15 -ാം കേരള നിയമസഭ

14 -ാം സമ്മേളനം

നക്ഷത്ര ചിഹ്നം ഇല്ലാത്ത ചോദ്യം നം. 2196 **30-09-2025 - ൽ മറുപടിയ്ക്ക്**

എം. എസ്. സി. എൽസ-3

ചോദ്യം		ഉത്തരം	
ശ്രീ. ഐ. സി. ബാലകൃഷ്ണൻ		**ശ്രീ. പിണറായി വിജയൻ (മുഖ്യമന്ത്രി)**	
(എ)	കേരള തീരത്ത് എം. എസ്. സി. എൽസ-3 കപ്പൽ കണ്ടെയ്നറുകളുമായി മുങ്ങിയ സംഭവത്തിൽ മലിനീകരണ നിയന്ത്രണ ബോർഡ് ഹൈക്കോടതിയിൽ നൽകിയ രേഖകളുടെ പകർപ്പ് ലഭ്യമാക്കുമോ?	(എ)	കേരള തീരത്ത് എം.എസ്.സി എൽസ-3 കപ്പൽ കണ്ടെയ്നറുകളുമായി മുങ്ങിയ സംഭവത്തിൽ ബഹു. ഹൈക്കോടതിയിൽ സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ് ഫയൽ ചെയ്ത റിപ്പോർട്ടും റിപ്പോർട്ടിനോടനുബന്ധമായി ചേർത്തിരുന്ന Exhibit R7(a) മുതൽ Exhibit R7(z6) വരെയുള്ള 18 Exhibit കളുടെയും പകർപ്പുകൾ ഉള്ളടക്കം ചെയ്യുന്നു.

സെക്ഷൻ ഓഫീസർ

BEFORE THE HON'BLE HIGH COURT OF KERALA AT ERNAKULAM

W.P. (PIL) No.50 of 2025

T.N. Prathapan :: Petitioner

Versus

Union of India & Others :: Respondents

AFFIDAVIT FILED BY THE SENIOR ENVIRONMENTAL ENGINEER-2, KERALA STATE POLLUTION CONTROL BOARD, HEAD OFFICE, THIRUVANANTHAPURAM, ON BEHALF OF THE 7TH RESPONDENT IN THE ABOVE CASE.

Adv. T. Naveen

Standing Counsel for the Kerala State Pollution Control Board

BEFORE THE HON'BLE HIGH COURT OF KERALAAT ERNAKULAM

W.P. (PIL) No. 50 of 2025

T.N. Prathapan :: Petitioner

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Dated this the 30th day of June 2025

KERALA STATE POLLUTION CONTROL BOARD

Adv. T. Naveen
Standing Counsel for the Kerala State Pollution Control Board

BEFORE THE HON'BLE HIGH COURT OF KERALA AT ERNAKULAM

W.P. (PIL) No. 50 of 2025

T.N. Prathapan :: Petitioner

Versus

Union of India & Others :: Respondents

AFFIDAVIT FILED BY THE SENIOR ENVIRONMENTAL ENGINEER-2,KERALA STATE POLLUTION CONTROL BOARD, HEAD OFFICE, THIRUVANANTHAPURAM, ON BEHALF OF THE 7TH RESPONDENT IN THE ABOVE CASE, AS DIRECTED BY THIS HON'BLE COURT AS PER ORDER DATED 19.06.2025.

I, Eby Varghese, Aged 54 years son of late T.V Varghese, residing at Perumbavoor, working as the Senior Environmental Engineer, Kerala State Pollution Control Board, Head Office, Pattom, Thiruvananthapuram, do hereby solemnly affirm and state as follows:

1. I am the Senior Environmental Engineer, Kerala State Pollution Control Board (hereinafter referred to as **Board**), Head Office, Thiruvananthapuram. I am aware of the facts affirmed by me in this Affidavit. I am filing this Affidavit on behalf of the 7th respondent, as duly authorized.

2. The above Writ Petition is filed inter-alia for a declaration that the 7th respondent is having statutory duty to prepare a proper Oil Spill Disaster Contingency Plan and implement the same without any further delay. This

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Affidavit is filed reserving the right of the 7th respondent to file a detailed counter affidavit, if required.

3. It is submitted that information was received from the Special Secretary Environment Department on the evening of 24th May 2025, that a Liberian-flagged vessel namely *MSC ELSA-3* sank in the Arabian Sea, approximately 38 nautical miles southwest of Kochi. The vessel was reported to be carrying 643 containers, including hazardous materials. True copy of the Cargo List received from Kerala State Disaster Management Authority (KSDMA) is produced herewith and marked as **Exhibit R7(a).**

4. **Action taken by the Kerala State Pollution Control Board in view of the MSC ELSA-3 shipwreck on 24.05.2025:**

As an immediate response to the incident, this respondent Board undertook the following actions on 24.05.2025.

a. Indian Coast Guard (ICG) was requested to take urgent action to contain the oil spill, if any, so that the spill does not cause contamination in the sea, coast, or beaches. As per that, action shall be taken for containment by using appropriate equipment such as booms, suckers/skimmers, and dispersants. Action shall be taken in coordination with Cochin Port Trust, Cochin Shipyard, and BPCL Kochi Refinery.

b. Chief Environmental Engineer, Regional Office and District Office, Ernakulam were alerted to be prepared for shoreline cleanup.

c. Seven District Collectors (Chairman, Disaster Management Authority) of coastal districts were requested to take urgent action on the following:

- Activation of District/Local level crisis management groups.

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- Arrangement of equipment/support facilities/oil spill dispersants for shoreline cleanup, recovery, storage, and disposal of pollutants.
- To place a request before the Indian Coast Guard, Kochi to coordinate/guide the District Disaster Management (DDMA) Authority of Ernakulam district to keep the pollution prevention and oil spill cleanup equipment in a state of readiness to meet any emergency.
- To give necessary instructions to the Indian Coast Guard, Kochi to coordinate with the DDMAs/KSPCB of the coastal districts, Mercantile Marine Department, Kochi and Kerala Maritime Board for urgent action.

d. Cochin Port Trust, Oil companies such as Indian Oil Corporation (IOCL), Bharat Petroleum Corporation Limited (BPCL), Hindusthan Petroleum Corporation Limited (HPCL), Petronet LNG and Adani Vizhinjam Port were requested to take urgent action to keep their Pollution Response (PR) team, equipment, absorbents, and support facilities in a state of readiness, and share the same with the State Government in case of any emergency for shore line cleanup. They were also requested to share the same with their sister concerns in Kerala having Pollution Response facilities.

e. Kerala Maritime Board was requested to take urgent action to alert the ports in coastal districts to be ready with the equipment and support facilities required for shoreline cleanup, recovery, storage, and disposal of pollutants.

f. Mercantile Marine Department was requested to take immediate action and precautionary measures.

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True copies of the E-mail communications dated 24.05.2025 sent by the Board to various officials, from Points (a) to (f), are produced herewith and marked as **Exhibit R7(b).**

5. It is respectfully submitted that in the wake of the ship wreckage incident the District Administration has constituted the Rapid Response Team (RRT) and the District Officers of the Board are the members of the Team, and they are stationed near the locations where the oil slick is expected to beach.

6. It is respectfully submitted that the Disaster Management Authority informed vide letter no. REV-k1/99/2017/DMD dated: 28.03.2017 that, as per the directions issued by Government of India and as per the directions of the Government of Kerala, the portfolio of Oil spill Contingency Management is entrusted with the State Pollution Control Board. Hence the Board had prepared a Standard Operating Procedure (SOP) in February, 2018 for shoreline cleanup. True copy of the Standard Operating Procedure (SOP) prepared by the Board in February, 2018 is produced herewith and marked as **Exhibit R7(c).** It is also submitted that the Board officials had frequently attended seminars and mock drills being done by the Indian Coast Guard with respect to oil spill contingency and are aware with the preparedness to be taken in consultation with the District Administration. Accordingly, beach clean-up materials like sacks, saw dust, lime and necessary tools, labourers were sourced as part of preparedness in case of any casualty at beaches where the contaminants are expected to reach.

7. In this regard it is submitted that a document outlining the Dos and Don'ts regarding oil spill management was circulated to District Officers of the Board to raise public awareness and ensure protection of the local population from possible risks. A true copy of the Document dated

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25.05.2025 prepared by the Board containing Dos and Don'ts is produced herewith and marked as **Exhibit R7 (d).**

8. As a further step of action, directions/instructions were given to following offices/departments to take urgent actions for preparedness/ mitigation of the anticipated environmental damages:

- Member Secretary, Kerala State Disaster Management Authority
- Principal Director, Local Self Government Departments , Thiruvananthapuram
- The Director, Directorate of Factories and Boilers, Thiruvananthapuram.
- Director General of Shipping, Mumbai
- General Manager, MSC Ship Management Limited, Cyprus
- District Collectors, Trivandrum, Kollam and Alappuzha
- Officer in Charge, Maritime Rescue Sub- Centre(MRSC)
- Chief Environmental Scientist, Central Laboratory, KSPCB, Ernakulam
- Environmental Engineers of the concerned District Offices of the Board

True copy of the letter dated 26.05.2025 sent by the Board to the Member Secretary, Kerala State Disaster Management Authority is produced herewith and marked as **Exhibit R7(e).** True copy of the letter dated 26.05.2025 issued by the Board to the Chief Environmental Engineer and Environmental Engineers is produced herewith and marked as **Exhibit R7(f).** True copy of the letter dated 28.05.2025 issued by the Board to the Principal Director, Local Self Govt. Department is produced herewith and marked as **Exhibit R7(g).** True copy of the letter dated 29.05.2025 issued

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by the Board to the Director, Directorate of Factories and Boilers Department, is produced herewith and marked as **Exhibit R7(h).** True copy of the letter dated 29.05.2025 issued by the Board to the Director General of Shipping is produced herewith and marked as **Exhibit R7(i).** True copy of the letter dated 30.05.2025 issued by the Board to the Officer in charge, Coast Guard District No.4, Fort Kochi, is produced herewith and marked as **Exhibit R7(j).** True copy of the letter dated 29.05.2025 issued by the Board to the General Manager, MSC Ship Management Ltd., is produced herewith and marked as **Exhibit R7(k).** True copy of the letter dated 29.05.2025 issued by the Board to the District Collector, Trivandrum/Kollam/Alappuzha is produced herewith and marked as **Exhibit R7(l).**

9. **Water Quality Monitoring carried out by the Board to assess pollution:**

In order to assess the pollution, sea water and sediment sampling was commenced on 25.05.2025 itself. A sampling protocol specific to this issue has been prepared by the Board. Sampling was carried out at various locations along the shoreline across coastal districts like, Thiruvananthapuram, Kollam, Alappuzha, Ernakulam, Kannur, Kozhikode, and Kasaragod. A true copy of the Sampling Protocol is produced herewith and marked as **Exhibit R7 (m).** The analysis reports obtained so far reveals that there is no noticeable variation in sea water quality with respect to shipwreck issue. Sampling and analysis are going on and final and conclusive inference on the extent of pollution that may be caused by the ship wreck can be made only after the entire analyses are over.

10. **Air Quality Monitoring:**

Air Quality Monitoring was also done in the beach areas as per the protocol prepared. Results show that the air quality is not varied with respect to shipwreck incident.

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11. **Response of the Board on the instances of container and other pollutants reaching the beaches:**

Board officials had inspected various sites where the containers were beached. It has been observed that more than 40 containers including empty, sealed and partially damaged containing cotton, paper, wood and plastic nurdles were reported to be beached in southern coastal region. Board had extended water sampling of those locations where beaching of containers or its contents happened and a final and conclusive inference can be made only after the completion of the analysis. The Board will take all earnest efforts to complete the analysis and the same can be completed in fast track mode.

12. **Responsibilities of the Board in beach clean-up:**

At the beaches in Kollam and Thiruvananthapuram districts, plastic nurdles were found deposited. KSDMA had developed a protocol for beach cleanup. The salvaging company on behalf of the shipping company as well as the volunteers engaged by LSG's was carrying out the beach cleanup under the supervision of the various Government Departments including the Board. In Thiruvananthapuram district, no suitable godown could be identified. Therefore, the nurdles mixed with sand are being collected in sacks and temporarily stored along the shore. A total of 1,623 bags of nurdles, weighing 32,922 kg, were transported from Groove Beach, Kovalam to Kollam Port in four trucks on 24.06.2025 and 25.06.2025. In Kollam district, plastic nurdles were collected, and approximately 950 bags containing nurdles mixed with sand have been removed from the coastal areas. These are currently stored at the Kollam Port godown, where MERC is carrying out the separation of nurdles by sieving. No plastic nurdles have been found in Alappuzha district.

13. It is submitted that a meeting was held on 07.06.2025, with all stakeholder departments, officials of the salvaging company and technical advisors, chaired

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by the Chairperson of the Board, to discuss the temporary storage and removal of plastic nurdles from the beaches. During the meeting, it was decided to transfer the materials to a temporary storage identified by the respective LSGs and in turn to KEIL, Ambalamugal for secure storage until final disposal is decided upon. True copy of the Minutes of the meeting held on 07.06.2025 is produced herewith and marked as **Exhibit R7 (n).**

Action taken by the Kerala State Pollution Control Board in view of the fire incident on container ship Wan Hai- 503 on 09.06.2025:

14. It is respectfully submitted that an information on 9th June 2025, at approximately 09:50 hrs was received at Board's office, that a fire incident occurred aboard the Singapore-flagged container vessel Wan Hai 503 (IMO Number: 9294862), managed by Wan Hai Lines. At the time of the incident, the ship was located at approximately 11° 37.6′ N Longitude, 074° 37.4′ E - about 44 nautical miles southwest of Azhikkal, Kerala. According to the ship owners, the vessel was carrying approximately 700 containers, including about 143 (International Maritime Dangerous Goods (IMDG) - classified units with hazardous materials such as Tri Nitro Toluene (TNT), gunpowder, and other explosives. True copy of the Cargo List received from Kerala State Disaster Management Authority (KSDMA) is produced herewith and marked as **Exhibit R7(o)**.

15. It is respectfully submitted that as an immediate response to the incident, the Board undertook the following actions on 09.06.2025.

a. The Board issued immediate directions/instructions by email on 09.06.2025 to the District Collectors of Alappuzha, Ernakulam, Thrissur, Malappuram, Kozhikode, Kannur, and Kasaragod to take urgent action on the following.

- Activation of District/Local level crisis management groups

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- Arrangement of equipment/Support facilities/ oil spill dispersant for shoreline cleanup/recovery storage/disposal of pollutants
- Request Indian Coast Guard, to co-ordinate/guide the Local District Disaster Management Authority of Kozhikode district to keep the pollution prevention and oil spill cleanup equipments in a state of readiness to meet any emergency.
- Request Indian Coast Guard, to coordinate with the DDMs/KSPCB of the districts viz. Ernakulam, Thrissur, Alappuzha, Kozhikode, Malappuram, Kannur and Kasaragod, Mercantile Marine Department, Kochi and Kerala Maritime Board for urgent action.

True copy of the e-mail communication dated 09.06.2025 sent by the Board to the District Collectors is produced herewith and marked as **Exhibit R7 (p)**.

b. The Board issued instructions by email on 09.06.2025 to the Indian Coast Guard (ICG) requested to take urgent action to contain the oil spill, if any, so that the spill does not cause contamination in the sea, coast or beaches. As per the email, action shall be taken for containment by using appropriate equipment such as boom and sucker/skimmer, and dispersants. Action shall be taken in coordination with Kochi Port Trust, Kochi Shipyard and Kochi Refinery. True copy of the email communication dated 09.06.2025 issued by the Board to the Indian Coast Guard is produced herewith and marked as **Exhibit R7(q).**

c. Cochin Port Trust, Oil companies such as Indian Oil Corporation (IOCL), Bharat Petroleum Corporation Limited (BPCL), Hindusthan Petroleum Corporation Limited (HPCL), Petronet LNG and Adani Vizhinjam Port were requested to take urgent action to keep their Pollution Response (PR) team, equipment, absorbents, and support facilities in a state of readiness, and share the same with the State Government in case of any emergency for shore line cleanup. They were also requested to share the same with their sister concerns in Kerala

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having Pollution Response facilities. True copy of the e-mail communication dated 09.06.2025 sent by the Board to Cochin Port Trust and the Oil Companies is produced herewith and marked as **Exhibit R7(r)**.

d. The Board instructed its Officers by email on 09.06.2025 in the districts of Kozhikode, Malappuram, Kannur, and Kasaragod to begin sampling on 10.06.2025 and to initiate monitoring operations along their respective coastal areas. True copy of the email communications dated 09.06.2025 sent by the Board to the Environmental Engineers is produced herewith and marked as **Exhibit R7(s)**.

e. The Board issued instructions by email on 09.06.2025 and Mercantile Marine Department was requested to take immediate action and precautionary measures. True copy of the e-mail communication dated 09.06.2025 sent by the Board to the Mercantile Marine Department is produced herewith and marked as **Exhibit R7(t)**.

16. It is respectfully submitted that the matter has been reported to Special Secretary, Environment Department and Member Secretary of the Central Pollution Control Board immediately by letter dated 09.06.2025 in this regard. True copy of the letter dated 09.06.2025 sent by the Board to the Special Secretary to Govt., Environment Department is produced herewith and marked as **Exhibit R7(u).** True copy of the letter dated 09.06.2025 sent by the Board to the Member Secretary of the Central Pollution Control Board is produced herewith and marked as **Exhibit R7(v).**

17. It is respectfully submitted as a further step of action, directions/instructions were given to following offices/departments to take urgent actions for preparedness/ mitigation of the anticipated environmental damages:

- Member Secretary, Kerala State Disaster Management Authority
- The Director, Directorate of Factories and Boilers,

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Thiruvananthapuram.

- Director General of Shipping, Mumbai
- The General Manager, Wan Hai Lines
- Officer in Charge, Maritime Rescue Sub-Centre(MRSC)
- District Collectors of coastal districts - including Thiruvananthapuram, Kollam, Alappuzha, Ernakulam, Thrissur, Malappuram, Kozhikode, Kannur, and Kasaragod.

True copy of the letter dated 19.06.2025 sent by the Board to the Member Secretary, Kerala State Disaster Management Authority is produced herewith and marked **Exhibit R7(w).** True copy of the letter dated 19.06.2025 issued by the Board to the Director, Directorate of Factories and Boilers Department, Thiruvananthapuram is produced herewith and marked as **ExhibitR7(x).** True copy of the letter dated 19.06.2025 issued by the Board to the Director General of Shipping, Mumbai is produced herewith and marked as **Exhibit R7(y).** True copy of the letter dated 19.06.2025 issued by the Board to the General Manager, Wan Hai Lines, is produced herewith and marked as **Exhibit R7 (z).** True copy of the letter dated 19.06.2025 issued by the Board to the Officer in charge, Coast Guard District No.4, Fort Kochi, is produced herewith and marked as **Exhibit R7(z1).** True copy of the letter dated 19.06.2025 issued by the Board to District Collectors of Coastal districts - including Thiruvananthapuram, Kollam, Alappuzha, Ernakulam, Thrissur, Malappuram, Kozhikode, Kannur, and Kasaragod is produced herewith and marked as **Exhibit R7(z2).**

18. It is respectfully submitted that comprehensive environmental monitoring was initiated on 10.06.2025, across several coastal districts such as Ernakulam, Thrissur, Malappuram, Kozhikode, Kannur, and Kasaragod following the incident. Monitoring was conducted on daily basis from 10.06.2025 to 18.06.2025. Based on the preliminary assessment of water and air quality data, the sampling frequency has been adjusted to once in every three days, from

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19.06.2025 onwards. A total of **36 seawater parameters** (including general indicators, heavy metals, petroleum hydrocarbons, Polycyclic Aromatic Hydrocarbons (PAHs), Volatile Organic Compounds (VOCs), and microbiological counts), **eight soil parameters** (covering physical properties, heavy metals, organics, and petroleum hydrocarbons), and **eight air quality** metrics (PM_{10}, $PM_{2.5}$, SO_2, NO_x, CO, organics, and total petroleum hydrocarbons) are being analyzed.

19. Water quality assessments are being conducted in the affected coastal regions, by collecting water samples at different locations, soil, and air samples are being collected from selected locations along the coastlines of Kannur, Kozhikode, Malappuram, and Thrissur districts. The water monitoring results up to 12.06.2025, reveal significant spatial variability in turbidity, may be because of monsoon, with localized spikes particularly at Paravanna Beach (Malappuram), Fort Kochi (Ernakulam), and Beypore Beach (Kozhikode). However, similar turbidity levels were sporadically recorded in these districts prior to the Wan Hai - 503 ship fire, indicating no consistent contamination pattern.

20. Dissolved Oxygen (DO) levels exceed 5 mg/L across all sites, signifying adequate oxygenation, while Biological Oxygen Demand (BOD) remains below detectable limits, suggesting no signs of contamination. A slight drop in pH was noted at Ponnani Beach (Malappuram) on 10.06.2025. From the available data of pH, it cannot be firmly establish that the observed change in pH is related to Wan Hai 503 ship fire accident.

21. Air quality monitoring commenced in Kannur on 09.06.2025, and ambient air sampling was subsequently extended to the coastal areas of Kannur and Kozhikode on 10.06.2025. Monitoring was carried out at five stations namely Kannur, Nallalam and Beypore (Kozhikode), Kanhangad (Kasaragod), and

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Malappuram during the period from 12.06.2025 to 17.06.2025. The findings confirmed that air quality at all locations remained within the limits prescribed under the National Ambient Air Quality Standards.

22. **Status Of Oil Spill Contingency Plan:**

It is submitted that in the review meeting chaired by the Additional Chief secretary, Environment Dept. on 16.06.2016 to review the level of preparedness of major accident hazard units to deal with chemical accidents, it was decided that Kerala PCB in association with the Central Coast Guard shall prepare Oil Spill Emergency Plan for the state and furnish it to the Govt. for approval. Hence notice inviting Expression of Interest from competent parties was published in the dailies on 18.10.2016 and a committee was constituted for verifying the proposals and interested parties were invited for a presentation on 29.11.2016. True copy of the proceedings dated 18.11.2016 of formation of the Committee is produced herewith and marked as **Exhibit R7 (z3).** Committee meeting was conducted and the committee members opined that since the scope of the study needed to be expanded further, the bids submitted, if any, to be returned without opening and to go for e-tendering.

