinity	SEAAL/SOP/06	ppm	0.02
16	Oil & Grease	IS 3025 Part 39:1991 RA 2014	mg/L	2.30
17	Dissolved Oxygen	IS 3025 Part 38:1989 RA 2014	mg/L	4.27
18	Biochemical Oxygen Demand (3 days at 27 °C)	IS 3025 Part 44:1993 RA 2014	mg/L	2.03
19	Chemical Oxygen Demand	IS 3025 Part 58:2006 RA 2012	mg/L	10.0
20	Cyanide (as CN)	IS 3025 (Part-27):1986 (Reaff.2003)	mg/L	<0.01
21	Cadmium (as Cd)	APHA (23 rd Edition) 3111-B: 2017	mg/L	<0.03
22	Pesticide	SEAAL/INS/RWM/SOP/01	---	Absent
23*	Insecticide	USEPA 508 : 1995	---	Absent

*Not Under NABL scope

Note: Values given for test parameters Mercury, Lead, Copper, Chromium, Zinc, Cyanide and Cadmium are our MDL values (Minimum Detectable Values) as per NABL scope.

End of Report



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

Laiju P. N.
Laboratory Head

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: 2017 & "A" Grade Laboratory of KSPCB

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

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

Annexure -4



Petronet LNG Limited

Survey No. 347, Puthuvypu P.O.

Kochi - 682 508, India.

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

www.petronetlng.com

CIN L74899DL1998PLC093073

PAN: AAACP8148D. GST: 32AAACP8148D1ZP

PLL/KOCHI/KSPCB/FORM-V/2019-20

22.09.2020

KSPCB Consent No: PCB/HO/EKM-1/ICO-R/18/2018 dated 10.10.2018 & valid up to 30.03.2023.

To,

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

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

Dear Sir/Madam,

Petronet LNG, Kochi terminal was commissioned on 20th August 2013 and KSPCB Consent number is PCB/HO/EKM-1/ICO-R/18/2018.

Kindly find Form-V (Environment Statement) of Petronet LNG Ltd, Kochi Terminal for the financial year 2019-20, as per Environment (Protection) Rules, 1986.

Thanking you,

For, Petronet LNG Ltd.

Reddy
22-9-20



Yogananda Reddy,
CGM & VP (Plant Head).

Enclose: Environment Statement (Form-V).

Cc:

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



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

ENVIRONMENTAL STATEMENT FORM-V
(See rule 14)

Environmental Statement for the financial year ending with 31st March 2020

PART-A

1	<i>Name and address of the owner/ Occupier of the industry, operation or process.</i>	:	Mr. Vinod Kumar Mishra, Director (Finance), Addition charge of Director (Technical). Kochi Address: Petronet LNG Limited, Puthuvypu P.O., Ernakulam-382508 Corporate Office: Petronet LNG Limited, World Trade Center, First Floor, Babar Road, Barakamba Lane, New Delhi-110001
2	<i>Industry category</i>	:	Red
3	<i>Production category. Units.</i>	:	5 Million TPA
4	<i>Year of establishment</i>	:	20 th August 2013
5	<i>Date of the last environmental statement submitted.</i>	:	18-09-2019

PART -B

Water and Raw Material Consumption:

I. Water Consumption (M³/Day)

Process : 2 M³/d
Cooling : Nil
Domestic : 25.1 M³/d

<i>Name of Products</i>	<i>Process water consumption per unit of products</i>	
	<i>During the previous financial year</i>	<i>During the current financial year</i>
1. RLNG	0.005 M ³ /MT	0.0008 M ³ /MT

II. Raw material consumption

<i>Name of raw materials</i>	<i>Name of Products</i>	<i>Consumption of raw material per unit of output</i>	
		<i>During the previous financial year</i>	<i>During the current financial year</i>
LNG	RLNG	0.021*	0.012*

*Converted LNG consumed in energy units (MMBTU)/ RLNG produced in energy units.

