



REPORT ON THE OSMAG-KPA-TKL MARINE EMERGENCY RESPONSE TRAINING & TIER II DRILL CONDUCTED IN NOV 2016

Tuesday 22nd – Thursday 24th November 2016

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Environment Manager

OSMAG/KPA/TKL MARINE EMERGENCY RESPONSE TRAINING & TIER II DRILL – 22ND - 24TH NOV 2016

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ii.) Abbreviations

Description	
OSMAG	Oil Spill Mutual Aid Group
OSRAT	Oil Spill Response & Action Team
IAP	Incident Action Plan
NOSCP	National Oil Spill Contingency plan
OSCP	Oil Spill Contingency Plan
PPCO	Principal Pollution Control Officer
MPCC	Marine Pollution Control Centre
ICC	Incident Command Centre
KMA	Kenya Maritime Authority
NEMA	National Environment Management Authority
KEMFRI	Kenya Marine Fisheries Research Institute
ERC	Energy Regulatory Commission
KPA	Kenya Ports Authority
TKL	Total Kenya Limited

OSMAG/KPA/TKL MARINE EMERGENCY RESPONSE TRAINING & TIER II DRILL – 22ND - 24TH NOV 2016

ii.) Abbreviations

Description	
OSRL	Oil Spill Response Limited
MJT	Mombasa Joint Terminal
LOBP	Lube Oil Blending Plant
KOT	Kipevu Oil Terminal
SOT	Shimanzi Oil Terminal
OSC	On Scene Commander
LPG	Liquefied Petroleum Gas
OSMAG TC	OSMAG Technical Coordinator
OSMAG TA	OSMAG Technical Assistant
HFO	Heavy Fuel Oil
HSEQ	Health Safety Environment & Quality

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ii.) Summary

- **The Marine Emergency Response (MER) training and drill was organized jointly by the Kenya Ports Authority, Total Kenya Limited & OSMAG Society**
- **The schedule of events was as follows:**
 - **Tuesday 22nd Nov 2016 – Classroom theoretical training at the Royal Court Hotel**
 - **Wednesday 23rd Nov 2016 - Practical training at the KPA Marine Pollution Control Centre on the different types of oil spill response equipment and how to operate them.**
 - **Thursday 24th Nov 2016 – Desktop exercise followed by the emergency response simulation drill at the KPA Marine Pollution Control Centre**
- **There were 60 participants from 30 organizations and stakeholder agencies but the number rose to more than 80 participants on the day of the drill. This was attributed to additional staff from KPA who led the teams and manned the mooring boats, tug boats and crafts.**
- **The equipment deployed included a tug boat, mooring boats, a craft from the Marine Police, a boom, skimmers and dispersants application equipment.**

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ii.) Summary

- **The simulation drill exercise was based on a real time accident scenario involving a tanker vessel carrying heavy fuel oil (HFO) for TKL which collided with one of the port wharfs resulting to serious damage on its hull and resulting to discharge of an estimated 80 metric tons of HFO into the sea.**
- **The Incident Command Centre (ICC) was set up at the KPA Marine Pollution Control Centre (MPCC).**
- **Total Kenya Limited convened their Crisis Management Cell (CMC) at their head office, Regal Plaza, Nairobi in line with their emergency response procedures.**
- **The ICC at the MPCC was comprised of the following:**
 - ✓ **The OSMAG TC who was the team leader**
 - ✓ **One staff each from KPA, the Kenya Navy and the Maritime Police**
 - ✓ **The TKL HSEQ Manager, Environment Manager and the Coast and LOBP HSEQ Engineers**