In the meanwhile KITCO, an agency accredited for doing Project Management Consultancy expressed interest for consultancy services for preparation of Oil Spill Contingency Plan. KSPCB conducted meeting with the agency on 09.07.2019. They submitted a budgetary proposal for Rs.60 lakhs on 01.08.2019. After negotiation, the amount was reduced to Rs.51 lakhs. This was placed in the plan scheme of 2021-2022 requesting the Govt. to award the work on nomination basis without tendering as the work has to be completed in a short period in that financial year. But the Government advised to go for tendering. Accordingly comments/ suggestions of various departments and agencies were collected to prepare tender document and based on that (Terms of Reference) TOR and tender document were prepared. E-tender was called for in 2022 with

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newspaper publicity. Committee was constituted for evaluating the tenders technically & financially with the officials from Indian Coast Guard, Kerala Maritime Board, Cochin Port Trust, India Gateway Terminal Private Ltd., Mercantile Marine Department, KSPCB. The E-tender date was extended and three firms participated in the process. The Committee evaluated the tenders. The lowest bidder had quoted an amount of Rs.1,74,88,830.15/- (Rupees One Crore Seventy Four Lakh Eighty Eight Thousand Eight Hundred and Thirty and 15 paise only) which is very high when compared to the sanctioned amount of Rs.51 Lakhs in the plan scheme. The bidder informed that the high cost was due to the inclusion of additional activities such as Oil Spill Modelling & Net Environmental Benefit Analysis as mandated by subsequent circulars of Indian Coast Guard. But it was decided to rework the proposal and re-tender the project. Tender document and TOR were modified and finalized in June 2024. But only two firms participated in the bidding. Accordingly details of new members were collected from different offices through letters & e-mails and additional member from the Directorate of Environment & Climate Change Dept. of Environment was also nominated to the committee. Accordingly the expert committee constituted earlier was reconstituted in May 2025 for evaluating the tenders for the preparation of Oil Spill Contingency Plan technically and financially.

In the first committee meeting conducted on 02.06.2025 for evaluating the tenders, it was decided that bidders are to be invited to present before the committee members on 10.06.2025 by making presentations. Accordingly the second committee meeting for the evaluation of technical bids was conducted on 10.06.2025. True copies of the Minutes of the Committee meeting held on 02.06.2025 and 10.06.2025, for the evaluation of bids, are produced herewith and marked as **Exhibit R7(z4) and Exhibit R7(z5).** There were only two bidders. The committee has approved both the technical bids and decided to open the financial bids. The financial bids were opened on 13.06.2025. On the same day an online meeting was held with committee members and decided that the bidder

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who quoted lowest prize will be invited to present before the committee physically on 20.06.2025.

23. It is respectfully submitted that an online meeting was held on 24.06.2025 to take a decision on the proposal submitted by the lowest bidder M/s Environ Software Pvt. Ltd and based on the decision of the committee, Order dated 27.06.2025has been awarded to M/s Environ for preparing Oil Spill Contingency Plan (OSCP). True copy of the order dated 27.06.2025 issued by the Board is produced herewith and marked as **Exhibit R7 (z6).**

24. It is most respectfully submitted that Board has taken all earnest efforts in delivering the duties entrusted as per the Act and Rules in the wake of the possible environmental damages and will continue to discharge its obligations to minimize the pollution threat caused by the ship wreckage.

All the facts stated above are true to the best of my knowledge, information and belief.

Dated this is the 30th day of June, 2025.

DEPONENT EBY VARGHESE
Senior Environmental Engineer

Solemnly affirmed and signed before me by the deponent on this the 30th day of June, 2025 in my Office at Ernakulam.

KERALA STATE POLLUTION CONTROL BOARD

T.NAVEEN
ADVOCATE

Exhibit R7(a)

The Cargo List of MSC ELSA-3 received from Kerala State Disaster Management Authority

Sl No	CntrNo	SzTp	F/E	Cargo
Sl No	CntrNo	SzTp	F/E	Cargo
1	GLDU5046345	20DV	F	SAWN TIMBER
2	GLDU9700990	20DV	F	WOOD
3	MSMU8237551	40HC	F	RAW CASHEW NUTS
4	MSMU5828102	40HC	F	BAMBOO STICKS
5	TGBU4300980	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
6	MSMU7436625	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
7	MSMU7559105	40HC	F	SPINNING MACHINE
8	CAIU8084859	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
9	TRHU8270418	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
10	TCLU5704422	40HC	F	SPINNING MACHINE
11	FFAU2394781	40HC	F	WASTE PAPER - PRINTED TMP
12	TGHU6492646	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
13	CAAU7858855	40HC	F	WOODWORKING CLAMP CARRIER
14	MSMU6844392	40HC	F	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIM
15	MEDU7910999	40HC	F	COTTON, NOT CARDED OR COMBED
16	MSMU6329324	40HC	F	SPINNING MACHINE
17	GLDU9832039	40HC	F	HDPE LUBAN DGDZ-6097
18	MSDU5484865	40HC	F	SPINNING MACHINE
19	MSMU5562603	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
20	MSDU7394462	40HC	F	SPINNING MACHINE
21	TGBU7810040	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
22	MSCU5356639	40HC	F	SPINNING MACHINE
23	MSDU6444527	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
24	FSCU3510856	20DV	F	WOOD
25	GLDU3752928	20DV	F	CALCIUM CARBIDE.SIZE:50-80MM
26	MEDU3865839	20DV	F	WOOD
27	MEDU6618806	20DV	F	CALCIUM CARBIDE.SIZE:50-80MM
28	TCLU2550703	20DV	F	CALCIUM CARBIDE.SIZE:50-80MM
29	DFSU2231980	20DV	F	WOOD
30	MSDU1913339	20DV	F	CALCIUM CARBIDE
31	AXIU2227284	20DV	F	CALCIUM CARBIDE.SIZE:50-80MM
32	TRHU2413764	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
33	IPXU3585748	20DV	F	WOOD
34	MEDU5451524	20DV	F	CONTINUOUSLY PRE-PAINTED GALVANIZED STEEL COILS
35	MEDU5372298	20DV	F	CALCIUM CARBIDE
36	MSNU1198797	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA

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Sl No	CntrNo	SzTp	F/E	Cargo
37	MSNU2728654	20DV	F	FISH BODY OIL - JAPAN CRUDE FISH OIL
38	MSMU1988490	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
39	MSMU1837390	20DV	F	CALCIUM CARBIDE
40	FBIU0260644	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
41	MEDU3645731	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
42	MSDU1465743	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
43	MSMU1694031	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
44	MEDU2563881	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
45	BMOU2619296	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
46	MSNU1776719	20DV	F	FISH BODY OIL - JAPAN CRUDE FISH OIL
47	HPCU2286769	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
48	TEMU3396821	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
49	MEDU5456697	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
50	CRXU3062703	20DV	F	TENSAGEX EOM670B SODIUM LAURYL ETHER SULPHATE
51	MEDU9883594	40HR	E	EMPTY CONTAINER
52	CXRU1320977	40HR	E	EMPTY CONTAINER
53	CRLU1400379	40HR	E	EMPTY CONTAINER
54	MEDU9176210	40HR	E	EMPTY CONTAINER
55	MEDU9712544	40HR	E	EMPTY CONTAINER
56	BMOU9650591	40HR	E	EMPTY CONTAINER
57	CXRU1434497	40HR	E	EMPTY CONTAINER
58	OTPU6675888	40HR	E	EMPTY CONTAINER
59	TRIU8087165	40HR	E	EMPTY CONTAINER
60	CXRU1470299	40HR	E	EMPTY CONTAINER
61	TGHU9919515	40HR	E	EMPTY CONTAINER
62	MEDU9036033	40HR	E	EMPTY CONTAINER
63	FSCU5798607	40HR	E	EMPTY CONTAINER
64	TEMU9668758	40HR	E	EMPTY CONTAINER
65	OTPU6454341	40HR	E	EMPTY CONTAINER
66	SZLU9308506	40HR	E	EMPTY CONTAINER
67	OTPU6670335	40HR	E	EMPTY CONTAINER
68	TRIU8922459	40HR	E	EMPTY CONTAINER
69	MSNU2431579	20DV	F	COATED PAPER C2S GLOSS
70	MEDU5533279	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
71	MEDU2513432	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T

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Sl No	CntrNo	SzTp	F/E	Cargo
72	MEDU3694335	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
73	TGHU3305741	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
74	MSCU6523999	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
75	MSDU1542813	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
76	MSNU1340113	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
77	TGBU3207825	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
78	MSDU2860110	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
79	MSDU2580438	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
80	MSNU2119447	20DV	F	FISH BODY OIL - JAPAN CRUDE FISH OIL
81	MSNU2432106	20DV	F	COATED PAPER C2S GLOSS
82	MEDU3565169	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
83	FTAU1969256	20DV	F	FISH BODY OIL - JAPAN CRUDE FISH OIL
84	MSDU1673346	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
85	MSNU2433165	20DV	F	COATED PAPER C2S GLOSS
86	MSNU2095073	20DV	F	FISH BODY OIL - JAPAN CRUDE FISH OIL
87	MSNU2002466	20DV	F	FISH BODY OIL - JAPAN CRUDE FISH OIL
88	SEKU1329020	20DV	F	FISH BODY OIL - JAPAN CRUDE FISH OIL
89	MEDU2940856	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
90	MSDU1118528	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
91	UETU2647575	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
92	GLDU9454849	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
93	TCLU2443731	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
94	CORU2426800	20DV	F	WOOD
95	TEMU5053400	20DV	F	WOOD
96	SEGU3108092	20DV	F	DRIED LEGUMINOUS VEGETABLES, SHELLED, WHETHER OR N
97	CAIU6911963	20DV	F	WOOD
98	MSDU7438935	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
99	TGBU6376120	40HC	F	UNCOATED KRAFT PAPER AND PAPERBOARD, IN ROLLS OR S

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Sl No	CntrNo	SzTp	F/E	Cargo
100	MSMU8511277	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
101	BMOU6743638	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
102	MSMU4192926	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
103	MSMU8311664	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
104	CRSU9163535	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
105	MSNU9570832	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
106	MSDU8103176	40HC	F	BLEACHED CHEMI THERMO
107	FFAU1968376	40HC	F	RAW CASHEW NUTS
108	MSDU5020340	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
109	MSNU9569174	40HC	F	COTTON, NOT CARDED OR COMBED
110	TIIU4199195	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
111	BMOU5634083	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
112	GAOU6717598	40HC	F	DICYANDIAMIDE 99.5 PCT MIN
113	MSNU5736458	40HC	F	LINEAR LOW DENSITY POLYETHYLENE
114	MSDU5453170	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
115	TIIU4006260	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
116	MSBU5494845	40HC	F	BLEACHED CHEMI THERMO
117	MSNU5589104	40HC	F	HDPE LUBAN DGDZ-6097
118	MSDU7272464	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
119	MSDU6586389	40HC	F	HIGH BULK C2S ART BOARD
120	MSMU8820548	40HC	F	RAW CASHEW NUTS
121	MSDU7745525	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
122	CAIU7391022	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
123	MSMU4130842	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
124	MSMU8663602	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
125	MSNU6129741	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
126	CAAU5517525	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
127	MSMU8487226	40HC	F	BLEACHED CHEMI THERMO
128	MSDU6901460	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
129	TGBU7944970	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
130	TCNU3185367	40HC	F	COTTON, NOT CARDED OR COMBED

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Sl No	CntrNo	SzTp	F/E	Cargo
131	TRHU7691412	40HC	F	HDPE LUBAN DGDZ-6097
132	MSDU7734011	40HC	F	WASTE
133	TGBU5843981	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
134	MSMU5243355	40HC	F	LINEAR LOW DENSITY POLYETHYLENE
135	FSCU8333075	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
136	GAOU7402949	40HC	F	BLEACHED CHEMI THERMO
137	MSMU6896544	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
138	MEDU9438710	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
139	FFAU2173245	40HC	F	WASTE PAPER - PRINTED TMP
140	MSMU8184805	40HC	F	BLEACHED CHEMI THERMO
141	TCLU1709051	40HC	F	LINEAR LOW DENSITY POLYETHYLENE
142	MSDU7030964	40HC	F	COTTON, NOT CARDED OR COMBED
143	FFAU1988937	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
144	MSMU4975979	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
145	MSNU7461684	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
146	TRHU8022849	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
147	MSDU6985136	40HC	F	WASTE PAPER - PRINTED TMP
148	CAAU7262721	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
149	TRHU7720995	40HC	F	COTTON, NOT CARDED OR COMBED
150	MSDU7238623	40HC	F	USED OR NEW RAGS, SCRAP TWINE, CORDAGE, ROPE AND C
151	MSDU5396830	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
152	MSDU5851997	40HC	F	HDPE LUBAN DGDZ-6097
153	MSMU5762427	40HC	F	GAUZE ROLL 90 CM 17TH
154	TLLU3260369	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
155	MSMU2067289	20DV	F	WOOD
156	MEDU5711766	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
157	DFSU1142277	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
158	MSBU1495139	20DV	F	WOOD
159	MSNU3694965	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
160	MSMU2959752	20DV	F	WOOD
161	DFSU2936965	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
162	MSMU1796706	20DV	F	BROWN FUSED ALUMINA
163	MSMU2978243	20DV	F	WOOD

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Sl No	CntrNo	SzTp	F/E	Cargo
164	HPCU2318758	20DV	F	DRIED LEGUMINOUS VEGETABLES, SHELLED, WHETHER OR N
165	MSNU2421225	20DV	F	PRINTING PAPER
166	MSMU4243427	40HC	F	RUBBER CHEMICAL ANTI-OXIDANT 6PPD
167	MSCU5260347	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
168	BMOU6117552	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
169	MSNU5275649	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
170	MSDU7920000	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
171	MEDU4556979	40HC	F	WASTE PAPER - PRINTED TMP
172	MSBU5488349	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
173	MSMU4069700	40HC	F	COTTON, NOT CARDED OR COMBED
174	MSMU4267537	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
175	CAAU8115710	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
176	MSMU7932610	40HC	F	MOPLEN HP456J, BG25BC
177	TGBU8008683	40HC	F	STANDARD ACCESSORIES
178	CAAU7366120	40HC	F	BLEACHED CHEMI THERMO
179	MSDU6396136	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
180	MSDU5935655	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
181	MSMU5928307	40HC	F	BLEACHED CHEMI THERMO
182	MSNU7324254	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
183	CRSU9238038	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
184	MSNU7084322	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
185	MEDU7587335	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
186	SEGU4102822	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
187	FFAU1152443	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
188	MSDU7713317	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
189	TXGU5490721	40HC	F	COTTON, NOT CARDED OR COMBED
190	MSMU8539633	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
191	CLHU9096854	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
192	SEKU6756679	40HC	F	COTTON, NOT CARDED OR COMBED
193	MSNU6641850	40HC	F	MOPLEN HP456J, BG25BC
194	MSNU5878853	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -

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Sl No	CntrNo	SzTp	F/E	Cargo
195	MSDU8256088	40HC	F	COTTON, NOT CARDED OR COMBED
196	FFAU3929785	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
197	MSMU6125697	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
198	FFAU3835198	40HC	F	COTTON, NOT CARDED OR COMBED
199	MSDU7961442	40HC	F	BLEACHED CHEMI THERMO
200	CAAU8148550	40HC	F	HDPE LUBAN DGDZ-6097
201	MSMU7377923	40HC	F	COTTON, NOT CARDED OR COMBED
202	MSDU8659519	40HC	F	BLEACHED CHEMI THERMO
203	MSDU6543392	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
204	MSDU7779905	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
205	MSBU8157196	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
206	TGBU5732458	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
207	TIIU4259870	40HC	F	HDPE LUBAN DGDZ-6097
208	MSMU7076149	40HC	F	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIM
209	TGBU5569090	40HC	F	COTTON, NOT CARDED OR COMBED
210	MSMU7751885	40HC	F	COTTON, NOT CARDED OR COMBED
211	MSMU4766222	40HC	F	MOPLEN HP462R, BG25BC
212	TRHU6546404	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
213	TEMU7962275	40HC	F	COTTON, NOT CARDED OR COMBED
214	DFSU6579758	40HC	F	POLYPROPYLENE
215	MSDU6902764	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
216	UETU6122498	40HC	F	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIM
217	CXDU2015607	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
218	MSBU6514118	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
219	MSDU6063270	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
220	MSNU2149708	20DV	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
221	MSNU1128803	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
222	GLDU9792316	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
223	MSMU1207880	20DV	F	WOOD
224	GLDU5626220	20DV	F	DRIED LEGUMINOUS VEGETABLES, SHELLED, WHETHER OR N
225	MSMU2708757	20DV	F	DRIED LEGUMINOUS VEGETABLES, SHELLED, WHETHER OR N
226	TEMU2390217	20DV	F	GRANITE, PORPHYRY, BASALT, SANDSTONE AND OTHER MON

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Sl No	CntrNo	SzTp	F/E	Cargo
227	DRYU2963086	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
228	MSDU2362462	20DV	F	WOOD
229	MSDU2524199	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
230	MSCU6973595	20DV	F	WOOD
231	MSDU1932220	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
232	TCNU3559512	40HC	F	ARTIFICIAL GRAPHITE
233	MSNU9657336	40HC	F	MOPLEN HP456J, BG25BC
234	MSDU8655154	40HC	F	COTTON, NOT CARDED OR COMBED
235	MSMU7556620	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
236	FFAU1922312	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
237	FFAU3986002	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
238	MSDU8980278	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
239	MSMU5586082	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
240	MSDU7215335	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
241	MSDU8647396	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
242	MSDU6251410	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
243	FFAU1691321	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
244	MSCU5380661	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
245	MSMU5579416	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
246	MEDU7466755	40HC	F	RE420MO POLYPROPYLENE
247	MEDU8952828	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
248	MSDU7574253	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
249	MSNU6114886	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
250	MSNU6794335	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
251	MSDU5928595	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
252	TCLU7727160	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
253	FBLU0090922	40HC	F	COTTON, NOT CARDED OR COMBED
254	TGBU4622923	40HC	F	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIM
255	BEAU4259321	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
256	TCLU5663663	40HC	F	DICYANDIAMIDE 99.5 PCT MIN

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Sl No	CntrNo	SzTp	F/E	Cargo
257	MSDU8999479	40HC	F	LINEAR LOW DENSITY POLYETHYLENE
258	MSDU8251255	40HC	F	COTTON, NOT CARDED OR COMBED
259	MSMU6531340	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
260	MSMU8766811	40HC	F	COTTON, NOT CARDED OR COMBED
261	FBLU0063531	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
262	MSCU5412840	40HC	F	COTTON, NOT CARDED OR COMBED
263	MSDU8601380	40HC	F	BLEACHED CHEMI THERMO
264	MSDU5949319	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
265	TCNU2916220	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
266	MSDU7069204	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
267	MSDU5950325	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
268	MSMU5110820	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
269	MSDU5526699	40HC	F	WASTE PAPER - PRINTED TMP
270	CAAU7417206	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
271	MSMU5528492	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
272	FFAU2077806	40HC	F	BLEACHED CHEMI THERMO
273	MSMU5808750	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
274	MEDU7994900	40HC	F	HIGH BULK C2S ART BOARD
275	MSDU6094856	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
276	FFAU4142006	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
277	MSMU8961525	40HC	F	ARTIFICIAL GRAPHITE
278	BMOU5933145	40HC	F	RAW CASHEW NUTS
279	MSMU7221463	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
280	MEDU4793060	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
281	CAIU7605762	40HC	F	COTTON, NOT CARDED OR COMBED
282	MSMU7843410	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
283	MSMU4137195	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
284	TCLU5276371	40HC	F	POLYPROPYLENE
285	MSMU4269150	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
286	CAIU4607479	40HC	F	STANDARD ACCESSORIES
287	MSMU7180770	40HC	F	COTTON, NOT CARDED OR COMBED
288	FFAU3824608	40HC	F	COTTON, NOT CARDED OR COMBED
289	FCIU4619879	20DV	F	CALCIUM CARBIDE

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Sl No	CntrNo	SzTp	F/E	Cargo
290	SEGU1488630	20DV	F	CALCIUM CARBIDE.SIZE:50-80MM
291	DFSU2681951	20DV	F	CALCIUM CARBIDE
292	CAIU2703977	20DV	F	WOOD
293	MSDU2942820	20DV	F	WOOD
294	TRHU1269930	20DV	F	WOOD
295	TEMU2040501	20DV	F	WOOD
296	MSMU1459264	20DV	F	THIS IS SEZ CARGO STEEL CORD
297	TCLU2570422	20DV	F	CALCIUM CARBIDE
298	TRHU1570624	20DV	F	STANDARD ACCESSORIES
299	DFSU2765179	20DV	F	CALCIUM CARBIDE
300	MSNU2295560	20DV	F	SPINNING MACHINE
301	FTAU1518118	20DV	F	SAWN TIMBER
302	MSMU3453692	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
303	MSMU1907878	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
304	MSMU1487158	20DV	F	DRIED LEGUMINOUS VEGETABLES, SHELLED, WHETHER OR N
305	TEMU5860973	20DV	F	WOOD
306	MSMU1409237	20DV	F	WOOD
307	MSBU3051616	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
308	MSNU2420933	20DV	F	PRINTING PAPER
309	MEDU6890054	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
310	CAIU3197826	20DV	F	WOOD
311	MEDU5780387	20DV	F	WOOD
312	TGBU1192367	20DV	F	PRINTING PAPER
313	MEDU5849293	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
314	MEDU6139763	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
315	FCIU6368730	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
316	MSDU1187405	20DV	F	WOOD
317	MEDU2917223	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
318	MEDU5746720	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
319	MEDU3174101	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
320	FBIU0412407	20DV	F	WOOD
321	TEMU3811901	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
322	MSNU2431162	20DV	F	PRINTING PAPER
323	CAIU2783798	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
324	MSDU1720258	20DV	F	WOOD
325	MEDU3929810	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA

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Sl No	CntrNo	SzTp	F/E	Cargo
326	MSDU1525375	20DV	F	WOOD
327	TGBU3222049	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
328	TGBU1195108	20DV	F	PRINTING PAPER
329	MEDU6204365	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
330	MEDU3440330	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
331	MSDU2473893	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
332	MSNU2420548	20DV	F	PRINTING PAPER
333	MSDU2528738	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
334	MSNU1864640	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
335	MEDU5227860	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
336	MSNU5326849	40HC	F	BLEACHED CHEMI THERMO
337	MSNU9045285	40HC	F	HE125MO POLYPROPYLENE
338	MSMU5916883	40HC	F	MOPLEN HP456J, BG25BC
339	MSMU4723637	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
340	MEDU8593435	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
341	MSCU5358014	40HC	F	BLEACHED CHEMI THERMO
342	FDCU0241538	40HC	F	COTTON, NOT CARDED OR COMBED
343	MSMU8295687	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
344	MSMU5309724	40HC	F	BLEACHED CHEMI THERMO
345	FFAU2841410	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
346	MSDU6166956	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
347	TCNU1313622	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
348	GLDU7653986	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
349	FFAU1994014	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
350	MSNU6582803	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
351	MSCU5091490	40HC	F	BE961MO PROPYLENE COPOLYMERS
352	MEDU7947299	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
353	CAAU5917898	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
354	MSNU8621560	40HC	F	LINEAR LOW DENSITY POLYETHYLENE
355	TGBU7867133	40HC	F	COTTON, NOT CARDED OR COMBED
356	CAAU7460162	40HC	F	BLEACHED CHEMI THERMO