PART-C

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

Pollutants		Quantity of Pollutants discharged (mass/day)	Concentration of Pollutants discharged (mass/volume)	Percentage of variation from prescribed standards with reasons.	
(a) Water		NIL	NIL	NIL	
(b) Air	Equipment	Parameters	Quantity of Pollutants discharged (mass/day)	Concentration of Pollutants discharged (mass/volume)	Percentage of variation from prescribed standards with reasons.
	GTG-A	PM	125.89 Kg/d	30.2 mg/Nm ³	No variation from prescribed standard
		CO ₂	16.37 T/d	0.2 %	
		CO	00.00 Kg/d	0.00 ppm	
		SO ₂	00.00 Kg/d	00.00 mg/Nm ³	
		NO _x	401.44 Kg/d	96.3 mg/Nm ³	
	GTG-B	PM	58.2 Kg/d	47 mg/Nm ³	
		CO ₂	26.73 T/d	1.1 %	
		CO	00.00 Kg/d	0.00 ppm	
		SO ₂	00.00 Kg/d	00.00 mg/Nm ³	
		NO _x	114.32 Kg/d	92.4 mg/Nm ³	
	GTG-C	PM	352.3 Kg/d	40.1 mg/Nm ³	No variation from prescribed standard
		CO ₂	34.5 T/d	0.2 %	
		CO	00.00 Kg/d	0.00 ppm	
		SO ₂	0.0 Kg/d	0.0 mg/Nm ³	
		NO _x	790.71 Kg/d	90 mg/Nm ³	
	Emergency DG set	PM	1.87 Kg/d	21.8 mg/Nm ³	No variation from prescribed standard
		CO ₂	0.00 T/d	0 %	
		CO	12.6 Kg/d	117.3 ppm	
		SO ₂	0.72 Kg/d	8.4 mg/Nm ³	
		NO _x	1.48 Kg/d	17.2 mg/Nm ³	

b) Air	Fire Pumps-C (Diesel Operated)	PM	0.16 Kg/d	18.2 mg/Nm ³	No variation from prescribed standard
		CO ₂	0.00 T/d	0 %	
		CO	1.63 Kg/d	149.5 ppm	
		SO ₂	0.1 Kg/d	11.2 mg/Nm ³	
		NO _x	0.16 Kg/d	17.8 mg/Nm ³	
	Fire Pumps-D (Diesel Operated)	PM	0.19 Kg/d	17.9 mg/Nm ³	No variation from prescribed standard
		CO ₂	0.00 T/d	0 %	
		CO	1.63 Kg/d	125.5 ppm	
		SO ₂	0.08 Kg/d	7.6 mg/Nm ³	
		NO _x	0.19 Kg/d	17.9 mg/Nm ³	
	Fire Pumps-E (Diesel Operated)	PM	0.17 Kg/d	17.5 mg/Nm ³	No variation from prescribed standard
		CO ₂	0.00 T/d	0 %	
		CO	1.63 Kg/d	131.2 ppm	
		SO ₂	0.09 Kg/d	8.6 mg/Nm ³	
		NO _x	0.25 Kg/d	25.2 mg/Nm ³	
	Fire Pumps-F (Diesel Operated)	PM	0.0.17 Kg/d	17.4 mg/Nm ³	No variation from prescribed standard
		CO ₂	0.00 T/d	0 %	
		CO	1.63 Kg/d	131.2 ppm	
		SO ₂	0.09 Kg/d	9.4 mg/Nm ³	
		NO _x	0.17 Kg/d	17.6 mg/Nm ³	

Note: All environmental monitoring activities during the FY 2019-20 was carried out by M/s. Standard Environment & Analytical Laboratories, a KSPCB approved agency.

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

<i>Hazardous Wastes</i>	<i>Total Quantity (Kg / Nos.)</i>	
	<i>During the previous financial year</i>	<i>During the current financial year</i>
1. Used Oil (Schedule 1, Category: 5.1)	1207 kg	1636.3 Kg
2. Waste residue containing oil (Schedule 1, Category: 5.2)	94 kg	1165 Kg
3. Discarded containers or barrels used for handling of hazardous wastes or chemicals (Schedule 1, Category 33.3). (used for storing dosing chemicals and used oil)	197 Nos.	212 Nos.
4. Industrial use of paint, plastic and Ink wastes (Schedule 1, Category 21.1)	150 kg	55 Kg
(b) From pollution control facilities	None	

Note:

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

PART -E
SOLID WASTES:

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

PART -F

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

<i>Sl: No</i>	<i>Hazardous wastes</i>	<i>:</i>	<i>Composition</i>
1	Used oil (Cat 5.1)	:	Organic Matter – 98 – 99 %, Inorganic Matter – 1 – 2 %.
2	Waste residue containing oil (Schedule 1, Category: 5.2)	:	Hydrocarbon
3	Discarded containers / barrels and Plastic/Ink/paint wastes (Cat 33.3)	:	Plastic or metallic barrels containing chemical / oil residue.
4	Industrial use of paint, plastic and Ink wastes (Schedule 1, Category 21.1)	:	Paint pigment, solvents etc.

Storage and disposal practice:

Hazardous wastes generated inside the terminal are being disposed through the agencies authorized by Kerala state pollution control board (KSPCB) for the disposal. Petronet LNG Limited has made agreement with M/s. APJ Refineries Pvt. Ltd., Palakkad and KEIL (Kerala Enviro Infrastructure Limited, Kochi) for disposing hazardous wastes generated in the terminal. Hazardous wastes are stored in a dedicated hazardous wastes storage area inside the terminal till its disposal. Hazardous waste storage was constructed and maintained as per the requirement of consent issued by KSPCB. Storage shed is provided with impervious flooring and proper roofing.

Used oil is being disposed through M/s. APJ Refineries. Used oil generated is collected in MS barrels or other suitable containers at the generation point and then shifted to storage shed by concerned department.

Waste residues containing oil such as oil soaked cotton wastes generated at various locations are collected and stored in designated storage bin located inside hazardous waste storage shed. These wastes are disposed through KEIL.

Discarded containers / barrels and Plastic/Ink/paint wastes are collected & stored in hazardous waste storage area and is disposed through KEIL.

Signboards are installed at hazardous waste storage for displaying each category of wastes. Records of hazardous wastes generation are maintained in Form 3 as per Hazardous Wastes (Management & Transboundary movement) rules, 2016.

PART-G

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

An environment management cell (EMC) has been constituted and maintained inside the terminal as required by the environment clearance issued to PLL, Kochi Terminal. EMC is headed by Chief General Manager & Vice President (Plant head) and other members are from the departments; Laboratory Operations, Civil, Materials, Technical and HSE. Sufficient man-hours are allocated for functioning of EMC. Environment management cell meets once in a month, take review of the situation and propose new environment initiatives.

A rain water harvesting system has been installed inside the terminal. Rain water collected from LNG storage tanks are being collected and stored in raw water storage tanks. This water has been used for domestic purpose. Condensate water from air heater has been directed to fire water storage reservoir. Treated water from Sewage Treatment Plant has been used for gardening purpose inside the terminal. STP water quality has been monitored by plant laboratory and also with the help of an external KSPCB grade 'A' environment laboratory. The waste slurry generated from STP has been used as manure for plants inside the plant.

Green belt is developed across the terminal with different plant species appropriate to the environment. Green belt is being maintained by the plant horticulture department.

Gas Turbine Generator installed in PLL terminal has been fitted with the Dry low emission burner (DLEB). DLE burners are designed to meet stringent emission standards.

A continuous Ambient Air Quality Monitoring Station (CAAQMS) was installed in our terminal. Ambient air quality data from CAAQMS has been linked to CPCB server. Ambient air quality data is being continuously monitored and updating to CPCB server.

Food waste converter placed in kitchen for converting all food wastes generated in canteen into manure and this manure has been used as fertilizer inside the plant.

PART -H

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

PLL has been certified for Environment Management system, ISO 14001. All the aspects and impacts associated with the terminal operations are identified and control measures are implemented. Objectives are established and periodically monitored for the continual improvement of management system.

At present, ambient air quality data from CAAQMS are being displayed at plant gate using a LED screen. PLL has initiated the proposal for updating the existing software for including additional environment parameters like stack emission parameters, ambient sound level, hazardous waste generation & disposal etc. in this display.

PART -I

MISCELLANEOUS:

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

Nil

For and on behalf of Petronet LNG Limited

Sign

:

Reddy

Date

:

22-9-20



Approved By : Yogananda Reddy

Designation : CGM & VP (Plant Head)