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iii.) Acknowledgements

- ▶ **Total Kenya Limited extends its sincere gratitude to the Kenya Ports Authority, the OSMAG Technical Coordinators, OSMAG Members, and the following parties/stakeholders who participated in the drill:**
 - ▶ **1.) The Kenya Maritime Authority (KMA)**
 - ▶ **2.) The Kenya Navy**
 - ▶ **3.) The Maritime Police Unit**
 - ▶ **4.) The Energy Regulatory Commission (ERC)**
 - ▶ **5.) Kenya Wildlife Services – Coast Conservancy Area**
 - ▶ **6.) Kenya Forests Services**
 - ▶ **7.) Kenya Ferry Services**
 - ▶ **8.) The Mombasa County Fire Brigade**

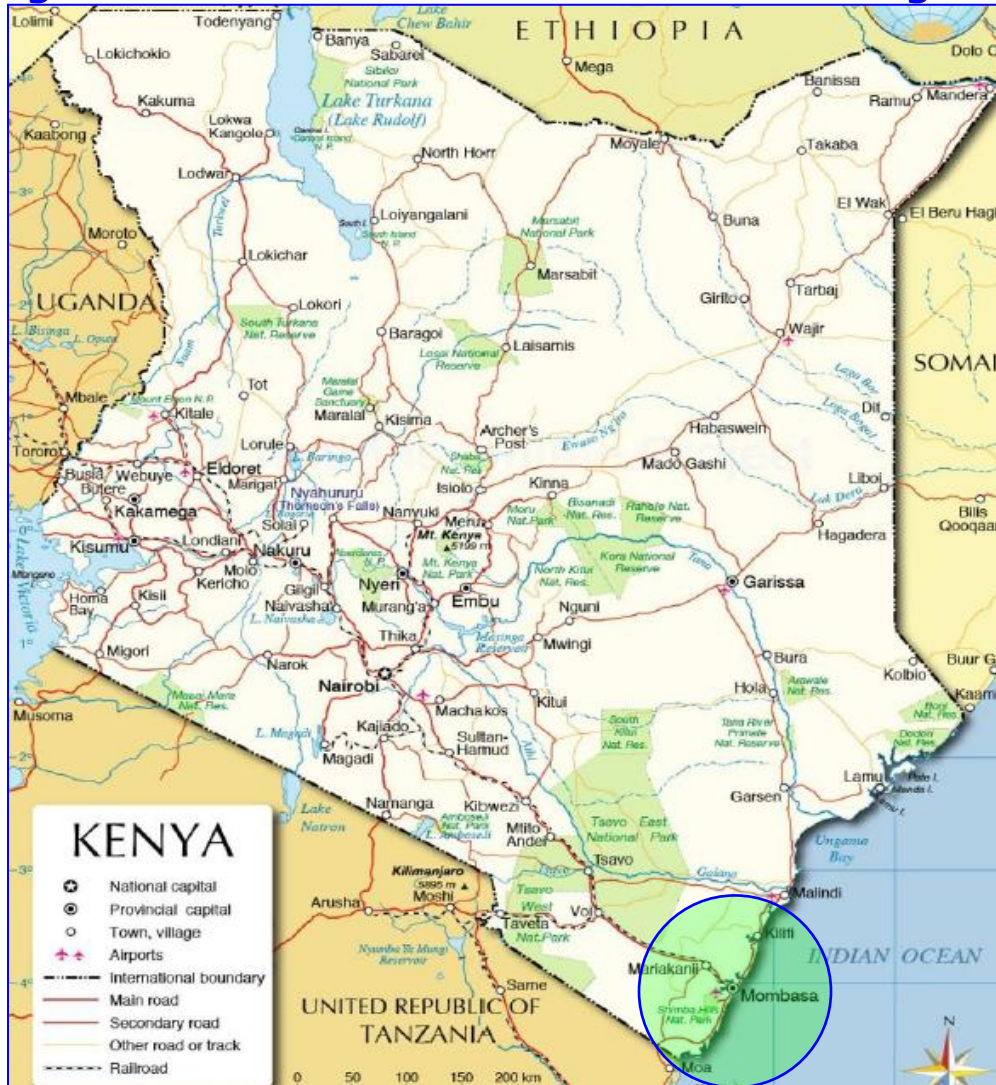
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iv.) Objectives