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Sl No	CntrNo	SzTp	F/E	Cargo
357	MSMU6221134	40HC	F	HE125MO POLYPROPYLENE
358	TCNU4327661	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
359	MSMU8660814	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
360	MSMU8315206	40HC	F	RE420MO POLYPROPYLENE
361	MSNU8507898	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
362	CAIU7737100	40HC	F	ELOTEX MP2050
363	MSNU8699677	40HC	F	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIM
364	TRHU6806667	40HC	F	COTTON, NOT CARDED OR COMBED
365	MSBU8176128	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
366	TXGU5344558	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
367	MSDU5813641	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
368	MSDU5457730	40HC	F	WOOD SAWN OR CHIPPED LENGTHWISE, SLICED OR PEELED,
369	CAAU6763101	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
370	MSMU8660795	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
371	FSCU9885968	40HC	F	COTTON, NOT CARDED OR COMBED
372	MSDU8553168	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
373	MSNU8668423	40HC	F	MOPLEN HP456J, BG25BC
374	FFAU2290489	40HC	F	COTTON, NOT CARDED OR COMBED
375	MSBU3144262	20DV	F	WOOD
376	MSDU1412527	20DV	F	WOOD
377	GLDU5051830	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
378	MSCU6300233	20DV	F	WOOD
379	MSBU1487473	20DV	F	WOOD
380	MSCU6014477	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
381	BMOU2055597	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
382	MSNU3547619	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
383	GLDU5121686	20DV	F	WOOD
384	CAXU6391333	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
385	MEDU6313073	20DV	F	WOOD
386	MSCU6867485	20DV	F	WOOD
387	MSMU3385767	20DV	F	WOOD
388	MSDU1964980	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
389	CAIU3142952	20DV	F	DRIED LEGUMINOUS VEGETABLES, SHELLED, WHETHER OR N

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Sl No	CntrNo	SzTp	F/E	Cargo
390	UETU2642486	20DV	F	WOOD
391	MSNU3557197	20DV	F	WOOD
392	MEDU5672422	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
393	FTAU1392797	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
394	MSNU2417647	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
395	MSMU3653577	20DV	F	BROWN FUSED ALUMINA
396	MSMU1185137	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
397	MEDU6350842	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
398	MSMU2760354	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
399	TEMU5104235	20DV	F	WOOD
400	MEDU2488751	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
401	FCIU2073367	20DV	F	WOOD
402	MSDU2246077	20DV	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
403	MSNU2420419	20DV	F	PRINTING PAPER
404	TGBU3835950	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
405	MEDU3512261	20DV	F	WOOD
406	MSMU1218800	20DV	F	WOOD
407	MEDU2076590	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
408	MSNU2654741	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
409	MSMU1878126	20DV	F	FISH BODY OIL - JAPAN CRUDE FISH OIL
410	PGRU2312104	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
411	MSDU1590982	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
412	MSNU1564237	20DV	F	FISH BODY OIL - JAPAN CRUDE FISH OIL
413	MSNU3700250	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
414	FCIU5592350	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
415	CAXU3381959	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
416	FTAU1353002	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
417	MSMU2191793	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
418	MSNU3015508	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
419	CAXU3305476	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T

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Sl No	CntrNo	SzTp	F/E	Cargo
420	MSMU1686036	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
421	TGBU3937530	20DV	F	PALMOCOL PDA 1300 DIETHANOLAMIDE HSCODE 3402139000
422	FCGU2267880	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
423	MEDU1436579	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
424	MSMU3295128	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
425	FCIU5964268	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
426	MSMU2560741	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
427	CORU2612039	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
428	MEDU1182411	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
429	MSDU1076968	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
430	CAIU6734343	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
431	MSDU7193848	40HC	F	STANDARD NEWSPRINT
432	MSNU5262702	40HC	F	MOPLEN HP456J, BG25BC
433	MSDU9837180	40HR	E	EMPTY CONTAINER
434	MEDU9660590	40HR	E	EMPTY CONTAINER
435	MSDU9792254	40HR	E	EMPTY CONTAINER
436	MSMU4799268	40HC	F	POLYETHYLENE LUPOLEN
437	MSMU8785684	40HC	F	STANDARD NEWSPRINT
438	MEDU9614722	40HR	E	EMPTY CONTAINER
439	MSDU9786652	40HR	E	EMPTY CONTAINER
440	TTNU8488604	40HR	E	EMPTY CONTAINER
441	BMOU6908527	40HC	F	STANDARD NEWSPRINT
442	MSDU9868663	40HR	E	EMPTY CONTAINER
443	MEDU9775310	40HR	E	EMPTY CONTAINER
444	MSDU9794560	40HR	E	EMPTY CONTAINER
445	GESU9273269	40HR	E	EMPTY CONTAINER
446	FFAU2505674	40HC	F	CHINA GREEN TEA
447	MSDU9799623	40HR	E	EMPTY CONTAINER
448	MSDU9797852	40HR	E	EMPTY CONTAINER
449	TTNU8122256	40HR	E	EMPTY CONTAINER
450	MEDU9744433	40HR	E	EMPTY CONTAINER
451	MSDU6596920	40HC	F	MOPLEN HP456J, BG25BC
452	MSDU9794093	40HR	E	EMPTY CONTAINER
453	MSDU9792167	40HR	E	EMPTY CONTAINER
454	GESU9440828	40HR	E	EMPTY CONTAINER
455	SZLU9020150	40HR	E	EMPTY CONTAINER
456	MSMU6697497	40HC	F	LINEAR LOW DENSITY POLYETHYLENE LLDPE

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Sl No	CntrNo	SzTp	F/E	Cargo
457	TTNU8127828	40HR	E	EMPTY CONTAINER
458	SEGU9441496	40HR	E	EMPTY CONTAINER
459	CRSU6131489	40HR	E	EMPTY CONTAINER
460	MSDU9793836	40HR	E	EMPTY CONTAINER
461	TEMU8185971	40HC	F	LUPOLEN 2427K, BG25BC
462	MSDU9799752	40HR	E	EMPTY CONTAINER
463	OTPU6569314	40HR	E	EMPTY CONTAINER
464	MSDU9793501	40HR	E	EMPTY CONTAINER
465	MSDU9793435	40HR	E	EMPTY CONTAINER
466	MSMU5750220	40HC	F	LUPOLEN 2427K, BG25BC
467	MSDU9797765	40HR	E	EMPTY CONTAINER
468	MSDU9797430	40HR	E	EMPTY CONTAINER
469	MSDU9893250	40HR	E	EMPTY CONTAINER
470	MSDU9798078	40HR	E	EMPTY CONTAINER
471	MSDU9019223	40HR	E	EMPTY CONTAINER
472	MSDU9793585	40HR	E	EMPTY CONTAINER
473	TRIU8172077	40HR	E	EMPTY CONTAINER
474	BMOU9227770	40HR	E	EMPTY CONTAINER
475	MSDU9793604	40HR	E	EMPTY CONTAINER
476	MEDU9094770	40HR	E	EMPTY CONTAINER
477	MSNU3630805	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
478	MEDU2520982	20DV	F	TENSAGEX EOM670B SODIUM LAURYL ETHER SULPHATE
479	MSNU2958940	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
480	MEDU3937749	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
481	FCIU4295511	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
482	MSMU2212303	20DV	F	FISH BODY OIL - JAPAN CRUDE FISH OIL
483	MSNU2402061	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
484	TRHU1596526	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
485	MSDU2079977	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
486	MEDU5584532	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
487	FCIU6423484	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
488	TGBU1194415	20DV	F	COATED PAPER C2S GLOSS
489	MSCU6984579	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
490	CAIU6235093	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
491	MSNU3323645	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T

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Sl No	CntrNo	SzTp	F/E	Cargo
492	INBU3896815	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
493	MSNU2215060	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
494	MEDU2343660	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
495	MSMU2660669	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
496	MEDU3005462	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
497	CAIU2523764	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
498	BMOU2765095	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
499	TGHU1013041	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
500	FCIU2736259	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
501	MSMU6691605	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
502	MSMU7525980	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
503	MSBU5363486	40HC	F	COTTON, NOT CARDED OR COMBED
504	TRHU8731799	40HC	F	LINEAR LOW DENSITY POLYETHYLENE
505	MSNU7166652	40HC	F	COTTON, NOT CARDED OR COMBED
506	TEMU8622407	40HC	F	BLEACHED CHEMI THERMO
507	TRHU7331210	40HC	F	COTTON, NOT CARDED OR COMBED
508	UETU6280528	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
509	MSNU6046668	40HC	F	HIGH BULK C2S ART BOARD
510	MSMU5922124	40HC	F	COTTON, NOT CARDED OR COMBED
511	MSMU8003065	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
512	MSBU5203092	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
513	MEDU7069547	40HC	F	BE961MO PROPYLENE COPOLYMERS
514	MSNU9610730	40HC	F	COTTON, NOT CARDED OR COMBED
515	TIIU5564306	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
516	MSDU5586189	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
517	TEMU6906826	40HC	F	COTTON, NOT CARDED OR COMBED
518	MSDU6902759	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
519	TRHU6548665	40HC	F	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIM
520	MSMU8666772	40HC	F	COTTON, NOT CARDED OR COMBED
521	FBLU0053195	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
522	CAAU7119310	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK

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EBY VARGHESE
Senior Environmental Engineer

KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Sl No	CntrNo	SzTp	F/E	Cargo
523	MSDU7392460	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
524	MSMU4201859	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
525	MEDU7774819	40HC	F	UNCOATED KRAFT PAPER AND PAPERBOARD, IN ROLLS OR S
526	MSMU6919911	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
527	MSDU6376438	40HC	F	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIM
528	CAIU7764830	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
529	MSMU4829357	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
530	MSDU8486959	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
531	MEDU4902074	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
532	MSDU6902609	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
533	TRHU5078187	40HC	F	LINEAR LOW DENSITY POLYETHYLENE
534	MSNU5292610	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
535	UETU6863612	40HC	F	BLEACHED CHEMI THERMO
536	MSMU8809467	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
537	MSDU6992686	40HC	F	HIGH BULK C2S ART BOARD
538	MSDU8716075	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
539	TEMU7978271	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
540	MSDU8943818	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
541	MSDU5067115	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
542	MEDU7409919	40HC	F	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIM
543	TIIU4778242	40HC	F	BAMBOO STICKS
544	UETU6084398	40HC	F	LINEAR LOW DENSITY POLYETHYLENE LLDPE
545	TRHU8651456	40HC	F	LINEAR LOW DENSITY POLYETHYLENE
546	TRHU6850799	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
547	TIIU4796230	40HC	F	COTTON, NOT CARDED OR COMBED
548	TLLU7582790	40HC	F	LINEAR LOW DENSITY POLYETHYLENE LLDPE
549	TIIU4801569	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
550	MEDU8562630	40HC	F	BLEACHED CHEMI THERMO
551	CAAU7516092	40HC	F	COTTON, NOT CARDED OR COMBED

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KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Sl No	CntrNo	SzTp	F/E	Cargo
552	MSMU5815738	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
553	MSNU7161096	40HC	F	COTTON, NOT CARDED OR COMBED
554	UETU5581194	40HC	F	BLEACHED CHEMI THERMO
555	TGHU6048708	40HC	F	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIM
556	MEDU4479189	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
557	FSCU7995082	40HC	F	96768 SETS OF EMPTY TIN PLATE CAN
558	CAIU9482517	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
559	MSMU6438557	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
560	TGCU5017406	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
561	MSMU4287467	40HC	F	BLEACHED CHEMI THERMO
562	MSDU5532460	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
563	MSNU7311935	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
564	MSMU1199249	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
565	MSDU1772626	20DV	F	CONTINUOUSLY PRE-PAINTED GALVANIZED STEEL COILS
566	MSNU1989083	20DV	F	CONTINUOUSLY PRE-PAINTED GALVANIZED STEEL COILS
567	MEDU5402113	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
568	MSDU1472742	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
569	MSNU2421610	20DV	F	COATED PAPER C2S GLOSS
570	MSMU1547236	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
571	MEDU6386486	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
572	DFSU2829144	20DV	F	CONTINUOUSLY PRE-PAINTED GALVANIZED STEEL COILS
573	MSMU1682200	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
574	MSBU5176145	40HC	F	TEA
575	MSMU7909292	40HC	F	STANDARD NEWSPRINT
576	OTPU6023386	40HR	E	EMPTY CONTAINER
577	CXRU1401615	40HR	E	EMPTY CONTAINER
578	TGBU5982333	40HC	F	CASSIA KABC GRADE INDONESIA ORIGIN
579	MSDU8493979	40HC	F	LUPOLEN 2427F, BG25BC
580	CXRU1198637	40HR	E	EMPTY CONTAINER
581	CXRU1271466	40HR	E	EMPTY CONTAINER
582	MSMU4989838	40HC	F	STANDARD NEWSPRINT
583	MSDU5612879	40HC	F	CINNAMOMUM
584	OTPU6086785	40HR	E	EMPTY CONTAINER

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KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Sl No	CntrNo	SzTp	F/E	Cargo
585	MSDU9805201	40HR	E	EMPTY CONTAINER
586	MSMU7809117	40HC	F	STANDARD NEWSPRINT
587	MSNU6118808	40HC	F	MOPLEN HP456J, BG25BC
588	TEMU9300025	40HR	E	EMPTY CONTAINER
589	TEMU9062170	40HR	E	EMPTY CONTAINER
590	MSMU7378956	40HC	F	STANDARD NEWSPRINT
591	FFAU1376124	40HC	F	STANDARD NEWSPRINT
592	SEGU9212000	40RE	E	EMPTY CONTAINER
593	TGBU7799825	40HC	F	MOPLEN HP456J, BG25BC
594	SZLU9261076	40HR	E	EMPTY CONTAINER
595	TEMU9293857	40HR	E	EMPTY CONTAINER
596	MSNU7822940	40HC	F	STANDARD NEWSPRINT
597	MSMU5710320	40HC	F	POLYPROPYLENE MOPLEN EP332K
598	TLLU7953443	40HC	F	POLYPROPYLENE MOPLEN EP332K
599	CXRU1418979	40HR	E	EMPTY CONTAINER
600	MSMU8868686	40HC	F	STANDARD NEWSPRINT
601	CRLU1321433	40HR	E	EMPTY CONTAINER
602	MSCU7391897	40HR	E	EMPTY CONTAINER
603	MSDU5708733	40HC	F	POLYETHYLENE LUPOLEN 2421H
604	TTNU8470863	40HR	E	EMPTY CONTAINER
605	CXRU1389042	40HR	E	EMPTY CONTAINER
606	MSMU7213869	40HC	F	LINEAR LOW DENSITY POLYETHYLENE LLDPE
607	CXRU1118797	40HR	E	EMPTY CONTAINER
608	SEGU9180638	40HR	E	EMPTY CONTAINER
609	MSNU2421673	20DV	F	COATED PAPER C2S GLOSS
610	MSNU1070569	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
611	TGBU3615283	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
612	MSNU2431455	20DV	F	COATED PAPER C2S GLOSS
613	MSNU2433123	20DV	F	COATED PAPER C2S GLOSS
614	MSMU1103545	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
615	MSMU2711494	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
616	FBIU0191374	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
617	UETU2877109	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
618	GAOU2440550	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
619	MEDU5727839	20DV	F	QUICKLIME, SLAKED LIME AND HYDRAULIC LIME, OTHER T
620	TRHU1265683	20DV	F	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SA
621	MSDU2261657	20DV	F	SHIP STOCK
622	MSDU7092673	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -

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KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Sl No	CntrNo	SzTp	F/E	Cargo
623	BMOU6881025	40HC	F	COTTON, NOT CARDED OR COMBED
624	CAIU7753517	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
625	MSNU7136745	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
626	MSMU6678579	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
627	CAAU7379220	40HC	F	COTTON, NOT CARDED OR COMBED
628	MEDU7336849	40HC	F	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIM
629	TCLU5649644	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
630	MSDU6369803	40HC	F	COTTON, NOT CARDED OR COMBED
631	MSMU4358278	40HC	F	POLYMERS OF ETHYLENE, IN PRIMARY FORMS - POLYETHYL
632	MSMU6961275	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
633	MSBU5449363	40HC	F	LINEAR LOW DENSITY POLYETHYLENE
634	CAAU7841003	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
635	MSMU8505850	40HC	F	BLEACHED CHEMI THERMO
636	MEDU7082019	40HC	F	MOPLEN HP462R, BG25BC
637	MSDU6954053	40HC	F	BLEACHED CHEMI THERMO MECHANICAL PULP
638	MEDU7999815	40HC	F	RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD -
639	CAIU4864796	40HC	F	COCONUTS, BRAZIL NUTS AND CASHEW NUTS, FRESH OR DR
640	MSMU5054428	40HC	F	USED CIRCULAR KNITTING MACHINES
641	MSMU5651296	40HC	F	WOOD IN THE ROUGH, WHETHER OR NOT STRIPPED OF BARK
642	CRXU5299926	20RE	E	SHIP STOCK
643	MSCU3627900	20RE	F	SHIP STOCK

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KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Exhibit R7(b)

Gmail

Senior Environmental Engineer 2 <kspcbhosee2@gmail.com>

ACCIDENT IN ARABIAN SEA - CONTAINING OIL SPILL - DIRECTION ISSUED

1 message

CHAIRMAN KSPCB <chn.kspcb@gmail.com> Sat, May 24, 2025 at 6:56 PM
To: DHQ FOUR INDIAN COAST GUARD KOCHI <dhq4@indiancoastguard.nic.in>
Cc: District Collector Collector <dcekm.ker@nic.in>, DISASTERMANAGEMENT <ddmaekm@gmail.com>, "cochinport@cochinport.gov.in" <cochinport@cochinport.gov.in>, "crl@cochinrefineries.com" <crl@cochinrefineries.com>, "BABURAJAN P.K. - CEE-RO, ERNAKULAM" <pcbroekm@gmail.com>, "MINI MARY SAM, DO-1, ERNAKULAM" <pcbdo1@gmail.com>, Senior Environmental Engineer 2 <kspcbhosee2@gmail.com>

Sir,

As you are aware, an accident involving a cargo ship has happened in the Arabian Sea, about 38 nautical miles southwest off the Kochi coast on 24.5.25. It is understood that containers are floating in the sea. You are requested to take urgent action to contain the oil spill, if any, so that the spill does not cause contamination in the sea, coast or beaches.
Containing the spill by using appropriate equipment / boom and sucker / skimmer / dispersants shall be adopted.Action shall be taken in coordination with Kochi Port Trust, Kochi Shipyard and Kochi Refinery. An action taken report shall be furnished to the Board at the earliest.

--
--
With Regards,

Er. SREEKALA S.
CHAIRPERSON,
Kerala State Pollution Control Board

True copy

KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Gmail Senior Environmental Engineer 2 <kspcbhosee2@gmail.com>

Fwd: ACCIDENT IN ARABIAN SEA - OIL SPILL CONTINGENCY

1 message

CHAIRMAN KSPCB <chn.kspcb@gmail.com> Sat, May 24, 2025 at 7:08 PM
To: "BABURAJAN P.K. - CEE-RO, ERNAKULAM" <pcbroekm@gmail.com>, "MINI MARY SAM, DO-1, ERNAKULAM" <pcbdo1@gmail.com>, Senior Environmental Engineer 2 <kspcbhosee2@gmail.com>

Please find the copy of the mail
---------- Forwarded message ---------
From: **CHAIRMAN KSPCB** <chn.kspcb@gmail.com>
Date: Sat, May 24, 2025 at 7:06 PM
Subject: ACCIDENT IN ARABIAN SEA - OIL SPILL CONTINGENCY
To: District Collector Collector <dcekm.ker@nic.in>, DISASTERMANAGEMENT <ddmaekm@gmail.com>, cochinport@cochinport.gov.in <cochinport@cochinport.gov.in>, crl@cochinrefineries.com <crl@cochinrefineries.com>

Sir,

As you are aware, an accident involving a cargo ship has happened in the Arabian Sea, about 38 nautical miles southwest off the Kochi coast on 24.5.25. It is understood that containers are floating in the sea. The Coast Guard have been requested to take urgent action to contain the oil spill, if any, so that the spill does not cause contamination in the sea, coast or beaches. You are requested to coordinate with the Coast Guard in containment operation

--
--
--
With Regards,

Er. SREEKALA S.
CHAIRPERSON,
Kerala State Pollution Control Board

--
With Regards,

Er. SREEKALA S.
CHAIRPERSON,
Kerala State Pollution Control Board

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EBY VARGHESE
Senior Environmental Eng

KERALA STATE POLLUTION CONTROL BOARD

Gmail

Senior Environmental Engineer 2 <kspcbhosee2@gmail.com>

SHIP ACCIDENT OCCURRED IN THE ARABIAN SEA - ACTION REQUIRED

1 message

Senior Environmental Engineer 2 <kspcbhosee2@gmail.com> Sat, May 24, 2025 at 8:20 PM
To: CHAIRMAN KSPCB <chn.kspcb@gmail.com>

dcalp.ker@nic.in, dcekm.ker@nic.in, dctsr.ker@nic.in, dcmlp.ker@nic.in, dckas.ker@nic.in , dcknr.ker@nic.in, dckzk.ker@nic.in

Sir,

An accident involving a cargo ship happened in the Arabian Sea, about 38 nautical miles southwest off the Kochi coast in the afternoon of 24.5.25. It is understood that containers from the ship are floating in the sea. There are chances of contamination of the sea, coast or beaches due to the oil spill. As the location of the accident is more than 12 nautical miles off the coastline, Indian Coast Guard is responsible for containing the spill and preventing the oil spill from reaching the coast. If the oil spill reaches within 12 nautical miles of the coast, preparedness is required. Therefore it is requested to take urrgent action for the following:

1. Activation of District/Local level crisis management groups
2. Arrangement of equipment/Support facilities/ oil spill dispersant for shoreline cleanup/recovery storage/disposal of pollutants
3. Request Indian Coast Guard, Kochi to co-ordinate/guide the Local District Disaster Management Authority of Ernakulam district to keep the pollution prevention and oil spill cleanup equipments in a state of readiness to meet any emergency.
4. Request Indian Coast Guard, Kochi to coordinate with the DDMs/KSPCB of the districts viz. Ernakulam, Thrissur, Alappuzha, Kozhikkode, Malappuram, Kannur and Kasaragod, Mercantile Marine Department, Kochi and Kerala Maritime Board for urgent action.