- ▶ 1.) To appraise the level of emergency preparedness of OSMAG/OSRAT, KPA and the TKL Crisis Management Cell in the event of an oil spill crisis
- ▶ 2.) Test the KPA Marine Pollution Control Centre as an Incident Command Centre and assess the coordination between it and TKL CMC
- ▶ 3.) Test the TKL Marine Emergency Response Plan and identify points of improvement
- ▶ 4.) Test the Port of Mombasa Oil Spill Contingency and Response Plan and its application and identify points of improvement
- ▶ 5.) Identify and mitigate any HSSE risks on site
- ▶ 6.) To appreciate & understand oil spill response among OSMAG members
- ▶ 7.) Review stakeholder liaison and management during a real spill crisis

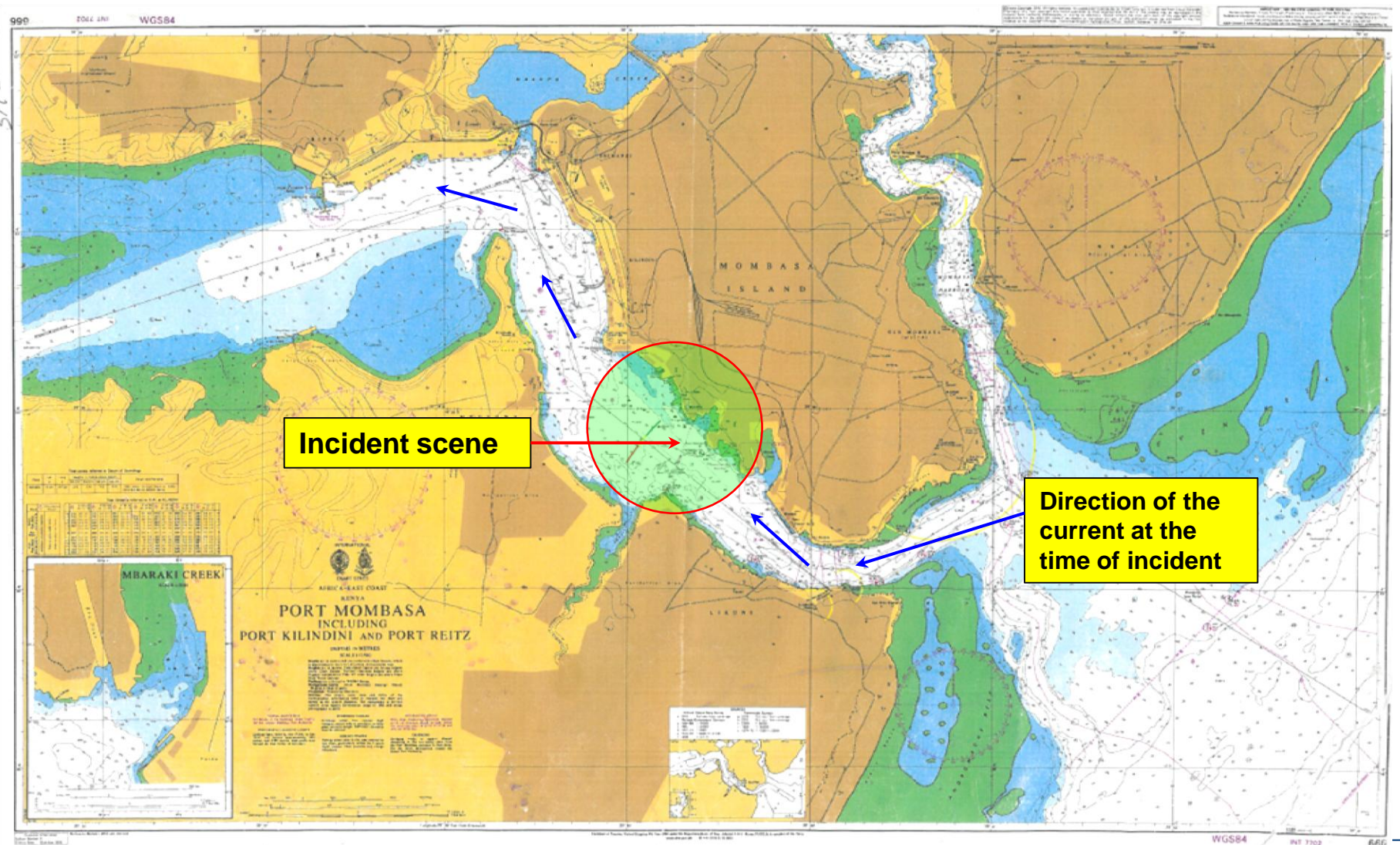
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v.) Map of Kenya & Location of Mombasa City



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vi.) Location of the Scene of the Incident



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vii.) The Scenario

- **At 06:45 hours, a KPA Pilot boards a fuel delivery tanker vessel ‘MT FUJO’, 2 miles east off the Kilindini channel entrance**
- **The vessel is chartered by TKL and is carrying 80,000 metric tons of Heavy Fuel Oil bound for Shimanzi Oil Terminal (SOT)**
- **At 07:30hrs, while executing the passage through the channel off buoy no7, the pilot advises the Master of the vessel to commence altering the course to bring the vessel to a new course of 309 degrees. The Master promptly obliges and gives a helm of 20 degrees to starboard.**
- **A few minutes later, the Chief Engineer reports that the propulsion engine has failed. The Pilot advises the Master to bring the wheel to amidships and standby both anchors for letting go.**
- **At 07:45hrs while the vessel is passing buoy no. 12, the pilot advises the Master to let go port anchor. The vessel is making a headway at a speed 7 knots. Apparently, the crew has not prepared the anchors prior to entering the port which is a standard procedure applicable to all vessels.**

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vii.) The Scenario

- Due to the momentum, the vessel continues swinging to starboard and at 08:00hrs, she makes heavy contact with the Mbaraki North Warf.
- There are no injuries to personnel on board the oil tanker and ashore but the impact causes extensive damage to the quay and her starboard bow.
- At 08:10hrs, the Pilot reports the incident to the Mombasa VTS station and requests for assistance of two tugs
- At 08:30hrs, the Pilot notices an oil slick around the vessel and immediately reports to the Mombasa VTS station. The Head of Marine Operations and the Pollution Control office are immediately notified about incident
- At 08:45hrs the Pollution Control Office dispatches a team to conduct an initial assessment of the reported oil spill
- At 09:15hrs, the Pollution control assessment team reports to the VTS station that approximately 50 tonnes of fuel oil has spilled into the harbour
- Vessel details: LOA-182.86m, Draft-9.75m, Cargo onboard: FO (180 Cst) Qty – 35,485 Metric Tonnes, Tank Capacity – 6,000 tonnes.

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viii.) Chronology of events (Before Activation)

- The four main response teams (Booming team, Skimming team, Dispersants team and On Shore Clean Up team) set up during the equipment familiarization and handling training the previous day were re-confirmed.
- Each team was allocated a trained Emergency Responder from KPA as the team leader. The KPA-PPCO was designated as the On Scene Commander (OCS) while the TKL HSEQ Manager was the main TKL Liaison Officer
- The following were appointed to the Incident Command Centre (ICC):-
 - OSMAG Technical Coordinator – Incident Commander & Ops Officer
 - TKL Environment Manager - Historian & Secretariat
 - KPA Marine Operations Officer - Communications Officer
 - OCS Marine Police Unit - Legal Officer
 - TKL HSEQ Engineer (Coast Region) - Logistics & Planning Officer
 - Officer from the Kenya Navy - later appointed Security Officer
 - TKL HSEQ Engineer (LOBP) - later appointed Safety Officer