--
Regards,
Kerala State Pollution Control Board
Head Office, Thiruvananthapuram

KERALA STATE POLLUTION CONTROL BOARD

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EBY VARGHESE
Senior Environmental Engi

Gmail

Senior Environmental Engineer 2 <kspcbhosee2@gmail.com>

SHIP ACCIDENT OCCURRED IN THE ARABIAN SEA - ACTION REQUIRED

1 message

Senior Environmental Engineer 2 <kspcbhosee2@gmail.com> Sat, May 24, 2025 at 8:27 PM
To: CHAIRMAN KSPCB <chn.kspcb@gmail.com>

patodc@cochinport.gov.in, dc@cochinport.gov.in, tm@cochinport.gov.in, dm@cochinport.gov.in, mmpc@cochinport.gov.in, info@bharatpetroleum.in, varshneysk@bharatpetroleum.in, sasipk@bharatpetroleum.in, TI TOJOSE@INDIANOIL.IN, anandank@indianoil.in, balakri shnankk@indianoil.in, vkdubara@hpcl.in, suniltu@hpcl.in, aboobackernainaca@hpcl.in, avarghe@hpcl.in, PEL@PETRONETLNG.IN, CEO@PETRONETENERGY.IN, investors@petronetlng.in, hebin.c@adani.com

Sir,

An accident involving a cargo ship happened in the Arabian Sea, about 38 nautical miles southwest off the Kochi coast in the afternoon of 24.5.25. It is understood that containers from the ship are floating in the sea. There are chances of contamination of the sea, coast or beaches due to the oil spill. As the location of the accident is more than 12 nautical miles off the coastline, Indian Coast Guard is responsible for containing the spill and preventing the oil spill from reaching the coast. If the oil spill reaches within 12 nautical miles of the coast, preparedness is required. Therefore it is requested to take urgent action to keep your Pollution Response team and equipments/absorbents/ support facilities in a state of readiness and share with the State Govt. in case of any emergency for shoreline cleanup and to share the same to your sister concerns also in Kerala, having the PR facilities.

Regards,
Kerala State Pollution Control Board
Head Office, Thiruvananthapuram

KERALA STATE POLLUTION CONTROL BOARD

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EBY VARGHESE
Senior Environmental Enginee

Gmail

Senior Environmental Engineer 2 <kspcbhosee2@gmail.com>

SHIP ACCIDENT OCCURRED IN THE ARABIAN SEA - ACTION REQUIRED

1 message

Senior Environmental Engineer 2 <kspcbhosee2@gmail.com> Sat, May 24, 2025 at 8:06 PM
To: CHAIRMAN KSPCB <chn.kspcb@gmail.com>

ceo.kmb@kerala.gov.in

Sir,

An accident involving a cargo ship happened in the Arabian Sea, about 38 nautical miles southwest off the Kochi coast in the afternoon of 24.5.25. It is understood that containers from the ship are floating in the sea. There are chances of contamination of the sea, coast or beaches due to the oil spill. As the location of the accident is more than 12 nautical miles off the coastline, Indian Coast Guard is responsible for containing the spill and preventing the oil spill from reaching the coast. If the oil spill reaches within 12 nautical miles of the coast, preparedness is required. Therefore it is requested to take urrgent action to alert the ports in districts such as Ernakulam, Thrissur, Alappuzha, Kozhikkode, Malappuram, Kannur and Kasaragod to be ready with the equipments required/support facilities for shoreline cleanup/recovery storage/disposal of pollutants.

Regards,
Kerala State Pollution Control Board
Head Office, Thiruvananthapuram

KERALA STATE POLLUTION CONTROL BOARD

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EBY VARGHESE
Senior Environmental Engineer

Gmail

Senior Environmental Engineer 2 <kspcbhosee2@gmail.com>

SHIP ACCIDENT OCCURRED IN THE ARABIAN SEA - ACTION REQUIRED

1 message

Senior Environmental Engineer 2 <kspcbhosee2@gmail.com> Sat, May 24, 2025 at 8:42 PM
To: CHAIRMAN KSPCB <chn.kspcb@gmail.com>

po.mmd-ker@gov.in
Sir,

An accident involving a cargo ship happened in the Arabian Sea, about 38 nautical miles southwest off the Kochi coast in the afternoon of 24.5.25. It is understood that containers from the ship are floating in the sea. There are chances of contamination of the sea, coast or beaches due to the oil spill. As the location of the accident is more than 12 nautical miles off the coastline, Indian Coast Guard is responsible for containing the spill and preventing the oil spill from reaching the coast. If the oil spill reaches within 12 nautical miles of the coast, preparedness is required. Therefore it is requested to take immediate action and precautionary measures.

--
Regards,
Kerala State Pollution Control Board
Head Office, Thiruvananthapuram

KERALA STATE POLLUTION CONTROL BOARD

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EBY VARGHESE
Senior Environmental Engineer

Exhibit R7(c)

STANDARD OPERATING PROCEDURE FOR SHORELINE CLEAN UP, ERNAKULAM

Prepared By

Kerala State Pollution Control Board (KSPCB)

&

Sri. Vijayakumar
Retd. Officer, Coast Guard
Vizhinjam

February 2018

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KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Sl. No.	CONTENT	Page No.

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KERALA STATE POLLUTION CONTROL BOARD

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EBY VARGHESE
Senior Environmental Engineer

EXECUTIVE SUMMARY

The Disaster Management Authority informed vide letter No. REV-k1/99/2017/DMD dated: 28/03/2017 that, as per the directions issued by Ministry of Government and Forest, Government of India and as per the directions of Kerala State Government, the port folio of Oil spill Contingency Management is entrusted with the State Pollution Control Board. Oil spill being an anthropogenic hazard regulated under the specific rules related to pollution management and the primary responsibility of conducting this exercise is with that of State Pollution Control Board. Hence, the department of Environment and State Pollution Control Board were requested to co-ordinate with Coast Guard and District Administration regarding organizing of mock drill. In this regard a meeting was held on 02/05/2017 in the Chamber of Environmental Secretary and decided to prepare a Standard Operating Procedure for the conduct of Mock drill. The Coast Guard also advised to get the service of Sri. Vijayakumar, Retired Officer, coast Guard, Vizhijam for the preparation of Standard Operating Procedure, and as adviser for the preparation of State Contingency Plan for Oil Spill and conduct of mock drill for Shoreline cleanup. Sri. Vijayakumar submitted a detailed operating procedure for Shoreline cleanup. The Standard Operating Procedure includes the details regarding Environmental consideration for Oil Spill, Shoreline Cleanup options and operations to be considered,Equipments/general provisions for coastal spill control and clean up operations. Important contact detail of Government and Resources Agencies etc. The report was also issued to Coast Guard for remarks, if any. But no modification was suggested by them. For the conducting of mock drill at Kochi, Standard Operating Procedure is published and same is to be updated regularly.

EBY VARGHESE
Senior Environmental Engineer

KERALA STATE POLLUTION CONTROL BOARD

True copy

EBY VARGHESE
Senior Environmental Engineer

STANDARD OPERATING PROCEDURE FOR SHORELINE CLEAN UP, ERNAKULAM

1. INTRODUCTION

The world has become more and more dependent upon oil based products, derived from petroleum (Walther, 2014). These products are used to fuel automobiles, produce energy, and are used for machinery in various industries. Some of the products that come from petroleum are gasoline, diesel, motor oil, kerosene, jet oil, heating oil, asphalt, and plastics. Oil is primarily stored and transported in large volumes via tankers because populous countries use large quantities of oils, and it is more cost effective to transport oil this way. However, while in storage or in transport, oils are sometimes spilled onto land or into waterways. Oil spills are a continuing problem throughout the world. Disasters such as the Deep Water Horizon oil spill and the Exxon Valdez oil spill, provide evidence that coastal oil spills pose danger to the economy and natural resources, and could directly affect the public's health (Boufadel et al.,2011). The experience shows that it is very difficult to avoid some oil reaching the shore line after an oil spill on sea. When oil reaches the shoreline, considerable effort may be required to clean the affected areas. It is therefore essential that comprehensive and well-rehearsed arrangements for shoreline clean-up are included in contingency plans.

Mechanical equipments and chemical treatment at sea are often insufficient to recover all spilled oil. Shoreline clean up operations are often very difficult, expensive and may last many weeks or months depending up on the amount of oil spilled. The clean up operation also depends upon the weather condition, quantity of oil spilled, the spreading pattern of the spill, type of shore line, sensitivity of the area affected,prevailing contingency plan etc., and above all the response time taken against the spill. Hencea contingency plan and proper understanding between the agencies involved in a shoreline clean up operations are highly required for preventing pollution of shoreline due to oil spill.

2. AIM

The aim of the Standard Operating Procedureon shore line clean up is

- To improve, check the preparedness and response action of various stake holders, different state government agencies and
- To improve their coordination on shore line clean up operations.

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3. ENVIRONMENTAL CONSIDERATIONS

3.1 Need to intercept the oil spill at in open sea

When an oil spill occurs in open sea water, the optional solution is to intercept and recover the oil before it reaches the shore time. This is because:

- Environmental damage is normally less critical in the open sea water environment
- Logistics of oil removal becomes more complex in the varied natural environment of coastlines compared with the oper sea.
- Cost of oil recovery increases dramatically when oil reaches shore lines compared with open water operation.

3.2 Specific parameters to be considered for shoreline clean up

When oil is spilled into the sea it undergoes a number of physical and chemical changes, some of which lead to its removal from the sea surface, while others cause it to persist (ITOPF, 2011). An understanding of the processes involved and how they interact to alter the nature, composition and behaviour of oil with time is fundamental to all aspects oil spill response.

- Quantity of oil spilled
- Characteristics of the oil (type, toxicity, viscosity etc)
- Weathering process
- Prevailing on-site conditions (weather, season, tides, temperature)
- Whether the oil remains at sea or is washed ashore
- Shore line type or Combination of types chips, peddler, sand, marsh

3.2.1 Characteristics of oil

When an active response is required, the type of oil, and its probable behaviour will determine which response options are likely to be most effective. The main physical properties that affect the behavior and the persistence of an oil spilled at sea are specific gravity, distillation characteristics, vapour pressure, viscosity and pour point (ITOPF, 2011). All are dependent upon chemical composition, such as the proportion of volatile components, and the content of asphaltenes, resins and waxes.

i) Specific gravity of oil

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It is its density in relation to pure water, which has a density in relation to pure water, which has a specific gravity of 1(ITOPF, 2011). Most oils are less dense or lighter that sea water which typically has a specific gravity of about 1.025. The specific gravity determines whether or not the oil will float. The oils with a low specific gravity tend to contain a high proportion of volatile components and to be of low viscosity.

ii) **Distillation characteristics**

It describes the volatility of oil. In distillation process, as the temperature of oil is raised, different components reach their boiling point in succession, evaporate and are then cooled and condense (ITOPF, 2011). The distillation characteristics are expressed as the proportions of the parent oil that distill within given temperature ranges. Some oils contain bituminous, waxy or asphaltenic residues, which do not readily distil even at high temperatures and are also likely to persist in the marine environment or extended periods.

iii) **Vapour Pressure**

It provides a further indication of the volatility of oil (ITOPF, 2011). A vapour pressure greater than 3kPA (23mmHg) is the criteria for evaporation to occur under most conditions. Above 100kPA (760mm Hg), the substance behaves like a gas. Gasoline has a vapour pressure of between 40-80 kPa (300-600 mm Hg).

iv) **Viscosity**

It is the resistance to flow. High viscosity oils flow less easily that those of lower viscosity (ITOPF, 2011). All oils become more viscous (flow less readily) as the temperature falls.

v) **Pour point** is the temperature below which oil no longer flows and is a function of its wax and asphaltene content. On cooling, oil will reach a temperature, termed the cloud point, when the wax components begin to form crystalline structures. Crystal formation increasingly hinders the flow of the oil until on further cooling the pour point is reached, flow ceases and the oil changes from a liquid to a semi-solid.

vi) **Toxicity** Two samples of two spilled oil must be checked in order to know the toxicity of oil. This is important to be able to judge the environmental damage to any organism at the shoreline as well as the steps to be taken by clean up team regarding the mode of operation, selection of equipments, and mode of disposal of collected spilled oil.

3.2.2 Weathering Process

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The combined effects of the various natural processes namely spreading, evaporation, dispersion, emulsification, dissolution, photo-oxidation, sedimentation and sinking, shoreline interaction, and biodegradation acting on spilled oil, collectively are known as 'weathering'. An oil slick also drifts according to the wind and currents.

i) **Spreading**

As soon as oil is spilled, it immediately starts to spread over the sea surface. The speed at which this takes places depends to a great extent on the viscosity of the oil and the volume spilled. Fluid, low viscosity oils spread much faster than those with high viscosity. Liquid oils initially spread as a coherent slick but quickly begin to break up. As the oil spreads and the thickness reduces, its appearance changes from the black or dark brown colouration of thick oil patches to iridescent and silver sheen at the edges of the slick. Rather than spreading as thin layers, semi-solid or highly viscous oils fragment into patches which move apart and may sometimes be centimeters thick. The rate at which oil spreads or fragments are also affected by waves, turbulences, tidal streams and currents – the stronger the combined forces.

ii) **Evaporation:** The more volatile components of oil will evaporate to the atmosphere. The rate of evaporation depends on ambient temperature and wind speed. The greater the proportion of components with low boiling points, the greater the degree of evaporation.Spills of refined products, such as kerosene and gasoline may evaporate completely within a few hours. There may be a risk of fire and explosion or human health hazards, when extremely volatile oils are spilled in confined areas.

iii) **Dispersion:** It depends upon the nature of the soil and the sea state, proceeding most rapidly with low viscosity oils in the presence of breaking waves. Waves and turbulence at the sea surface can cause all or part of a slick to break up into droplets of varying sizes which become mixed into the upper layers of the water column. Smaller droplets remain in suspension while the larger ones rise back to the surface whether they either coalesce with other droplets to reform a slick or spread out in a very thin film. The dispersed oil mixes into ever greater volumes of sea water, resulting in the rapid and very substantial reduction of the oil concentration.

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iv) **Emulsification:** Many oils take up water and form water-in oil emulsions. This can increase the volume of pollutant by a factor of upto five times. Emulsions form most readily for oils which, when spilled, have a combined Nickel/Vanadium concentration greater than 15 ppm or an asphaltene content in excess of 0.5%. Formation of water in oil emulsions reduces the rate of other weathering processes and is the main reason for the persistence of light and medium crude oils on the sea surface and shoreline.

v) **Dissolution:**

The rate and extent to which an oil dissolves depends upon its composition and spreading, the water temperature, turbulence and degree of dispersion. The heavy components of crude oil are virtually insoluble in sew water whereas lighter components, particularly aromatic hydrocarbons such as benzene and toluene, are slightly soluble. However these compounds are also the most volatile and are lost very rapidly by evaporation, typically 10 to 1000 times faster than they dissolve. As a result, concentration of dissolved hydrocarbons in sea water rarely exceeds 1 ppm and dissolution does not make significant contribution to the removal of oil from the sea surface.

vi) **Photo-oxidation**: Hydrocarbons can react with oxygen, which may either lead to the formation of soluble products or persistent tars. Oxidation is promoted by sunlight. Even under intense sunlight, thin oil films break down only slowly and usually at less than 0.1% per day.

vii) **Sedimentation and sinking**: Dispersed oil droplets can react with sediment particles and organic matter suspended in the water column so that the droplets become dense enough to sink slowly to the sea bed. Shallow coastal areas and the waters of river mouths and estuaries are often laden with suspended solids that can bind with dispersed oil droplets, thereby providing favourable conditions for sedimentation of oily particles, In brackish water, where fresh water from rivers lowers the salinity of sea water and therefore its specific gravity neutrality buoyant droplets of oil may sink.

viii) **Biodegradation**: Sea water contains a range of marine micro-organisms capable of metabolizing oil compounds. They include bacteria, moulds, yeasts, fungi, unicellular algae and protozoa, which can utilize oil as a

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source of carbon and energy. Such organisms are distributed widely throughout the world's oceans although they are most abundant in areas with natural seeps of oil or chronically polluted coaster waters. Typically those close to urban centers which receive industrial discharges and untreated sewage.

ix) **Combined processes**: Spreading, evaporation, dispersion, emulsification and dissolution are most important during the early stages of tehs pill while photo-oxidation, sedimentation and biodegradation are longer term processes that determine the ultimate fate of oil:. Dispersion and emulsification are competing processes, with dispersion removing oil from sea surface and emulsification causes the volume of pollutant to increase and persist.

Fig. Crude oil - fresh

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Fig. Emulsified crude oil

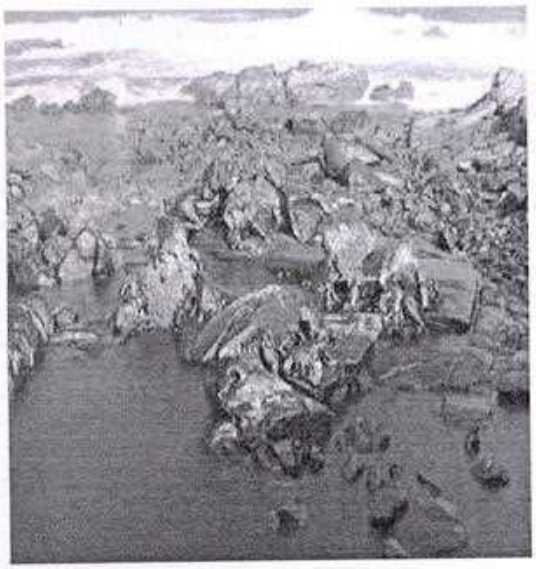

Fig. Fresh fuel oil (Fluid and black in colour)

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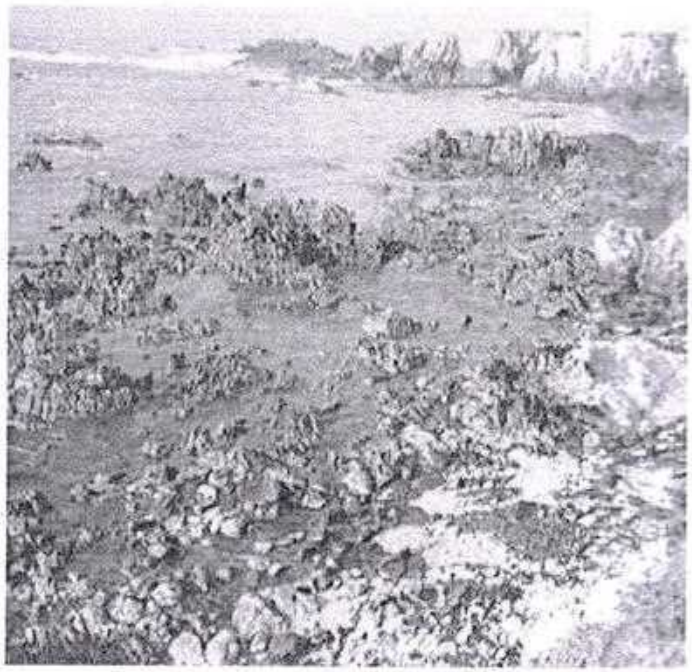

Fig. Emulsified Heavy fuel oil

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Fig. Weathered oil on sand beach

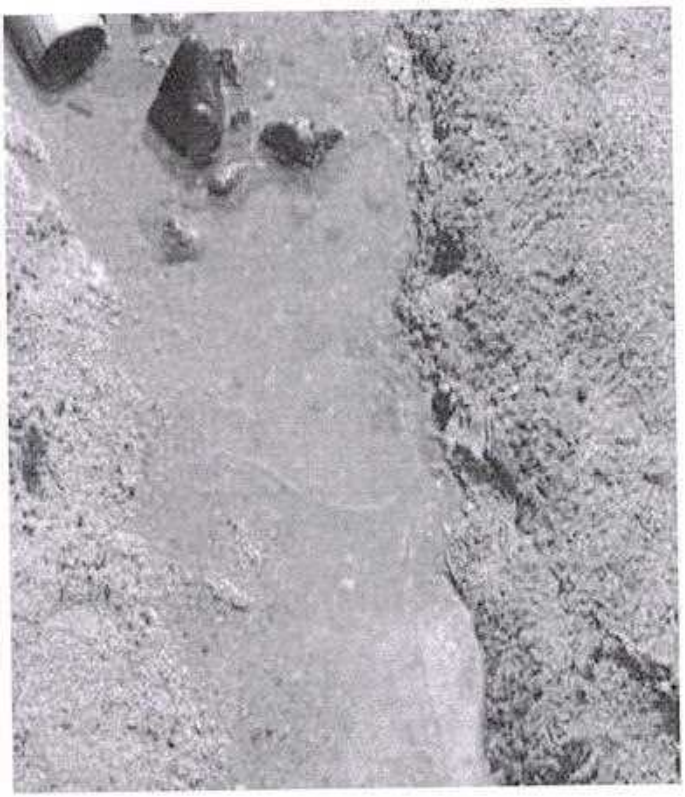

Fig. Translucent base oil

3.2.3Prevailing On-site conditions

Wind, current and wave pattern which exist or could develop must be known as well as the temperature. These will influence the movement of the spilled oil which in turn, will affect the success associated with the usage of various types of equipment and with cleaning procedures.It is important to be new currant high and low tide levels and time in order to plan for efficient cleanup operation.

3.2.4 Shoreline Types

Various shoreline types have different vulnerability to oil spill and the pattern of removal of oil. Different clean up techniques are applied depending on the type of shore. The flexibility of cleaning effectively in also dependent of the type of shore line found.

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The shore lines can be divided into three zones according to their features.

i) Near shore zone.
ii) Inter tidal zone.
iii) Back shore zone.

i) Near Shore Zone

The near shore zone is always located below the Low Water mark (Submerged) and receives only slight contamination.

ii) Inter – Tidal Zone

The inter –tidal Zone (foreshores) in the area between the low Water Mark and the high water Mark. If this foreshore receives a lot of wave action, the part of the zone nearer to the high water mark will receive most contamination. If the wave action is less, the oil will cover the entire foreshore.

iii) Back Shore Zone

The back shore zone is located above the level of normal wave activity. This area will normally only be affected by the oil in cases of storms or exceptional high tide level.

3.2.5 Special Consideration

Some shorelines have very sensitive periods of the year which influence decision making client on oil spill cleanupbased on ex-wild life nesting, bird migration and sand beaches are associated with high amenity value of national importance.

3.2.6 Contingency planning

Mapping of sensitive areas along shorelines which could receive oil pollution from sea is of great help in operations planning during an oil spill. Areas which have been deemed sensitive can then be protected in advance of the pollution, so that deposition onto the shoreline can be avoided. .

The normal floating debris of the sea in usually deposited on the shore depends upon the duration of the current, prevailing winds etc. The identification of areas with high levels of stranded debris will give on indication of the areas which will be subjected to the heaviest contamination. It is also important to identify disposal sites for material collected during

cleanup operation. This information must be readily available before any cleanup operation. The searching for a disposal site during the operation in not possible as other matters dominates.

4. SHORELINE CLEANUP OPTIONS AND OPERATIONS TO BE CONSIDERED

4.1 Shoreline cleanup options

There are four options to be considered before a clearing up operation is initiated.

i. Do not clean
ii. Clean but to a minimum.
iii. Clean to full restoration
iv. Clean to pristine level

4.1.1 Do not clean

The reason for this option can be,

- Cleaning will do more damage than the oil.
- Area will be cleaned naturally by high wave action.
- Area has little value and the costs for cleaning will be prohibitively high.

4.1.2 Clean but to a minimum standard

The affected shoreline has little value itself but the oil could be spread to other more sensitive areas if not removed.

4.1.3 Clean to full restoration

The shoreline is important and must be restored to its pre-spilled condition.

4.1.4 Clean to pristine level

The shore line may the cleaned to a standard higher than the pre-oil spill condition due to demand from government agencies/public.

4.2 Shoreline cleanup operations

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The shoreline clean up operation is normally not an emergency operation as in the case with an oil spill on open water. A clean up project can last many weeks or months depending on the amount of oil spilled.

Shoreline clean-up operation is typically divided into three stages.

Stage I – Removal of gross pollution and lube oil

Stage II – Removal of oil

Stage III – Final cosmetic/ aesthesic treatment

4.2.1Removal of gross pollution and Bulk oil

This is recovering the floating oil at the water's edge and removal of thick oil layers on the shore. Mechanical equipments such as skimmers, transferring pumps, vacuum trucks, shovels, buckets are required.

In unit operations, the option of allowing vacuum truckers into the shore to suck up the oil may be attractive. However the usage of heavy machineries depends upon the accessibility and sensitivity of the area.

4.2.2 Removal of leached oil

The second stage in the removal of moderately contaminated stranded oil and oiled bleach materials. A cleanup operation will often start at this stage of the oil spill in quite restricted or the oil has been present on the shorelines for some times and penetrated the top layers. Mechanical equipments are required for this stage and this includes skimmers, pumps, vacuum trucks and buckets.

4.2. 3 Final Cosmetic/aesthetic treatment

This is the final stage of the cleanup operation. The level of the clean up or the final appearance of the polluted area to be discussed/agreed by all interested parties to avoid misunderstandings.

At this stage absorbing materials can be used for removing oil from the shoreline. The use of dispersing agents can also be useful if permitted by the authorities. A shoreline cleanup operation is expensive as it requires a lot of personal, equipment time. In order to control the costs of the operation it is essential that the objectives for the cleanup are fully described.

4.3 Shoreline Clean up techniques

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The clean up techniques which can be used depends upon the nature of the shoreline. The types of shoreline are:

1. Rocks and man-made structures
2. Cobbles, pebbles and shingles
3. Sandy beaches
4. Sedimentary

4.3.1 Rocks and man-made structures

Rocks exposed to wave action will normally have a high self cleaning potential and cleaning these areas are not recommended. However, if the wave action is low or the man-made structures (harbour, jetties etc), it can become necessary to clean up the oil spill (Fig. 1). In this case the following stages should be followed.

Step 1. Removal from sea using skimmers combined with booms

Step 2. Removal from structures using high pressure/ spray cleaners (hot or cold water)

Step 3. Sorbents dispersants and dispersals

Step- I

1. Use skimmers, pumps for recovery of floating oil
2. On tidal shorelines the oil must be flushed from the rocks/ concrete towards a boom combined with a skimmer at the water edge. The optimum solution in to use booms, to encapsulate the area being cleaned as completely as possible.
3. The area should only be cleaned in conjunction with mounted booms. Any oil flushed into the sea will return.

Step- II

1. Once the free oil has been removed, high pressure cleaners should be employed for cleaning the rods/ concrete. For this purpose, sea water should be used.
2. Steam cleaners can use after taking consideration of presence of micro organism and ecological damage.
3. Booms and skimmers are used for receiving the flushed oil. The boom is to be placed at the water edge and the skimmers at the surface of the water level.

Step- III

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The use of dispersants, if ecologically suitable/permitted, can be achieved by a spraying in the inter-tidal zone just before the incoming tide submerges the area.

The use of absorbing materials can also be started forrecovery of oil sheen present in the water and oil leaching out firm rocks/concrete.

Fig. 1 Black rock resembling oil contamination

4.3.2 Cobbles, pebbles and shingles

This type of shorelines is very difficult to clean as large quantity of the oil will penetrate into the gaps between the stones (Fig. 2). A careful cleaning is necessary as important and well established plant communities are present around the stones

Step- I

The same technique as for rocks and manmade structures can be used here. However, heavy machinery cannot be used because of poor load bearing characteristics this kind of Sholes as well as damage to plant communities.

Step- II

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High pressure cleaners with cold sea water should be used to flush surface oil to the water's edge where boom and skimmers have been placed.

Step- III

Stones that retain a greasy film after the use of high pressure cleaners can be pushed into sea in non-tidal areas where they will be gradually cleaned by wave action.

The area where the clean up takes place should be surrounded by boom. The use of dispersants is not recommended as it will allow the oil to penetrate deeper into the beach materials.

Fig.2 Heavy oiling with penetration (Shingle beach)

4.3.3 Sandy Beaches

Pure sandy beaches are normally exposed to strong wave action or currents and have a high self-cleaning potential. In the summer time, an immediate cleanup operation is necessary (Fig.3). The polluted sand can remove after considering the possible erosion. During this operation the transportation of polluted sand is to be taken into account as the quantity of debris can be up to 20 times the quantity of recovered oil.

Step- I

Removal of surface sand which has been polluted. This can be done by either using heavy machinery or alternatively by using shovels and plastic bags. The disadvantage of using heavy machinery is the large volume of sand in the recovered oil which will give problem with disposal.

Step- II

Transfer the polluted sand with shovel by manually to trucks for temporary storage sites.

If available vehicles are not reachable to the site, then the manually collected oily sand will have to be filled into heavy duty plastic bags. Precautions should be taken not to overfill the bags.

The bags should be protected against exposure from direct sunlight for long periods as plastics are prone to decomposition. The oil will often penetrate 30 cm down into the sand (depending on its viscosity) and this may make the polluted area too/large and make logistics/erosion problem. It is impossible to clean the whole length of a beach at one time. The beach must be divided into smaller section of approximately 100 metre, depending on the number of people/infrastructure available in the site. Flood lighting is essential when working with beach cleaning at night and diesel driven generators are necessary.

Step- III

The remaining part of the oil can be removed by spraying dispersant agents approximately 30 min before an incoming tide.

Non tidal shores can be flushed with sea water. Tar balls which remaining can be collected normally by shoveling the beach material through much screens. After the draining, discolored sand can be lightly covered with fresh sand.

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Fig.3 Layers of black sand and yellow sand which give impression of contamination of shoreline by weathered oil

4.3.4 Sedimentary

In sheltered areas the sediment contains lighter mud particles and more marine life. Sedimentary areas are having very less self cleaning properties due to the low wave activity.

Muddy areas have difficult accessibility removal of the polluted soil will often do more harm to the environment the oil pollution itself. Cleaning requires that damage trenches are dry to aid pooling of the oil using less pressure flushing with sea water. The accumulated oil is then removed by pumps.

Manual removal of the top zone oiled material in the only possibility to very soft muddy shores.

4.4 Equipments/General Provisions for coastal spill control and clean up operations

4.4.1 For lightening operation

a) Pumps
b) Tankers and coastal barges
c) Fenders

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d) Buoys

e) Hoses (Fig. 3)

f) Generators (with fire proof)

g) Heating equipments (for high viscous oil)

h) Communication equipments

Fig. 3 Skimming

4.4.2 For containment

a) Booms

b) Tugs

4.4.3 For supply of fuels

a) Oil bowsers

b) Intermediate storage tanks

c) Pumps (mandatory for air craft refilling)

4.4.4 For transfer of oil

a) Pumps

b) Boats

c) Fenders

d) Hoses with floatation aids

e) Heating equipments (if necessary)

f) Shore reception facilities

g) Communication equipments

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4.4.5 For application of treatment chemical

a) Containers
b) Spraying equipments (Fig. 4 and 5)
c) Boats and /or aircraft
d) Transfer pumps

4.4.5 For surveillance (spill)

a) Equipments for recording wind speed and direction (anemometer)
b) Explosion meter
c) Sampling container
d) Spill cameras
e) Video cameras

4.4.6 General processing

a) Protective clothing for every leady (such as overall, boats, glover, goggles etc)
b) Cleaning material – rags, soap, detergents brushes. Equipment to clean cloths, machinery etc – with jets of hot water.
c) Plastic bags (heavy duty) for collecting oily debits

Fig.4 Low pressure flushihg

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Fig. 5 High pressure hot water washing

4.5 Organization and tanks of a cleanup operation

Before and during cleaning up of shoreline, it is important that both the chain of command and individual ranks are clearly defined. A beach supervisor should be appealed, who will be responsible for the cleanup operation. Public safety in under the responsibility of the beach supervisor.

Crude oil and produces are complete chemical mixtures and must be treated with caution. The health hazards (Toxicity) can be listed under for general headings.

1) Effects of Vapors
2) Inhalation (Aspiration)
3) Skin contact
4) Ingestion

In order to ensure that the clean up operation will work best, the following organization guideline and ranks are recommended.

1) The work forces are directed into groups of max 10 people.
2) A Team leader is appointed for each of the groups.
3) The team leaders refer to the beach supervisor.
4) Each group is assigned to a special section of the shoreline or a special job

within the limited shoreline if the clean up operation in to the done section by section.

5) The activation which the group should carry out must be clear and verifiable.

4.5.1 Team leaders

The team leader (s) appointed must ensure that:-

1) Records of all the work carried out by the group in maintained and handed over to the Beach Supervisor.
2) Personnel involved are issued with adequate protective working clothing and other safely equipment such as:-
    a) Hearing protection
    b) Head protection
    c) Eye protection
    d) Oil resistant gloves
    e) Protective foot wear.
    f) Oil resistant overalls
    g) Life Jackets etc.
3) The team leader is responsible post his / her group following the safely and health regulations.

4.5.2 Beach supervisor

The Beach supervisor is responsible for:-

a) Promises of floodlights, generators, shovels and buckets.
b) Provision of personal cleaning and toilet facilities.
c) The crew working on the Beach have breaks with refreshments
d) All vehicle movements are controlled
e) All the Equipments are cleaned after use and ready for the next day.
f) Make the area is out of bends until individuals have received a full safety briefing
g) Appoint a responsible person for dealing with pross.
h) Keep the general public at a safe distance only authorized personnel in allowed undo the Beach during operation. In this true assistance of local police can utilized.

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4.6 Preparation of Shore-line cleanup operation Plan

The Beach supervisor should draw up an others plan of action before field cleaning operation are begin. This plan includes:

The agreed acceptable cleaning status to be achieved.

a) Do not clean
b) Clean but to a minimum standard.
c) Clean to full restoration
d) Clean to pristine level.
e) Tanks for each of the team and from leaders
f) Outline of the procedure to be followed by each team.
g) Equipment to be used for the operation
h) Vehicle traffic and storage
i) Working periods
j) Safety check list

4.7 Health and safely Aspects of a shore line clean – up operation

The health and safely aspects are of prime importance in a clean up operation group team leaders must inform their team members about the safety regulation that must be followed group members who are unable to follow procedures should be asked to leave the area failure to follow safety procedures put other peoples safety in jeopardy.

4.8 Accidents after occur due to rules not being adhered to

The most common rules to be followed are:-

a) Communication System must be defined and checked
b) Tools must not be lift scattered on the Beach.
c) Working personal must be will illuminated during operation.
d) Resets for vehicles to be earmarked.
e) Personal must be equipped with adequate safety clothing.
f) Equipments using in the Area must be fire proof.
g) Adequate safety precautions be ensure before using chemicals for combating oil spill.
h) Instant access to correct/clean Eye/Body in an accident occurs.
i) Proper cleaning and maintenance of equipment during operation must be called off.

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j) Every team leader must be familiars with procedures in care of any injuries to personal such as.

k) Call ambulance.

l) Report to beach supervisor.

m) Escort ambulance to injured person.

n) One person follows the injured to the hospital and reports beach to beach supervisor.

o) The family of the injured to be informed etc.

p) Safety drill on equipments to people working on the site.

4.9 Agencies Designated and their Responsibilities

Shoreline oil spill response is a collective action by all the concerned agencies such as Central `Government, State Government, Resource Agencies and Oil Handling Agencies. A shoreline cleanup project can last many weeks or months together depending on the amount of oil spilled, environmental conditions and prevailing weather condition etc.

The success of the response action depends upon the effective response to oil spill at the shoreline. To achieve this responsibilities, lines of command and communication are enumerated in the following paragraph for efficient coordination between agencies involved.

No.	Agency		Functional responsibilities
1	Indian coast guard	1.1	Central coordinating authorising with all agencies on a oil spill response
		1.2	Advise on clean-up operations
		1.3	Advise on clean-up strategies
		1.4	Assisting on air surveillance
		1.5	Assisting on WIRELESS COMMUNICATION network with different Government/Resource agencies
		1.6	Providing logistic support in movement of men and material.
		1.7	Providing available specialized pollution machineries for the cleanup operation
2	INDIAN NAVY	2.1	Providing facilities of their communication/operation center to receive/disseminate reports of marine

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			pollution accidents
		2.2	Providing different types of air craft for arial surveillance
		2.3	Logistic support in movement of men and materials to the incident site.
		2.4	Providing available/suitable vessels for transporting pollution response equipments.
3.	DISTRICT ADMINISTRATION	3.1	Nodal agency for the implementation of cleanup operation
		3.2	Co-ordinate different State Government agencies such as Police, Marine Police, Health Department, Fire & Rescue team etc. for the provision of men & material for the operation
		3.3	Arrange volunteers from NGOs, Civil agencies, Colleges, Schools for clean-up operation.
		3.4	Render all possible assistance to the On Scene Commander of the cleanup operation
		3.5	Identify/earmark disposal sites, recycling facility for the spilled oil.
		3.6	Arrangement of logistics to the participants
		3.7	Conduct of periodical exercises on shore line cleanup with State Pollution Control Board.
4.	STATE POLLUTION CONTROL BOARD	4.1	Nodal agency for the conduct of the cleanup operation with District Administration.
		4.2	Nodal agency for coordinating different resource agencies in the area for possible assistance
		4.3	Updation of Contingency Plan on beach cleanup operation
		4.4	Coordinate with scientific laboratory for analysing of spill oil sample.
		4.5	Coordinating with district Administration of the affected area for taking necessary mitigation action.
		4.6	Coordination with scientific and health departments to assess the effects of pollution to the human being and the ecological system.
		4.7	Assist District Administration on conducting regular meetings /Exercises on shoreline cleanup with

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			NGOs, stake holders, resource agencies.
		4.8	Updating of scientific data regarding species and shoreline sensitivity.
		4.9	Assess the environmental damage and provide necessary remedial measures.
		4.10	Facilitate restoration measures of the affected shoreline/control areas.
5.	KERALA STATE MARINE BOARD	5.1	Assist the district Administration/Kerala State Pollution Control Board in shoreline cleanup by providing available resources such as trained men, Tugs, vessels, Barges etc.
		5.2	Coordinate with District Administration for issuing notice against the polluting shop master/owner for cleanup operation.
6.	STATE COASTAL POLICE	6.1	Provide resources such as vessels for conveying PR Personal and PR Equipments on the spill site
		6.2	Secure the area from the general public for the smooth conduct of the Beach cleanup operation
7.	STATE FOREST DEPARTMENT	7.1	Provide information to the OSC regarding list of species reside in the affected area.
		7.2	Removal affected species from the area
		7.3	Assist District Administration on claim from polluter
8.	STATE FISHERIES DEPARTMENT	8.1	Assist local Administration regarding sensitive areas for protection
		8.2	Provide available vessels for the operation
			Advise fishermen on the effects of oil pollution
		8.3	Impose Ban on fishing in the affected area.
		8.4	Assist District Administration on claim pertaining to on fishing days and restoration of fishing areas.
9.	OIL HANDLING AGENCEIS AND PORTS	9.1	Coordinate with District Administration on shoreline cleanup.
		9.2	Provide trained Technical personnel for the operation
		9.3	Provide available PR Equipments for the cleanup.
		9.4	Provide all Available infrastructures, useful for the cleanup operation including manpower

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		9.5	Provide suitable vessels for conveying men & material.
10.	OIL COMPANIES AND RESOURCE AGENCIES	10.1	To Assist the Local Administration with available resources such as trained personnel. materials and PR Equipment.
		10.2	Assist the Administration on possibility of re-cycling the collected oil.
		10.3	Arranging vessels for treating polluted oil
		10.4	Arrange storage facilities for Transhipped oil

4.10 List of available pollution response equipment

The lists of available pollution response equipments in Cochin Port Trust, Bharath Petroleum Corporation Limited (BPCL), and Petronet LNG are given below:

4.10.1COCHIN PORT TRUST

SL	EQUIPMENTSREQUIRED FOR RISKCATEGORY A	PRESENT INVENTORY	TO BE PROCUREDUPGRADE TO TIER - 1AS PER OISD/ COASTGUARD	REMARKS
01	OIL BOOM -2000 M	2000 (500 MTR RIGID AND	NIL	
		1500 MTR INFLATABLE)		
02	SKIMMER-04 (20 TPH)	1 IN NO. 50 TPH (MULTI	3X20 TPH	WILL BE COMPLETE BY
		SKIMMER)		JUNE 2017
		I IN NO 5 TPH		
		I IN NO SKIMMER VESSEL 60		
		TPH		
03	OSD APPICATOR- 6 NO	NIL	6	BY JUNE 2017
04	OSD 10000 LTR	10000 LTR	NIL	

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05	FLEX BARGE - 04 (10 TONS)	NIL	4	BY JUNE 2017
06	BOOM SUSTAINABLE IN	NIL	2	TO BE PROCURED
	STRONG CURRENTS IF			
	CURRENT WITH IN 4 KTS			
07	SORBENT BOOM PACK 500	500 MTR	NIL	
	MTR			
08	SORBENT PADS-2000 NO	1000	10000	BY JUNE
09	SHORE LINE CLEAN UP	5 SETS	NIL	
	EQUPT			
	MINI VACCUM PUMPS			
	OSD APPLICATOR			
	FAST TANKS			

4.10.2 BPCL				
01	SPS CERTIFIED MAINTENANCE VESSEL , MT OCEAN AQUAMARINE		THIS VESSEL IS STATIONED IN SPM ROUND THE CLOCK	
02	SUPPORT VESSEL, MT ALLIANCE			
03	OIL SPILL CONTAINMENT BOOM OF 200 M LENGTH-03 (600 m)			
04	1200 LTRS OF OIL		DISPERSANT	

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	SPILL DISPERSANT ALONG WITH TWO NO. OF SPRAYING ARMS		AND SPRAYING ARMS KEPT ON BOARD MAINTANANCE/ SUPPORT VESSEL	

4.10.3 PETRONET LNG	
HARBOUR BOOM WITH POWER PACK & COMPRESSOR	3X250 M
SKIMMERS WITH POWER PACKS	1
HIGH PRESSURE JET WASHING PUMP	1
SORBENT PADS	500
OSD	4900 L
OSD APPLICATOR SIDE BOOM	2
OSD APPLICATOR SPRAY NOZZLE	2
IMO LEVEL II CERTIFIED MANPOWER	2

4.11 Important contact detail of Government and Resources Agencies

Sl. No.	Company Name	Tele No.	
		Office	Residence
01	**AMBULANCE**	STD Code : 0484	
	Ambulance (Civil)	101	
	Dhanavanthari Service Society	0484-1364815	
	Ernakulam Karayogam	0484-2364815	0484-2362910
	General Hospital	0484-2361251	
02	**Coast Guard (Mumbai)** STD Code:022		

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	COMCG(W)	022-24379478,24385089	022-25701045
	Chief of Staff	022-24378039, 24308385	022-23679038
	Chief Staff Officer(OPS)	022-24372472	022-25708251
	Chief Staff Officer (Tech)	022-24379868	
	Regional OPS & Plans Officer	022-24376133	
	Main signal Office	022-24379201, 27371403 (F)	
	Ops Centre(west)	022-24332554, 24333727 (F)	
	Commander Dist No.2	022-24222696	
	Pollution Response team (w)	022-24321094	
03	**COAST GUARD KOCHI**	STD Code : 0484	
	Commander (Kerala)	0484-2218121	0484-2235608
	Executive Officer	0484-2218320	0484-2231436
	Operation Officer	0484-2218969	0484-2231436
	Main Signal Office	0484-2218460	
	Operation Centre	0484-2218969	2217164 (F)
04	**COCHIN SHIPPYARD**	STD Code : 0484	
	Chairman	0484-2373155, 2370897(Fax)	
	Director (OPS)	0484-2381449, 2380181(Fax)	
	Exchange	0484-2351181, 1361181	
05	**CUSTOMS**		
	Commissioner of Customs	0484– 2668068(F)	9446055786
	Asst. Commissioner (P)	0484– 2668517,2666861	

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	Speriented	0484– 2668468(F) 0484-2666861	
	Control Room (24 Hrs)	0484–2397204	
	Customs and Central Excise	0484-2391352,23904 2390438(F)	
06	**DISTRICT COLLECTORS OF STATE**		
	Trivandrum	0471-- 2462471/ 2423001	0471 – 2463363
	Kollam	0474 – 2794900	0474 – 2792970
	Alappuzha	0477 – 2251720	0477 – 2251720
	Ernakulam	0484 – 2423001	0484 – 2422982
	Trichur	0487 – 2361020/ 2362210	0487 – 2361020
	Malappuram	0483 – 2734355	0483 – 2734355
	Kannur	0497 – 2700243	
	Kasargod	04994 – 256400	
	Pathanamthitta	0468 – 2222505	
	Idukki	04862 – 233103	04862-233101
	Kottayam	0481 – 2562001	
	Kozhikkode	0495 – 2371400	0495-237582
07	**FIRE STATION** STD Code : 0484		
	Fire Station (Civil), Ernakulam	101,2205550(Fax)	
	Fire Station, CPT	0484-2666555	
	Fire Station, INS Venduruthy	0484- 2872300,2872425	
	Fire Station, INS Garuda	0484-2872200	
	Fire Station South Jetty	0484-2874647	
	Club Road Ernakulam Fire Station	0484-2355101	
	Fire Station Mattancherry	0484-2225555	
08	**FISHERIES**	STD Code : 0484	
	FSI	0484-2226860	
09	**INTELLIGENCE AGENCIES**		

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	Additional DG, IB	0471	– 244117818	
	SP, IB, Trivandrum	0471	– 24411818	
	Jt. Director, IB	0471	– 2322912(F)	
	Commissioner Ernakulam (SIB)	0484	– 2394469(F)	
		0484	– 2315266	
	SP, SSB, Ernakulam	0484	– 2402935(F)	
	Additional Director of Special Bureau	0484 0484-2370568	– 2330567	
10	**KERALA STATE POLLUTION CONTROL BOARD**			
	Regional Office, Ernakulam	0484 – 2207782, 2207783, 2207784, 2207785, 2207786		
	District Office - 1, Ernakulam	0484 – 2207782, 2207783, 2207784, 2207785, 2207786		
	District Office - 2, Ernakulam (Perumbavoor)	0484 – 2593747		
	Environmental Surveillance Center	0484 - 2545678		
	Head Office, Thiruvananthapuram	0471 – 2318153, 2318154, 2318155, 2318156, 2312910		
11	**KOCHI REFINERIES LTD**	STD Code : 0484		
	General Manager (T&D)	0484-2720868		
	General Manager (OPS)	0484-2720460		
	Fax	2720855		
12	**KOCHI PORT TRUST**	STD Code : 0484		
	Exchange	0484-2666871/ 2668163(Fax)		
	Director (OPS)	0484-2381449		
	Chairman	0484-2668200,2668566		
	Dy. Chairman	0484-2666592		
	Traffic Manager	0484-2666418		
	Dy. Conservator	0484-2666417		

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	Harbour Master	0484-2666410	
	Fire Station	0484-2666555	
	Chief Medical Officer	0484-2666402	
13	**MARINE ENFORCEMENT**		
	SP ME & V	0471 – 2317524	09447141184
	DSP	09447141183, 9447141184,	
		9447141180	
	Beypore	0495–2414074,	
		2414074(F)	
	Kannur	0497 - 2732487	
	Neendakara	0476 - 2680036	
	Vizhinjam	0471 – 2480335	
	Vypin	0484 – 2502768	09447141192
	CI, Sajeevan		
14	**MEDICAL**	STD Code : 0484	
	INHS Sanjivani Casualty Centre	0484-2872517	
	MI Room, INS Garuda	0484-2872200,2873020	
	MI Room, INS Venduruthy	0484-2879999	
	General Hospital	0484-2360002, 2361251	
	Medical Trust Hospital	0484-23581001-14	
	City Hospital	0484-2361809,3043010,11,12	
	IMA BlDuty Officer bank	0484-2361549(Fax),2350522	
	Duty Provost Staff	04842872080	
	NORA Police Station	0484-2872500, 2872460	
	Naval Provost Marshal	0484-2872079	

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	Police Control Room (Civil)	100, 0484-2359100,2359200	
	Police Station – Ernakulam South	0484-2359350	
	Police Station – Willingdon Island(HT)	0484-2666005	
	Port Registration Office – Willingdon Island (Port)	0484-2666027,2666871 0484-2666027	
15	**NAVY KOCHI**	STD Code : 0484	
	Maritime Operation Centre	0484-2872466, 2878257 (F)	
	Chief Of Staff (COS)	0484-2872003 / 287 2004 (R)	09895709259
	CSO OPS	0484-2872009, 2879817 (F)	
	Command OPS Officer	0484-2872552, 2872003 (F)	
	Command Aviation Officer	0484-2872594	
	Garuda OPS Officer	0484-2879817	
	CLO	0484-2871050/ 2876043	
	Staff Officer (OPS)	0484-2878811	
	INHS Sanjivani	0484-2872517	
	Fire Brigade (Navy)	0484-2872300/ 2425 / 2200	
	DUTY OFFICER INS Venduruthy	0484-25312531 / 25292520	
	DUTY OFFICER INS Garuda	0484-2873002	
	DUTY OFFICER INHS Sanjivani	0484-2874439	
	DUTY OFFICER INS Dronacharya	0484-2218341 / 103	
16	**OIL COMPANIES**	STD Code: 0484	
	Indian Oil Corporation	0484-2319800, 2312601(Fax)	
	Bharat Petroleum	0484-2720871, 2720162(Fax)	0484-2721095
	Hindustan Petroleum (Black)	2319888, (Fax)	
	Hindustan Petroleum (White)	2782699 (Fax)	
17	**OIL HANDLING AGENCIES**		
	Cochin Port Trust	0484– 2666410	

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		0484–2666417(F)	
	Port Control	0484–2667105	
	HPCL, Irumbanam	0484–2774718 0484–2782695	0484–2785344 0484–2782699
	BPCL	0484–2722061/2720992	
	HPCL, Kadavanthra	0484–2315322/2312141	2314427(F)
	Southern Refineries LTD	0471-2534944	0471-2534942
	IOC, Panamballi Nagar	0484–2312741/2310392	2319800(F)
	IOC, Willingdon Island	0484–2784224 0484–2666015(F)	2666298(F)
	Kochi Refineries	0484–2821311	0484–2720855
	Kerala State Pollution Control Board	0484–2206561 0484–2207784	0484–2207782
	MMD, Kochi	0484–2666104	
18	**STATE POLICE**		
	DGP of Police, Trivandrum	0471 – 2729434 / 2721547/ 2721601	2722002 (Fax) 2726560 (Fax)
	ADGP, Trivandrum	0471 – 2555123	
	IGP, Admin, Trivandrum	0471 – 272202	
	Asst IG, Trivandrum	0471 – 2722566	2318168 (Fax)
	IG of Police (Crime)	0471 – 2461433 0471 - 2453448	
	Commissioner of Police, TVM	0471 – 2320579	2320579 (Fax)
	Commissioner of Police, TVM City	0471 – 2331843	
	Commissioner of Police, TVM Rural	0471 – 2316995	
	SP, Trivandrum	0471 – 2315803 / 2726271	09447010768
	Commissioner of Police, Kollam	0474 – 2746000	
	SP, Kollam	0474 – 2764422 / 2744165 (Fax)	09446402007
	Control Room, Kollam	0474 - 2746000	
	Commissioner of Police, Pathanamthitta	0468 – 2222226	

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Commissioner of Police, Alappuzha	0477 – 2251166	
SP, Alleppey	0477 – 2239326 / 223800 (Fax)	09447111230
Commissioner of Police, Kottayam	0481 – 5550400	
Commissioner of Police, Idukki	04862 – 221100	
Commissioner of Police, Ernakulam, City	0484 – 2359200	
Commissioner of Police, Ernakulam, Rural	0484 – 2621100	
Commissioner of Police, Trissur	0487 – 2424193	
SP, Trlchur	0487 – 2361000 / 2381000	09447015608
Commissioner of Police, Palakkad	0491 – 2522340	
Commissioner of Police, Malappuram	0483 – 2734966	
SP, Malappuram	0483 – 2734983	09447015601
Commissioner of Police, Kozhikkode City	0495 – 2721831 / 2722911	27229116 (Fax)
Commissioner of Police, Kozhikkode Rural	0496 – 2523091	
SP, Rural, Kozhikkode	0495 – 2523100	09447115607
SP, City, Kozhikkode	0495 – 2375393 2722116 (Fax)	
Commissioner of Police, Wayanad	04936 – 205808	
Commissioner of Police, Kannur	0497 – 2763337	
SP, Kannur	0497 – 2763330	09447077600
SP, Kasargode	04994 - 230401	

References

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Boufadel, M. C., Bobo, A. M., & Xia, Y. (2011). Feasibility of Deep Nutrients Delivery into a Prince William Sound Beach for the Bioremediation of the Exxon Valdez Oil Spill. doi:10.1111/j1745.

ITOPF (2011). Fate of marine oil spills. Technical Information Paper 2, The International Tanker Owners Pollution Federation Limited, London, U.K.

Walther, H.R. (2014). An analysis of spills occurring in Santa Barbara, California, Prince William Sound, Alaska, the Sea of Japan, and the Gulf Coast. The University of San Francisco USF Scholarship: a digital repository @ Gleeson Library, Geschke Center Master's Project Thesis. Dissertations, Capstones and Projects.

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"Mock drill- Shore line clean up and post oil spill" conducted on 21/05/2019 at Fort Kochi

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As per the direction from that office mockdrill on post oil spill shore line clean up was conducted on 21/05/2019 at the Fort Kochi beach.The mock drill started by 8 am. The Commandant KLArun. District operations, welcomed the gathering.The Chairman Shri Ajit Haridas. Chief Environmental Engineer, Shri. M A Baiju ,Pollution control board, addressed the gathering.

The BPCL officials demonstrated some oil spill response equipments and fire fighting equipments and all officials participated in the beach cleaning activities. It was followed by a brief explanation on post oil spill cleanup by coast guard officials. After that the whole team was divided into small groups of threes and proceeded for the shoreline clean up. The wastes were collected in garbage bags and were disposed through corporation authorities. The mock drill came to an end by 9.30 AM. Around 100 peoples/volunteers contributed to the event.

The mock drill was a full scale event for evaluating the capabilities and response mechanism of all stake holders and augmenting regional level emergency preparedness with regard to risk factors associated with marine oil spill. The exercise is aimed at assessing our preparedness and enhances coordination between various agencies responsible. The participation and cooperation provided by all stakeholders towards the conduct of the drill, is indicative of our resolve to combat pollution for protecting the flora and fauna of these islands. The mock drill successfully validated and reinforced response mechanism for Oil Pollution incidents and enabled us to fine tune the actions required in such eventualities by improving coordination and communication with different agencies.

The mock drill was undertaken by Kerala State Pollution Control Board along with Indian Coast Guard in conjunction with stakeholders which included the Kerala state Administration.Kochi Corporation, Cochin Port Trust, Bharat Petroleum Corporation Ltd,Fire and Rescue, Forest, Police and Health departments. The preparedness of all agencies during the drill was witnessed by Shri Ajith Haridas, Chairman, Kerala state pollution control board, Chandrasekhar, General manager, Kochubaby Manjooran, Senior Manager (Kochi Refinery), DIG Sanatan Jena,TM. District commander no. 4 and Commandant Vijay Singh,TM.Executive officer and Commandant K L Arun. District operations and Plans officer, Commandant (JG) GSuresh,Staff officer (coast guard).Thomas Alappat.Deputy Conservator (Cochin Port Trust).

This is the first time the Kerala PCB is organizing such a mockdrill at Ernakulam.

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Exhibit R7(d)

Do's and Don'ts for an oil spill — Dated: 25.05.2025

Do's:

- Act quickly. Immediately notify authorities: Report any spill, oiled shoreline, strong odours. Call 112.
- Protect yourself and others: Wear protective gear to help with clean-up. Avoid areas where oil is visible or can be smelled, and wear gloves and boots when handling oil or contaminated materials.
- Contain the spill:Use absorbent materials like pads, cotton, natural materials, mats, card board, rags, sand, saw dust for shoreline clean-up.
- Spraying of dispersants to eliminate the oil sheen at sea with the help of Coast Guard/ Oil Handling Agencies.
- Helicopters may be arranged for spraying dispersants
- Arrangement of booms, skimmers, vacuum pumps, trucks for removal through Coast Guard/ Oil Handling Agencies.
- Wash your hands: Wash your hands thoroughly with soap and water after contact with oil or contaminated surfaces.
- Seek medical attention:If you experience any symptom like headache, nausea, dizziness, chest pain, or breathing difficulty, seek medical attention immediately.
- Precautions shall be taken to prevent tampering/leakage of containers once taken to the shore.
- Safe anchoring of cranes/containers to the ground.
- Arrangement of cranes / machines, JCBs.
- Arrangement of lorries for carrying container for carrying removed oil/substance.
- Volunteer groups may be mobilized.
- There are chances of breaking of containers if it hits the shore, so stay away from the containers.

Don'ts:

- Don't ignite any flames near the spill: Oil spills can be flammable, and igniting flames can cause a fire.

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- Do not fish, swim, or engage in water sports in the waters that have been affected by the oil spill: This can expose you to the potential health risks.
- Don't go near the area, Call 112.
- Don't touch the containers/ oil spill, don't smell.
- Don't use water or chemicals to clean up the spill as it may result in serious pollution.
- Don't dispose any oil soaked material without bagging them safely. Such oil coated materials shall be collected, bagged properly and disposed safely as per the advice of State pollution Control Board.

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BIJY VARGHESE
Senior Environmental Engineer

Exhibit R7(e)

☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
e-mail: chn.kspcb@gov.in; ms.kspcb@gov.in FAX: 2318152 web: www.kspcb.kerala.gov.in
KERALA STATE POLLUTION CONTROL BOARD
കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്
Pattom P.O., Thiruvananthapuram – 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

KSPCB/460/2022-EE-5 Date:26/05/2025

From

Chairperson

To

Member Secretary
Kerala State Disaster Management Authority
Thiruvananthapuram

Sub: Ship accident occurred in Arabian Sea – reg.

Sir,

In the event of the ship wreck off Kerala Coast, the following instructions are issued for containing pollution of the water bodies for urgent compliance

1. Instruct Coast Guard to deploy boom around the sunken ship to contain possible oil spill
2. To interact with coast guard and get samples of water from deep sea near the ship wreck location
3. Action to be initiated to provide booms at lake mouths and river mouths at Neendakara and Thottappally spillway to contain oil ingress into lake/river.If there are any chances any other inland water body getting affected the same may be addressed.
4. Urgently arrange for using saw dust filled jute bags at shoreline to contain the thickened oil below water surface

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5. Give instructions to Coast Guard – In the case of oil spill reaching near the coast, dispersants are to be used to prevent oil pollution of shore area
6. Give necessary instructions to Food Safety authority regarding precautions to be taken.

Yours faithfully,

CHAIRPERSON

Copy to:

Special Secretary,
Environment Department

KERALA STATE POLLUTION CONTROL BOARD

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Senior Environmental Engineer

Exhibit R7(f)

☎ General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
e-mail: chn.kspcb@gov.in; ms.kspcb@gov.in FAX: 2318152 web: kspcb.kerala.gov.in
KERALA STATE POLLUTION CONTROL BOARD
കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്
Pattom P.O., Thiruvananthapuram – 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം – 695 004

KSPCB/460/2022-EE-5 Dated: 26/05/2025

From
Chairperson

To
1. The Chief Environmental Scientist
Central Laboratory, Ernakulam

2. Environmental Engineer,
District Office,
Thiruvananthapuram/Kollam/Alappuzha/Ernakulam DO-1/
Ernakulam DO-2 /ESC Eloor/Thrissur/Kozhikode /Malappuram/
Kannur/Kasargod

Sub: Action required- Safety measures following Cargo ship accident in Arabian Sea

Sir/Madam,

Kind attention is invited to the above subject matter. As you are aware, an accident involving a Cargo ship occurred in Arabian Sea in the afternoon of 24.05.2025 near Kochi coast. The officers stationed at the possible sites where containers are likely to beach are directed to follow the instructions given under:

1. Identify the containers of concern and follow the safety measures prescribed in consultation with Factories & Boilers. Instructions from PESO with respect to Calcium Carbide and Chemical Disaster and risk deduction guidelines are enclosed for reference.

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KERALA STATE POLLUTION CONTROL BOARD

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Senior Environmental Engineer

2. The details regarding containers beached have to be entered in the list provided. Currently action is being taken by Kollam and Alappuzha DOs, as containers are beached within their jurisdiction.
3. All DOs having jurisdiction of coastal area shall take samples at appropriate locations. In districts having coastal areas where containers are beached samples shall be taken from unaffected areas as well for enabling comparison.
4. The samples collected shall be analysed and the analysis reports are to be furnished to Head office promptly without any delay.

Yours faithfully,

CHAIRPERSON

Copy to:

The Chief Environmental Engineer,
Thiruvananthapuram/Ernakulam/Kozhikode

KERALA STATE POLLUTION CONTROL BOARD

True copy

EBY VARGHESE
Senior Environmental Engineer

Exhibit R7(g)

☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairperson: 2318150 Member Secretary: 2318151
e-mail: chn.kspcb@gov.in; ms.kspcb@gov.in FAX: 2318152 web: kspcb.kerala.gov.in
KERALA STATE POLLUTION CONTROL BOARD
• കേരളസംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്
Pattom P.O., Thiruvananthapuram – 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

KSPCB/460/2022-EE-5 Date: 28/05/2025

From

The Chairperson

To

The Principal Director,
Local Self Government Department
Swaraj Bhavan, Nanthancode
Thiruvananthapuram

Sub: Sinking of MSC ELSA 3-Collection of legal samples

Sir,

In connection with ship wreck (MSC ELSA 3) is has been decided to collect legal samples as per section 21 of Water Act, 1974 from the sea at various locations. In this regards, please direct Secretaries of LSGIs concerned to present during the legal sampling procedure along with PCB officials and to sign the requisition form in order to submit for further analysis as per the statute.

Yours faithfully,

CHAIRPERSON

Copy to:

The Environmental Engineer
District Office, TVM/KLM/ALP/EKM

True copy

KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Exhibit R7(h)

☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
e-mail: chn.kspcb@gov.in; ms.kspcb@gov.in FAX: 2318152
web:kspcb.kerala.gov.in

KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്
Pattom P.O., Thiruvananthapuram – 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

KSPCB/460/2022-EE-5 Date: 29.05.2025

From
Chairperson

To
The Director
Directorate of Factories and Boilers,
"Suraksha Bhavan"
Kumarapuram, Medical College.P.O
Thiruvananthapuram, Kerala- 695011
Email: directorate.fab@kerala.gov.in

KERALA STATE POLLUTION CONTROL BOARD THIRUVANANTHAPURAM
30 MAY 2025
DESPATCHED

Sub: - MSC Elsa 3 shipwreck occurred in the coast of Kerala in Arabian sea –reg.

Ref: - Email from Environment Department <envtkerala@gmail.com> dated 28.05.2025 enclosing letter No-ENVT-B2/50/2025-ENVT dated 27.05.2025

Sir,

Kind attention is invited to the subject matter. As you are aware, an accident involving a cargo ship occurred in the Arabian Sea, approximately 38 nautical miles southwest off the Kochi coast, in the afternoon of 24.05.2025. It is understood that several containers from the ship are now floating in the sea and some have already washed ashore. It has been reported that the cargo ship was carrying a total number of 643 containers. Upon reviewing the list of cargo materials in the 643 containers, as made available by KSDMA, it is understood that containers with hazardous materials like calcium carbide, hydrazine, rubber compound, etc., are also sunk alongwith the ship.

It has been instructed to the Board by the Environment Department vide reference cited to identify the containers of concern and to follow the safety measures prescribed in consultation with Factories and Boilers. In view of the above, it is kindly requested to identify all the containers including the containers of concern and inform the safety measures to be taken urgently. A preparedness plan in this regard may also be prepared to deal with an exigency.

Yours faithfully,

CHAIRPERSON

Encl: as above

Container details have been enclosed via email dated 29.05.2025 from <kspcbhosec2@gmail.com>)

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KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Exhibit R7(i)

☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
e-mail: chn.kspcb@gov.in; ms.kspcb@gov.in FAX: 2318152 web: www.kspcb.kerala.gov.in
KERALA STATE POLLUTION CONTROL BOARD
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Pattom P.O., Thiruvananthapuram – 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

KSPCB/460/2022-EE-5

Date: 29 /05/2025

From

The Chairperson

URGENT

To

The Director General of Shipping
9th Floor, Beta Building,
i-Think Techno Campus,
Kanjurmarg (East),
Mumbai- 400 042

Sub: - Information compilation on Containers in MSC ELSA 3-ship– reg.
Ref: - CPCB letter no. CP-14/16/2025-IPC-I-HO-CPCB-HO dated 27/05/2025, constituting Committee.

Sir,

Kind attention is invited to the subject matter. As you are aware an accident involving a cargo ship happened in the Arabian Sea, about 38 nautical miles southwest of the Kochi Coast in the afternoon of 24/05/2025. The committee constituted by Central Pollution Control Board (vide ref), based on the instruction from the Ministry of Environment, Forest and Climate Change had a meeting at the Head Office of the Kerala State Pollution Control Board. During the meeting the details of all containers and its contents were enquired into by the team. In connection with this, it is requested to kindly provide the details of materials, no. of containers, ship fuel, quantities etc., in the format enclosed, for onward submission to the Central Pollution Control Board (CPCB).

Yours faithfully

True copy

CHAIRPERSON

Encl: as above

KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Exhibit R7(j)

☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
e-mail: chn.kspcb@gov.in; ms.kspcb@gov.in FAX: 2318152 web: www.kspcb.kerala.gov.in
KERALA STATE POLLUTION CONTROL BOARD
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പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

KSPCB/460/2022-EE-5 Date:30.05.2025

From
The Chairperson

To
The Officer in charge, MRSC
Kochi Head Quarters,
Coast Guard District No. 04,
Fort Kochi, Kerala-682001.

Sub: Request to report current status regarding the shipwreckincident on 24.05.2025- Reg.

Ref: Nil

Sir,

Kind attention is invited to the above subject matter. As you are aware, an incident involving a cargo ship happened in the Arabian sea about 38 nautical miles southwest of the Kochi coast in the afternoon of 24.05.2025. In connection with this, it is requested to kindly inform

i) the current status of the operations so far done and presently doing
ii) pertinent details regarding the ship's position, condition and other ongoing work or assessments
iii) any information of oil spill as of now from the shipwreck spot
iv) containment arrangements around the location of sunkenshipfor averting any possible drifting of oil such as deploying a boom around the ship so as to avoid any chances of oil spill that may happen from the sunken ship towards other parts of sea and seashore as well.

It is requested that if such a containment is not provided, its possibility may be explored at the earliest to put in place the same.

Yours faithfully,

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KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer
CHAIRPERSON

Exhibit R7(k)

☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
e-mail: chn.kspcb@gov.in; ms.kspcb@gov.in FAX: 2318152 web: www.kspcb.kerala.gov.in
KERALA STATE POLLUTION CONTROL BOARD
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Pattom P.O., Thiruvananthapuram – 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം – 695 004

LiFE Lifestyle for Environment

KSPCB/460/2022-EE-5 Date: 29.05.2025

From

The Chairperson

URGENT

To

The General Manager,
MSC SHIPMANAGEMENT LIMITED
MSCHouse, 8Spyrou Kyprianou Avenue,
Limassol, CY-3070, Cyprus

Sub: - Shipwreck off the Kerala coast –MSC ELSA-3 - urgent action required- request for information – reg.

Sir,

In view of the ship wreck happened in Arabian Sea on 24.05.2025 and the subsequent incidents happened such as sinking and beaching of containers, it is hereby requested to take urgent necessary action to salvage the ship and its associated containers at the earliest and report. Also furnish the details of materials, no. of containers, ship fuel, quantities etc., in the format enclosed urgently.

Yours faithfully

CHAIRPERSON

Encl: as above

KERALA STATE POLLUTION CONTROL BOARD

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EBY VARGHESE
Senior Environmental Engineer

Exhibit R7(l)

☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
e-mail: chn.kspcb@gov.in; ms.kspcb@gov.in FAX: 2318152 web: kspcb.kerala.gov.in

KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

LiFE Lifestyle for Environment

File No. KSPCB/460/2022-EE-5 Date: 29.05.2025

From

The Chairperson

To

The District Collector
Trivandrum/Kollam/Alappuzha

Sub: Ship wreck incident-cleaning process-reg

Sir,

Kind attention is invited to the subject matter. In the unfolding of the events subsequent to the SMC ELSA 3 ship wreck, one of the major concerns is the spread of plastic nurdles along the beaches of Trivandrum, Alappuzha and Kollam. There are instances of containers beaching up the shore. Polyurethane foams are also seen spread along the shore areas in Kollam. The above scenario presents concerns regarding the safety and aesthesis aspects of beaches. Hence, adequate steps may be taken by DDMA to coordinate safe clean up of beaches.

Yours faithfully,

CHAIRPERSON

KERALA STATE POLLUTION CONTROL BOARD

True copy

EBY VARGHESE
Senior Environmental Engineer

Exhibit R7(m)

Sampling Protocol

Objective: Systematic, periodic monitoring of pollutants to assess the pollution load and trends, evaluate control measures, and ensure compliance with national and international standards

Coverage: Coastal waters (up to 5 km from shore), intertidal zones, estuaries/creeks, and adjacent soils/sediments.

Geotagging: All sampling locations must be geotagged for traceability and data integrity

1. WATER SAMPLING

A. Site Selection & Network Design

- Select sites based on monitoring objectives (e.g., beaches where the pollutant load is visible, bathing areas on beaches, river mouths etc.

B. Frequency of Sampling

- **Coastal/Marine Waters/ River mouths:** At least once in 48 Hours for one week and at regular intervals thereafter.

C. Parameters to Monitor

- **General:**Colour, odour, temperature, pH, electrical conductivity (EC), dissolved oxygen (DO), turbidity, total nitrogen, COD, total dissolved solids (TDS), total suspended solids (TSS), biological oxygen demand (BOD), oil & grease, total petroleum hydrocarbons.
- **Nutrients:** Ammonia (NH_3-N), nitrate/nitrite (NO_2^-/NO_3^-), total phosphorus
- **Heavy Metals:** Cadmium, lead, mercury, and others as per site-specific requirements
- **Microbiological:** Total coliforms, faecal coliforms (where relevant)
- **Organic Pollutants:** VOCs, PAHs, as per risk assessment

D. Sampling Procedures

- **In-situ Measurements:** Temperature, pH, DO, EC must be measured immediately at site to prevent alteration

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EBY VARGHESE
Senior Environmental Engineer

- **Sample Collection:** Use weighted bottles for wells; avoid surface skimming. For tube wells, run water for 5 minutes before sampling
- **Sample Containers:** Use pre-cleaned polypropylene/polyethylene bottles for metals; hard borosilicate glass for organics
- **Preservation:** Acidify metal samples to pH <2 with HNO_3; cool all samples to 4°C; add sodium thiosulfate if residual chlorine is present for PAH/VOC samples
- **Transport:** Ship samples in ice boxes to the laboratory within 24 hours

E. Sample Labelling

- Use waterproof ink/labels with:
  - Sample code/location
  - Date and time
  - Nature and type of sample (grab/composite/integrated)
  - Preservation method
  - Collector's name and signature

2. SOIL/SEDIMENT SAMPLING

A. Site Selection

- **Background/Reference:** Collect from at least two locations, each at three orthogonal directions >2 km from the contamination source (or >5 km if the background is impacted)
- **Contaminated Area:** Minimum of five locations (four at perimeter, one at centre)
- **Depths:** 0.5 m, 1.5 m, 3.0 m; extend deeper if contamination is suspected

B. Frequency

- At least once per week initially, or as required by site risk assessment and regulatory requirements

C. Parameters

- **Physical:** Texture, total carbon

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STATE POLLUTION CONTROL BOARD KERALA

EBY VARGHESE
Senior Environmental Engineer

- **Heavy Metals:** Cadmium, lead, mercury
- **Organics:** VOCs, PAHs
- **Other:** As per site-specific contamination (e.g., petroleum hydrocarbons)

D. Sampling Procedures

- **Equipment:** Use stainless steel or lined tubes (25–100 mm diameter) for undisturbed samples; seal both ends immediately after collection
- **VOC Sampling:** Collect directly from auger, minimize disturbance, use pre-prepared 40 mL vials with organic-free water; preserve with methanol or sodium bisulfate as per Method 5035
- **Sediment Sampling:** Use scoops, spoons, or dredges; store in wide-mouth glass bottles or zipped polypropylene bags
- **Transport:** Keep samples cool (4°C); VOC samples must reach the lab within 48 hours

E. Quality Control

- Collect duplicate and split samples, field blanks, and equipment blanks
- Use Certified Reference Materials (CRM) for laboratory analysis when available

F. Additional Points

- Please collect adequate samples for keeping in safe custody for any dispute. (5 Litres minimum)
- Legal sample also shall be collected.

3. QUALITY ASSURANCE & DOCUMENTATION

- **Chain of Custody:** Maintain records from field to lab for all samples.
- **QA/QC:** Include field and laboratory blanks, duplicates, and CRMs in each batch
- **Data Management:** Ensure proper documentation, digital records, and geotagging of all sampling events

SREEKALA S
CHAIRPERSON

KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

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Sampling Protocol

Amendments

Objective: Systematic, periodic monitoring of pollutants to assess the pollution load and trends, evaluate control measures, and ensure compliance with national and international standards.

Coverage: Coastal waters (up to 5 km from shore), intertidal zones, estuaries/ lakes/ inland waters and adjacent soils/sediments.

1. WATER SAMPLING

A. Site Selection & Network Design

- Select sites based on monitoring objectives (e.g., beaches where the pollutant load is visible/ where the containers beached/ bathing areas on beaches/ river mouths etc.)
- The sample collectors shall report whether the sampling location pertains to Salt Water-I or Salt Water -II or Salt Water -IV class as per water quality standards for coastal waters/marine outfall notified in the Environment (Protection) Rules, 1986 and record the same in the field observation sheet.
- Control samples shall also be taken from Ramsar sites (Ashtamudi & Vembanadu Lakes) and associated river mouths.

B. Frequency of Sampling

- At least daily from the same locations where the sampling started until further orders. Control samples (from unaffected area/ Ramsar sites) shall be taken once in a week.

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EBY VARGHESE
Senior Environmental Engineer

C. Parameters to Monitor

General: Colour, odour, temperature, pH, electrical conductivity (EC), dissolved oxygen (DO), turbidity, total nitrogen, COD, total dissolved solids (TDS), total suspended solids (TSS), biological oxygen demand (BOD), oil & grease, total petroleum hydrocarbons, Calcium hydroxide (In all samples from affected & unaffected coastal waters) once in a week, Microplastics (identification & characterization at CIPET) once in a week.

- **Nutrients:** Ammonia (NH_3-N), nitrate/nitrite (NO_2^-/NO_3^-), total phosphorus
- **Heavy Metals:** Cadmium, lead, mercury, and others as per site-specific requirements
- **Microbiological:** Total coliforms, faecal coliforms (where relevant)
- **Organic Pollutants:** VOCs, PAHs, as per risk assessment
- **Acetylene gas:** If necessary, as per risk assessment

F. Additional Points

- Please collect adequate samples for keeping in safe custody for any dispute. (5 Litres minimum)
- Legal sample also shall be collected.
- Ambient air quality monitoring shall be done at the selected locations along the beach area (baseline data) once. Routine parameters (PM 10, PM 2.5, SO_2, NOX, CO, VOC, TPH & PAH) shall be analyzed.
- Air samples shall be collected, as per risk assessment and the issue-specific parameters (hydrogen cyanide & hydrogen halides) shall be analyzed if necessary.

All other matters in the previous protocol remains same.

STATE POLLUTION CONTROL BOARD KERALA

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EBY VARGHESE
Senior Environmental Engineer

Exhibit R7(n)

Minutes of the meeting chaired by Chairperson, Kerala State Pollution Control Board (KSPCB) on 07.06.2025 to discuss on the temporary storage and lifting of plastic nurdles from the beaches of Trivandrum district

The meeting started at 11 am chaired by Er. Sreekala S., Chairperson, KSPCB. She welcomed all participants. The participants introduced themselves. The following officials attended the meeting.

1. Muhammed Huwais M., Joint Director, LSGD
2. Sareena Rahman, Joint Director, LSGD, Trivandrum District
3. Ketan Gajjar, Project Head, MERC
4. Amit Saha, Salvage Officer, MERC
5. Pradeep Khushwa, Shore Coordinator, MERC
6. Nandan Kilpadi, Shore Coordinator, MERC
7. Thomas Sturgeon, Technical Adviser, ITOPF
8. Richard Johnson, ITOPF
9. Susannah Domaille, ITOPF
10. N. K. Pillai, CEO, KEIL
11. Baburajan P. K., Chief Environmental Engineer, KSPCB
12. Sumithra S., Chief Environmental Engineer, KSPCB
13. Krishnan M. N., Chief Environmental Engineer, KSPCB
14. Eby Varghese, Senior Environmental Engineer, KSPCB
15. Bincy B. S., Environmental Engineer, KSPCB
16. Rema Devi, Environmental Engineer, KSPCB
17. Benoy A. V., Assistant Engineer, KSPCB
18. Ajai R Prasad K. C., Assistant Engineer, KSPCB

Chairperson informed that on 06/06/2025, KSPCB had conducted a meeting with representatives of salvaging firm, technical team and KEIL to discuss on the temporary storage and lifting of plastic nurdles from the beaches of Trivandrum district, based on the decision of the meeting of the District Collector, as informed by Assistant Environmental Engineer, KSPCB District Office, Trivandrum. In the meeting on 06.06.2025, KSPCB had enquired the details of shore cleaning, collection and transportation of nurdles and the arrangements made for this by the salvaging company. Officials of MERC and ITOPF had explained their plans and at the same time had requested for clarifications on the matters of arrangement of storage spaces, transport to KEIL and the permissions needed. Today's meeting is a continuation of the above discussion. Officials of Local Self Government Department (LSGD) are also participating in today's meeting.

She also added that KSPCB had already conducted a discussion with LSGD, District Administration, Kerala State Disaster Management Authority (KSDMA) and Clean Kerala Company Limited (CKCL) on 07/06/2025 at 10 am and it was decided in the meeting that

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KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

LSGIs will identify the temporary storage yards under their purview. PCB officials will give approval to those storage yards considering the suitability aspects. This beach area to be cleaned falls under the purview of around 13 LSGIs. So the representatives from LSGIs must identify the temporary storage areas and KSPCB will inspect or check the yard to confirm it's suitability. The salvaging company must have to ensure safe transfer of the materials from the sea shore to these temporary yards. In the SOP issued by KSDMA, the salvaging company has to coordinate with the Customs Department for verification. After the formalities are completed, these materials are to be transferred from temporary storage yards to KEIL by the salvaging company itself. KSPCB will specify a manifest system to ensure that the materials reach KEIL safe and secure. Also if the plastic nurdles are filled with sand, shipping company must clean the materials from sand and has to transport it to temporary yards. Also all the logistics and expenses for the transportation of the plastic nurdles from sea shore to temporary yards and from there to KEIL should be borne by shipping company and KSPCB will supervise all these. KEIL will store these materials till it's final disposal.

Mr. Thomas Sturgeon, ITOPF, delivered a powerpoint presentation showing the shore line clean up taken up so far. The materials are collected, sorted, safely packed and ready for transportation. Some pellets are small and round and some are long and tubular shaped. He also added it is understood that it takes nearly 8 hours to transport the materials to KEIL.

Mr N K Pillai,. KEIL informed that,KEIL can facilitate for temporary storage of plastic pellets only and that too in an open area without roofing. They don't have any facilities for final disposal of such materials.

MERC official enquired with Chairperson about the final disposal of plastic pellets. He also requested KEIL to give a letter pointing out that KEIL can be used as a temporary storage space and that they cannot facilitate final disposal.

Mr. N K Pillai, KEIL agreed to issue a letter as requested. He also added that KEIL has a secured landfill for hazardous material but not for plastic materials.

Chairperson, KSPCB informed that the State Government has instructed that the plastic nurdles have to be transported to KEIL. For any deviation from the above instructions, approval from State Government has to be obtained and that the matter has to be taken up with Secretaries of LSGD/ Environment Department and KSDMA.

MERC official opined that the decision for transportation of plastic nurdles to KEIL which does not have a final disposal facility may be reconsidered. He also added that they will coordinate with LSGIs for identifying the temporary storage area. He also enquired with KSPCB about the final disposal procedure.

Chairperson replied that in this particular case, we need to follow very detailed procedures in consultation with the State Government because of the possible legal implications and that the general procedure of plastic disposal cannot be adopted.

Ms. Sareena Rahman, Joint Director, LSGD, Trivandrum District, who had participated in the meeting of the District Collector on 06.06.2025 informed that the instructions were given to

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EBY VARGHESE
Senior Environmental Engineer

LSGIs to identify the storage areas. All the related expenses will have to be met by the salvaging company.

MERC official requested Joint Director, LSGD to help identify the warehouses immediately and to make available the necessary details for entering into an MoU with the concerned.

Mr. Muhammed Huwais M. , JD, LSGD replied that he will discuss this matter with their Government Secretary and do the needful.

MERC officials stated that they will request Trivandrum District Collector to conduct a meeting with all the stakeholders on 9/6/2025 regarding the plan of storage and further disposal of plastic nurdles in line with KSPCB.

The MERC official informed that a temporary storage warehouse is required first, following which a final disposal plan has to be formulated in coordination with the PCB. Answering a query raised by Shri Muhammed Huwais, MERC official stated that nurdles are being temporarily stored on the beach, and emphasized the immediate need for storage facilities in two or three areas to shift the material. MERC official further mentioned that, as per the SOP published by the Government , shifting to KEIL and final disposal would be done subsequently. Shri Muhammed Huwais informed that the arrangement of temporary storage facility will be addressed soon after necessary discussions.

The Joint Director, LSGD informed that directions were already issued on 06.06.2025 to seven LSGIs to identify potential storage areas and informed that in some areas the quantity of nurdles is low and would only require small-scale storage and further suggested that a representative from MERC should communicate the exact storage space requirements to the concerned Secretaries, so they can plan accordingly.

Shri N K Pillai suggested that the plastic nurdles can be utilized for manufacturing purposes or could be sent to plastic recyclers or to cement kilns for co-processing.

The Chairperson emphasized that once the LSGD identifies the warehouse, PCB officials will inspect the safety and security aspects, take stock of the collected nurdles, and create a database. After the formalities of Customs Department are completed, the nurdles will be transported to KEIL. The Chairperson stressed that collection of plastic nurdles from beaches must be carried out in an environmentally sound manner, with least effect on the beach ecosystem, for which advice from Shri. Muralee Thummarukudy has to be considered. She further enquired whether there is a mechanism to continuously collect nurdles being washed ashore. In reply, ITOPF informed that the beaching of nurdles may continue for several months and hence beach cleaning activities will have to go on further until the deposition of the nurdles decreases to a minimum level. Chairperson further informed MERC officials that all locations where nurdles are currently stacked in sacks must be geotagged, with proper documentation, photographs, and waterproof labelling. It was further stated that the warehouse must also be geotagged for record-keeping.

MERC officials requested a face-to-face meeting on Monday involving all concerned stakeholders. The MERC team confirmed their commitment to providing daily updates, and reiterated that disposal will be done in accordance with Government guidelines.

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KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

Shri Krishnan M.N., Chief Environmental Engineer, KSPCB, enquired about the cleanup techniques being used to remove the nurdles, the technology being deployed for cleaning the nurdles, and whether further sorting would be done at the temporary storage sites. In response, Mr. Thomas explained that a range of techniques—from basic to sophisticated—are being considered, and detailed documentation outlining these methods will be shared at the meeting on Monday. He also proposed conducting a joint survey to show the techniques that will be used on-site. Shri Thomas added that cleaning would primarily be done at the shore itself, though some limited work might be required at the warehouses.

Smt. Rema Devi, Environmental Engineer, KSPCB, highlighted the need for data on the recyclability and reusability of the collected nurdles to develop an effective disposal plan. She enquired whether ITOPF would be able to provide this information. The ITOPF official confirmed that they would be able to do so and noted the importance of a technical meeting to understand the specific criteria of PCB. He also assured that MERC would quantify the materials that will be collected.

The following decisions were taken:

1. Secretaries of LSGIs with the advice of LSGD shall identify temporary storage yards and inform KSPCB and the salvaging firm. **(Action : LSGIs, LSGD)**
2. Inspection and approvals for temporary storage yards. **(Action : KSPCB)**
3. The salvaging firm shall enter into MoU with storage yards and transfer materials from the beach to the temporary yards. **(Action : MERC)**
4. Beach cleaning activities, collection of materials, labelling and geotagging and storage at temporary yards shall be properly documented under the supervision of KSPCB. **(Action : KSPCB, MERC)**
5. MERC has to submit transportation plan to KSPCB. **(Action : MERC)**
6. Approval for transportation plan made by the salvaging firm shall be done by KSPCB. **(Action : KSPCB)**
7. Transportation of materials to KEIL following the manifest system as per directions of KSPCB. **(Action : MERC)**
8. The salvaging firm shall bear the expenditure and arrange the logistics for transferring the materials to the storage yards and further transport to KEIL. **(Action : MERC)**
9. The entire activity shall be carried out in an environmentally sound manner. **(Action : MERC, ITOPF)**

It was decided that follow up meetings will be taken up soon and the entire procedure will be finalized. The meeting concluded at 12:30 pm.

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KERALA STATE POLLUTION CONTROL BOARD

CHAIRPERSON, KSPCB

EBY VARGHESE
Senior Environmental Engineer

Exhibit R7(z3)

PROCEEDINGS

Sub: Constitution of the committee in connection with the preparation of the State Oil Spill Contingency Plan - Sanctioned – orders issued

KERALA STATE POLLUTION CONTROL BOARD

No.PCB/HO/TAMS/19/2005 Thiruvananthapuram, Dated 18 .11.2016

Read: 1. The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996

2. Letter No3281/B2/12/Envt. dated 24.06.2016 from the Additional Chief Secretary, Environment Department

ORDER

As per the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, crisis groups have to review the status of onsite and offsite emergency plans. A review meeting was held by the Additional Chief secretary, Environment on 16.06.2016 to review the level of preparedness of major accident hazard units to deal with chemical accidents. In the meeting, it was decided that Kerala State Pollution Control Board in association with the Central Coast Guard shall prepare oil spill emergency plan for the State and furnish it to government for approval.

Notice inviting Expression of Interest (EOI) from competent parties was published in the dailies on 18.10.2016 and is being processed with expert opinion. In the above circumstances, a committee is constituted, with the following members in connection with the preparation of the State Oil Spill Contingency Plan.

1. The Officer-in-Charge MRSC
   Kochi Headquarters , Coast Guard
   or his representative - Member
2. Chief Manager, BPCL-Kochi Refinery
   or his representative - Member
3. Member Secretary
   Kerala State Disaster Management Authority - Member
4. Chief Environmental Engineer-1,
   Kerala State Pollution Control Board
   Head Office, Thiruvananthapuram - Member

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Senior Environmental Engineer

5. Chief Environmental Engineer
   Kerala State Pollution Control Board
   Regional Office, Ernakulam - Member
6. Accounts Officer
   Kerala State Pollution Control Board,
   Head Office, Thiruvananthapuram - Member

Environmental Engineer-1, Kerala State Pollution Control Board, Head Office shall be the member convenor of the committee.

The committee shall verify the proposals and recommend further course of action. Expenditure of the Committee shall be met from the head of account 'Contingency' from the current year's budget.

Sd/-
CHAIRMAN

To

1. The Officer-in-Charge MRSC
   Kochi Headquarters
   Coast Guard , District No. 04 (Kerala)
   Fort Kochi Kerala – 682001
   0484-2218969, 2217164
2. The Member Secretary
   Kerala State Disaster Management Authority
   Second Floor, Revenue Complex
   Public Office Building, Opp. Museum
   Thiruvananthapuram, Kerala 695033
   Phone:0471 233 1345
3. The General Manager
   BPCL- Kochi Refinery
   Ambalamugal, Kochi, Kerala 682302
4. The Chief Environmental Engineer-1, Kerala State Pollution Control Board, Head Office , Thiruvananthapuram
5. The Chief Environmental Engineer, Kerala State Pollution Control Board, Regional Office , Ernakulam
6. The Accounts Officer, Kerala State Pollution Control Board, Head Office
7. The Environmental Engineer-1, Kerala State Pollution Control Board, Head Office

Copy to:

1. Additional Chief Secretary, Environment Department
2. Stock file

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KERALA STATE POLLUTION CONTROL BOARD

FORWARDED / BY ORDER

EBY VARGHESE
Senior Environmental Eng

ENVIRONMENTAL ENGINEER – 1

Exhibit R7(z4)

MINUTES OF THE EXPERT COMMITTEE FIRST MEETING (HYBRID) HELD ON 2/6/2025 AT 2:30 PM

The Chairperson, KSPCB chaired the meeting and welcomed all committee members. The meeting commenced at 2:30 P.M in the chamber of Chairperson. The Committee members introduced themselves.

The following members were present.

1. Commandant (JG) Deependra Chauhan, 4212-V, Indian Coast Guard Station Vizhinjam
2. Shri. Jeevanand M., Mechanical Marine Engineer(I/C), Kerala Maritime Board
3. Capt. Sam Abraham, Manager, Marine Pollution Control, Cochin Port Trust
4. Shri. Anoop Johny, Manager – HSE, Port Terminal, India Gateway Terminal Pvt. Ltd, Kochi
5. Capt. G P Shenoy, Nautical Surveyor-cum-DDG (Tech), Mercantile Marine Department, Kochi
6. Er. Kalaiarasan P., Environmental Engineer, Directorate of Environment & Climate Change, Thiruvananthapuram
7. Senior Environmental Engineer-1, Head Office, KSPCB
8. Senior Environmental Engineer-2, Head Office, KSPCB
9. The Accounts Officer, Head Office, KSPCB
10. Assistant Engineer-13, Head Office, KSPCB (Convenor)

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KERALA STATE POLLUTION CONTROL BOARD

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Senior Environmental Engineer

Chairperson briefed the background-of preparation of Oil Spill Emergency Plan (OSCP) since 2016. The Government had entrusted KSPCB to prepare Oil Spill emergency plan for the state in association with the Indian Coast Guard in par with National OSCP. In the present re-tendering, 2 bids were received - one from M/s. KITCO and other from M/s. Environ Software Private Limited.

Captain Sam Abraham from Cochin Port Authority said that the 7th point under the heading Salient Features and Scope of Work in the tender document is not necessary. Chairperson replied that, tender document was prepared in consultation with the Indian Coast Guard.

EE, DoECC said that in the tender document of KSPCB it is only mentioned about 590 km of coastal line and the entire coast is prone to oil spill disasters. He opined that the intrusion of tidal effects into inland water bodies must also have to be taken into consideration and the scope of work includes the riverine system extending upto 40 km towards the inland or till the tidal effect is evident, whichever is more.

SEE-2, HO informed that tender document was prepared in consultation with all stakeholder departments/agencies.

The Committee suggested to invite two bidders for the detailed-presentations before the technical committee.

Commandant (JG), ICG suggested to share tender document to all committee members, so that they can study and make a compliance matrix which will help to clarify doubts during bidders presentation.

Chairperson concluded the meeting at 3:30 pm informing that PCB will share the soft copy of tender document and the proposals received to all committee members. She further stated that the bidders will be invited to be present before the committee on 10.06.2025 for making presentations.

CHAIRPERSON

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Senior Environmental Engineer

1.Commandant (JG) Deependra Chauhan, 4212-V, Indian Coast Guard Station Vizhinjam

2. Shri. Jeevanand M., Mechanical Marine Engineer(I/C), Kerala Maritime Board

3. Capt. Sam Abraham, Manager, Marine Pollution Control, Cochin Port Trust

4. Shri. Anoop Johny, Manager – HSE, Port Terminal, India Gateway Terminal Pvt. Ltd, Kochi

5. Capt. G P Shenoy, Nautical Surveyor-cum-DDG (Tech), Mercantile Marine Department, Kochi

6. Er. Kalaiarasan P., Environmental Engineer, Directorate of Environment & Climate Change, Thiruvananthapuram

7. Senior Environmental Engineer-1, Head Office, KSPCB

8. Senior Environmental Engineer-2, Head Office, KSPCB

9. The Accounts Officer, Head Office, KSPCB

10. Assistant Engineer-13, Head Office, KSPCB (Convenor)

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Senior Environmental Engineer

Exhibit R7(z5)

MINUTES OF THE EXPERT COMMITTEE SECOND MEETING HELD ON 10.06.2025 AT 2:30 P.M –REGARDING THE EVALUATION OF TECHNICAL BIDS

The meeting commenced at 2:30 P.M in the chamber of Chairperson, KSPCB as the chair. The following members were present;

Committee Members

1. Sri. P. Kalaiarasan , Environmental Engineer (EE), DoECC
2. Capt. G P Shenoy, Nautical Surveyor-cum-DDG (Tech), Mercantile Marine Department
3. Capt. Sam Abraham, Manager, Marine Pollution Control, Cochin Port Authority
4. Sri.Jeevanand M, Mechanical Marine Engineer, KMB
5. Sri.P.Vijayakumar, Retd. IndianCoast Guard (ICG)official
6. Sri. Deependra Chauhan, Commandent, ICG
7. Sri. Anoop Johny, Manager, DP World
8. Smt. Viji.V.Vijay, ACO, KSPCB
9. Sri.Krishnan.M.N, CEE, Head Office
10. Smt.Sumithra.S. CEE, Regional Office, Thiruvananthapuram
11. Smt.Ramya.G, SEE-1, Head Office, KSPCB
12. Sri.Eby Varghese, SEE-2,Head Office, KSPCB

Representatives of bidders

1. Dr. P.V. Benjamin, KITCO Ltd, Thiruvananthapuram
2. Dr. K.P.S Nair, KITCO Ltd, Thiruvananthapuram
3. Sri. Vinod Kumar. L, Expert, KITCO Ltd, Thiruvananthapuram
4. Ms. Annu Antony, Consultant, KITCO Ltd, Thiruvananthapuram
5. Sri. V, Kesava Das, EIA Coordinator, KITCO Ltd, Thiruvananthapuram
6. Dr. G.S. Reddy, Managing Director, Environ Software Pvt. Ltd
7. Sri. G.S. Pavan, Ocean Engineer, Environ Software Pvt. Ltd

The Chairperson welcomed all committee members. As per the 1st Expert Committee meeting decision the bidders M/s. KITCO and M/s. Environ Software Private Limited

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KERALA STATE POLLUTION CONTROL BOARD

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Senior Environmental Engineer

were invited for presentation. The summary of presentation and discussion points are given below:

TECHNICAL BID OF M/s. KITCO Ltd.

KITCO presented the project proposal, covering aspects such as oil spill threats, oil pollution preparedness, and various oil spill contingency plans. They also highlighted the contribution of NOS-DCP in preparing documents for oil spill disaster contingency planning. Furthermore, KITCO discussed their current proposal for developing a state-level oil spill contingency plan for the State of Kerala, in line with the latest Indian Coast Guard guidelines. The proposal also outlined the scope of work and the proposed methodology, which includes strategy formulation, operational actions, and the development of a comprehensive data directory. M/s KITCO stated that they have prepared an oil spill contingency plan for coastal line of Gujarat extending to 1600km.

The queries of EE, DoECC and replies given by KITCO follow:

Extent of the Oil Spill Contingency Plan (OSCP) as mentioned in Task 2 of the project proposal is not clarified. KITCO replied that they intend to cover 590 km of the Kerala Coast. They also expressed concern that the riverine systems have to be mentioned in the study extending 40km inland where tidal effect is evident or whichever is more.The EE, DoECC, said that the study must include areas up to a maximum of 40 km inland of tidal effect. He also pointed out that,as per Task 2, the project proposal does not include any primary data collection related to coastal, marine, meteorological parameters and other relevant data, nor does it include model validation based on such primary data.

As per Coastal Zone Management Plan (CZMP) 2019, all the tidal influenced water bodies must be taken into account. The Chairperson enquired who would be responsible for the riverinesystem extending up to 40 km. The EE, DoECC, replied that the responsibility lies with the concerned local bodies.The Chairperson directed KITCO to clearly mention in the plan that the local bodies are responsible for the riverine system extending up to 40 km.The EE, DoECC, also added that in Task 2 of the proposal, it is mentioned that the riverine modelling will be studied based on secondary data.

Clarification was sought on the secondary data especially the parameters and duration, frequency etc., intend to use for the modelling, and the modelling software. KITCO replied that the software used is 'GENUME'. The EE, DoECC noted that this information was not mentioned

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Senior Environmental Engineer

in their proposal. KITCO further clarified that the secondary data they intend to use is IMD (India Meteorological Department) data, covering a duration of one year. and the secondary data parameter is surface water characteristics. The EE, DoECC, then enquired about the inclusion of the INCOIS trajectory model in their proposal and asked how their proposed model would differ from the INCOIS model in the event of an oil spill and that the bidder should explain it in writing.

The environmental attributes covered in the Environmental Sensitivity mappingwas enquired. Proponent replied that three factors are included in the sensitivity mapping:

i)Shoreline characteristics such as sand, beaches, rocky coasts, marshes, etc.

ii) Biological resources – including coastal and sub-tidal habitats.

iii) Human resources/receptorssuch as bathymetric contours, administrative towns and villages, administrative limits, place names, roads, railway lines, and major infrastructure.

The EE, DoECC, further enquired about the inclusion of ecologically sensitive areas as classified in the Coastal Regulation Zone Notification. KITCO responded that those areas will also be included. The Chief Environmental Engineer (CEE), Regional Office (RO), Thiruvananthapuram, pointed out that the proposal mentions: "Based on the inventory, the environmental sensitivity of the port limit would be complied with the preparation of an Environmental Sensitivity Index (ESI) map." KITCO clarified that the mapping is not confined to the port limits alone, but will also cover theentire stretch of the coast.

Proponent was asked for an explanation regarding the oil spill sensitivity mapping of the Gulf of Kutch as shown in the proposal. However, KITCO was unable to provide a proper explanation. The EE, DoECC, further raised the following queries with respect to Task 2 of the project proposal:

a) Types of marine environmental conditions and coastal zone charecteristics are being considered

b) Whether scope is limited only to the port limits

He also noted that these aspects are not clearly addressed in the project proposal submitted by KITCO.

M/s KITCO clarified that the contingency plan will be prepared based on scope of work as per the tender document. EE, DoECC instructed that the plan shall be prepared as per scope of work in the tender document.

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M/s KITCO ensured that provisions for training and support will be given. Capacity building will be given during all phases covering all aspects.

As per the proposal it is mentioned that the Incident Management Mechanism would be formulated and will be presented before the port authorities. CEE, RO TVM asked whether this is to be presented before port authorities or State Govt. M/s KITCO clarified that the Incident Management Mechanism would be formulated and presented before the State Govt.

Chairperson opined that all clarifications shall be collected from proponent in written form.

CEE RO TVM opined that the Environment Sensitivity Index Mapping is to be done along the entire coast under consideration and not restricted to port limits. M/s KITCO agreed on the matter and ensured to make necessary corrections in the proposal.

The committee members instructed that any corrections as suggested by the Indian Coastguard shall be made in the proposal and the proponent is bound to ensure the same. Technical assistance shall be extended up to the final approval of contingency plan by Indian Coast Guard.

The committee members enquired about the duration required for the preparation of contingency plan. The proponent agreed to complete the same by 8 months from the date of award of work and release of first installment. The committee members also informed that financial commitments will be done according to Store purchase rules.

Mechanical Marine Engineer, Kerala Maritime Board asked to ensure that all pages of bid received shall be signed and submitted by proponent. He also enquired about the exemption of Earnest Money Deposit and Tender fee for M/s KITCO, the same was clarified.

The committee members also verified the validity of MSME certificate of the bidder.

TECHNICAL BID OF M/s. ENVIRON SOFTWARE PVT. LTD

Dr. G.S. Reddy, Managing Director of Environ Software Pvt. Ltd., conveyed that their firm had submitted a proposal in response to the tender issued by the Kerala State Pollution Control Board on 30th September 2024 for the preparation of an Oil Spill Contingency Plan (OSCP) for the Kerala coast. He stated that the company had experience in conducting similar studies and was confident in executing the proposed work as per the defined scope.

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He explained that the OSCP would be prepared in accordance with the guidelines of the National Oil Spill Disaster Contingency Plan (NOS-DCP) of 2015, 2018, and 2024. The objective of the study, as presented, included controlling and mitigating oil spills, protecting marine and coastal environments, conducting hydrodynamic and oil spill modelling, and preparing Environmental Sensitivity Index (ESI) mapping and Net Environmental Benefit Analysis (NEBA).

Dr. Reddy further mentioned that the study would cover the entire 590 km of Kerala's coastline, including riverine systems affected by tidal influence. The deliverables, would be completed in a period of eight months, and would consist of inception, draft, and final reports, incorporating stakeholder feedback.

The methodology was outlined to include literature review, data collection, model calibration and validation, oil spill simulation under various scenarios, and development of detailed response strategies. He affirmed that the plan would align with international standards and best practices as recommended by bodies like IMO and IPIECA

EE, DOECC enquired about bathymetric depth and its interval in task 2 of the proposal. The proponent replied that bathymetric data will be collected at 500m intervals along the seacoast upto the depth of 100m offshore. He further added that in the shore side the same will be carried out at 25 m grid interval and 2m depth.

EE, DOECC asked the duration and season to carry out bathymetry and analysis also the equipments proposed to accomplish the survey. The proponent replied that they are proposing bathymetric study only as per requirement and wherever the data available the same will be used for the contingency plan. EE, DOECC asked for further clarification in the matter and proponent said that they are having data for 60km stretch and bathymetric study is to be done for balance 530 km.

The secondary data source and the list of parameters enquired by EE, DoECC and the proponent replied that the available authenticated data will be used for modelling and duration of data collection proposed is minimum period of 5 years and may be extended based on the availability.

Regarding frequency of offshore deployment, monitoring and the instruments used for collecting the data was enquired by EE, DOECC. The proponent said that they are using current

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meter and monitoring duration is 15 days. The proponent also stated that tidal characteristics can also be simulated in the model for offshore deployment.

The Committee members suggested that the scope of the study as reported in the bid document for 24 kms towards seaward side is to be corrected to 12 nautical miles.

The committee noted that as per the tender document inception report should be submitted within 15 days of payment.

CEE RO TVM opined that necessary corrections shall be made in the proposal up to the final approval of contingency plan by Indian Coast Guard. The proponent agreed to the same.

Sri.P Vijayakumar enquired about chemical pollution mentioned in the proposal. Proponent clarified that they have dispersion model and the same will be used to assess the hazardous chemical dispersion.

Sri.P Vijayakumar suggested KSPCB that the agreement shall be signed between the parties after incorporating all points discussed in the meeting.

Sri. P Vijayakumar also suggested that the Oil Spill Contingency Plan shall be prepared as per NOS-DCP in force and also the agreement will be in effect till the Oil Spill Contingency Plan shall be approved by Indian Coast Guard.

The meeting concluded at 4:30pm. The committee approved both the technical bids and decided to open the financial bids.

KERALA STATE POLLUTION CONTROL BOARD

CHAIRPERSON

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EBY VARGHESE
Senior Environmental Engineer

1. Sri. P. Kalaiarasan , Environmental Engineer (EE), DoECC

2. Capt. G P Shenoy, Nautical Surveyor-cum-DDG (Tech), Mercantile Marine Department

3. Capt. Sam Abraham, Manager, Marine Pollution Control, Cochin Port Authority

4. Sri.Jeevanand M, Mechanical Marine Engineer, KMB

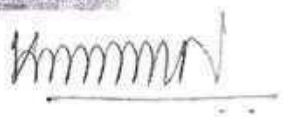
5. Sri.P.Vijayakumar, Retd. IndianCoast Guard (ICG)official

6. Sri. Deependra Chauhan, Commandent, ICG

7. Sri. Anoop Johny, Manager, DP World

8. Smt. Viji.V.Vijay, ACO, KSPCB

9. Sri.Krishnan.M.N, CEE, Head Office



10. Smt.Sumitra.S. CEE, Regional Office, Thiruvananthapuram

11. Smt.Ramya.G, SEE-1, Head Office, KSPCB

12. Sri.Eby Varghese, SEE-2,Head Office, KSPCB

KERALA STATE POLLUTION CONTROL BOARD

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Senior Environmental Engineer

Exhibit R7(z6)

☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
e-mail: chn.kspcb@gov.in; ms.kspcb@gov.in FAX: 2318152 web: kspcb.kerala.gov.in
K[illegible]STATE POLLUTION CONTROL BOARD
സ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്
Pattom P.O., Thiruvananthapuram – 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

KSPCB/127/2022-EE-5 Date: 27.06.2025

From
Chairperson

To
Dr. G S Reddy
Managing Director,
Environ Software (P) Ltd,
60/4, Environ Towers/4th Floor,
Hosur Main Road,
KonappanaAgrahara,
Electronic city,
Banglore

Sub: Work Order - Environ Software Pvt. Ltd for the preparation of Oil Spill Contingency Plan for shoreline clean up for the state of Kerala

Ref: 1. Tender id: 2024_KSPCB_687146_1
2. Bidder Id: 1988094

Sir,

Your offer for the preparation of Oil Spill Contingency Plan (OSCP) for shoreline clean up for the state of Kerala is accepted subject to the conditions mentioned herein. Please effect the OSCP according to the instructions in the note below and the conditions mentioned in the list of acceptance.

1. An agreement has to be executed by you on a non-judicial Kerala stamp paper of value minimum Rs.500/- (stamp duty to be paid by the successful bidder) within 15 days from the date of acceptance of the bid. Security Deposit will be @ 2.5% of the gross amount of each running bill so that the amount so retained shall be 2.5% of the value of the work done till then. The security deposit should be paid on or before the due date fixed by the KSPCB in the form of DD drawn in favour of Kerala State Pollution Control Board payable at Thiruvananthapuram.

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Senior Environmental Engineer

2. The amount collected at the time of executing contract agreement will be 5% of the contract value and the deposit will be retained till the expiry of Defect Liability Period, that is one to two years after completion of work. At least fifty percent (50%) of this deposit shall be collected in the form of Treasury Fixed Deposit and the rest in the form of Bank Guarantee or any other forms prescribed in the revised Kerala PWD Manual.

3. You shall ensure that the work is completed within a period of 8 months from the date of release of first instalment and the technical assistance shall be provided for the approval of the Indian Coast Guard (ICG) and shall pay an amount equal to 1 percent of the total cost of the work as compensation, for every month delay after the due period, provided that the entire amount of compensation to be paid under the provisions of this clause shall not exceed 10 percent of the total cost of the work.

4 In case dispute arises while work is in progress or after the completion, matter shall be referred to the Chairperson, Kerala State Pollution Control Board for decision. The decision of Chairperson, KSPCB will be final.

5. The OSCP shall include mapping of Environmental Sensitive Index of oil spills at the seacoast of Kerala, preparation of response focused oil spill contingency plans and associated documentation including:

1. Crisis Management Plans
2. Marine Emergency Response Plans
3. State Oil Spill Contingency Plans
4. Oil Spill Contingency Planning Guidelines (Indian Coast Guard, industries)
5. Oil Spill Contingency Plans (site-specific, regional and corporate)
6. Wildlife Response Plans
7. Ship Board Pollution Emergency Plans
8. Tactical Oil Spill Booming/ Site Response Plans

6. Following are the aspects that should be highlighted in the Oil Spill Contingency Plan.

1. Incident Reporting - who to report, whom to report
2. Measures to make the locals aware of the incident
3. Mitigation measures to be followed
4. Policy and responsibility of various departments/ agencies and their contact details

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Senior Environmental Engineer

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5. Oil spill risks and protection priorities
6. Shoreline oil spill response elements
7. Shoreline response operations
8. Administrative action for shoreline clean-up
9. Machines/ Equipments to be kept available in each department
10. Availability of control equipments in ports, harbours, etc. and their contact details
11. Custodian of machines/ equipments and his/her contact details
12. Deployment of machines/ equipments in cleaning operations
13. Compatibility of equipments
14. Data base of Authorities to be contacted in case of oil spill
15. Data base of available machinery/ equipments for cleaning
16. Important telephone directory & Institutional arrangements
17. Arrangement of periodic mock drills
18. Necessity to contact Indian Coast Guard (ICG) for advice/ assistance
19. Keeping ICG appraised of actions being taken
20. Safety measures to be followed
21. Meeting of Task Force
22. Cleaning on beaches
23. Manual cleaning of waste
24. Transportation of waste
25. Disposal of waste
26. Collection and accumulated oil in breaches, temporary storage and final disposal of the same
27. Inspection at the site
28. Rock boulders cleaning
29. Medical camps
30. Filing case against the accused
31. Formation of volunteer groups
32. To identify the areas along the coast for oil spill that may occurdue to the operation of fishing boats, boats, ships

KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

33.To identify all areas along the coast which are environmentally vulnerable, due to bunkering of fuel by numerous numbers of boats, beaches, fishing haven, water intakes, etc.

34.To seek help and assistance from the Nodal agencies like Coast Guard, Navy who will be of assistance if needed, to control the spread of oil spill

35.To assess the availability of boats / aerial surveillance, etc., if needed to monitor and control the oil spread.

36.Detailed plan with chain of command, duties and responsibilities, contact details, list of all available resources, useful outside agencies and their field of expertise and how to get their help ifneeded, etc.

37.Arrangement with private agencies who deal with oil spill cleaning jobs.

38.Decide on the responsible officers in charge to collect information regarding spill, command centre, response team, implementing control measures, availability of resources. Their contact details shall be available.

39.Procure and stock a reasonable amount of shoreline clean up equipment at nearby locations of all vulnerable areas in line with direction with Indian coast guard.

40.Decide on the other agencies that will be of assistance if needed, to control the spread of spill and reduce the damages.

41.Indian Coast Guard is the Nodal agency for oil spill response and management in Indian Waters. Point of contact shall be specified. The details of responsible officers shall be included.

42.Bunkering Operation

43.Model Study to analyze the likely impact & develop a mitigation plan

44.KCZMA has prepared the Coastal Zone Management plan with regard to ecologically fragile areas, details of tourist spots, harbour, fishing landing centres, etc. and it can be used from the plan for preparing the contingency plan

45.The entire area, where the CRZ notification is made applicable shall be included in the plan as CRZ areas are basically the areas having tidal influence.

46.Shoreline Oil Spill response and operations

47. Inland water body Oil Spill response and operation methodology

48.Administration & funding for coastal and inland ecological profiling including cost for clean up

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Senior Environmental Engineer

49.Oil Spill Response Management Team

50.The oil spill contingency plan shall be prepared with due regard to the relevant international best practices, international conventions, and domestic legislations and National Oil Spill Contingency Plan.

51.The nature of the possible threat including the worst case scenario, and the resources consequently at risk shall be realistically assessed bearing in mind the probable movement of any oil spill.

52.The priorities for protection shall be fixed taking into account theviability of the various protection and clean-up options.

53.The strategy for protecting and cleaning the various areas shall be clearly explained.

54.The necessary organizations shall be outlined, the responsibilities of all those involved shall be clearly stated and all those who have a task to perform shall be aware of what is expected of them.

55.The levels of equipment, materials and manpower sufficient to deal with the anticipated size of spill shall be clearly explained. If not, back-up resources shall be identified and, wherever necessary, mechanisms for obtaining their services and entry to the country shall be established.

56. Temporary storage sites and final disposal routes for collected oil and debris shall be identified.

57.The alerting and initial evaluation procedures shall be fully explained as well as arrangement for continual review of the clean-up operation shall be explained.

58.The arrangements for ensuring effective communication between shore, sea and air shall be described.

CONDITIONS

1. ERA5 provides horizontal resolution of 39km. Keep the grid size of 4 km × 4 km or better to ensure the higher accuracy.

2. To do the model calibration minimum 30 days data of spring and neap tides should be used instead of 15 days.

EBY VARGHESE
Senior Environmental Engineer

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Senior Environmental Engineer

3. A minimum number of 10 sampling locations in the offshore and atleast each one sample from the tidal influenced water bodies shall be collected and analysed.
4. The geodetic datum WGS 84 shall be converted into UTM with orthometric height (With respect to MSL) by applying correction as per the Survey of India Benchmarks.
5. Survey transects shall be planned at 500 m intervals in 12 nautical miles.
6. It is directed to complete the OSCP with the following additional conditions;
    - *The methodology stipulated in the project proposal shall strictly be performed;*
    - *All the conditions specified in the tender document and the Terms of Reference (ToR) issued by the KSPCB shall becomplied.*
    - *Both the primary and secondary data used for the preparation of the Oil Spill Contingency Plan (OSCP) shall be shared with KSPCB.*
    - *The model inputs, outputs and expected outcomes, for the modules/software proposed shall be discussed separately in the report.*
    - *Field photographs including details such as latitude, longitude, date and time shall be included in the report.*
    - *No secondary data shall be provided by the KSPCB.*
    - *The total financial commitment of the work study should be limited to the quoted amount of financial bid.*

Yours faithfully,

CHAIRPERSON

KERALA STATE POLLUTION CONTROL BOARD

EBY VARGHESE
Senior Environmental Engineer

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