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ix.) Chronology of events (After Activation)

- **Between 0920hrs & 0945hrs, the KPA-PPCO briefed the teams on safety and also facilitated a quick desk top exercise for the teams to refresh themselves on key expectations. VHF radios were tested and set to channel 10**
- **Actual activation was at 0950hrs via call received at MPCC from Mombasa VTS control tower regarding the ‘incident’ at Mbaraki Wharf**
- **1010hrs - The ICC was convened and key responsibilities confirmed. The booming team was advised to convene immediately and proceed to site**
- **1015hrs – TKL Liaison Officer reported the incident to TKL Head Office. The MJT Terminal Engineer was also notified at the same time.**
- **1032hrs – The ICC completed review of the impact situation and formulated effective response strategies. Most of the oil slick was by then drifting to Mtongwe Beach and Port Reitz areas. The ICC contacted the OSC and relayed the following objectives. Rest of the teams responded:**
 - **Objective 1 – Booming team to strive and contain the spill and prevent the slick from impacting Mtongwe beach**
 - **Objective 2 – Skimming team to recover as much product as possible**

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x.) Chronology of events (After Activation)

- Objective 3 –The Dispersants team to act on the portion of the slick drifting to Port Reitz
- Objective 4 –The Shoreline Clean Up team to be on standby at Mtongwe beach to deal with any fugitive portions of the slick

xi.) Main Observations – Booming Team

- The booming team arrived at the scene of accident and was ready to start response at 1041 hrs (31 minutes after activation).
- The boom could however not be deployed due to a failure of the hydraulic unit on the power pack deployment equipment.
- Hydraulic oil was badly leaking from the unit and an engineer had to be called in from the marine operations section to sort out the problem.
- The engineer attributed the problem to wear of the hydraulic seals. Replacement of the seals could not be done immediately as they were not available. He estimated that it would take at least 3 days to sort the problem.
- The booming operation was subsequently called off at 1204 hrs

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xii.) Main Observations – Skimming Team

- The departure of the skimming team from the MPCC was delayed due to absence of a boat.
- The mooring boat KMB5 initially allocated to them was not working and the alternative mooring boat KMB6 was reportedly being used for port operations.
- The team left at 1120 hrs, almost 1 hr after activation
- The skimming team had to turn and head back to the MPCC 15 minutes after setting off after realizing that they had picked wrong hoses that were not compatible with the skimming unit.
- This caused an additional delay of 24 minutes
- The skimming operation started at 1156 hrs, approximately 1 hr and 46 minutes after activation
- The team did not carry a temporary recovery tank to store recovered oil and had to use drums which was not efficient
- The skimming operation was called off at 1210 hrs

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xiii.) Main Observations – Dispersants Team

- The dispersants application operation started at 1144 hrs.
- This was approximately 1 hr and 34 minutes after activation
- Authority for use of the dispersants had to be obtained from KMA and NEMA in line with dispersants policy and EMCA requirements.
- The dispersants application process was called off at 1209 hrs

xiv.) Main Observations – Shoreline Clean Up Team

- The shoreline clean up team arrived at Mtongwe Beach at 1106 hrs
- This was approximately 56 minutes after activation
- The clean up action started at 1134 hrs (1hr 24 minutes after activation) after the shoreline boom and shoreline storage tanks had been set up
- The shoreline clean up operation was called off at 1209 hrs

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xv.) Key Highlights of the exercise

- ▶ **Activation – 0950 hrs, Deployment – 1010 hrs**
- ▶ **Completion of exercise – 1209 hrs, Re-assemble and debrief – 1315 hrs**
- ▶ **Length of boom deployed – Nil**
- ▶ **Quantity of oil reportedly spilled – 80 tonnes**
- ▶ **Quantity recovered through skimming – 8 tonnes (10%)**
- ▶ **Quantity recovered via shoreline clean up – 24 tonnes (30%)**
- ▶ **Quantity dispersed – 44 tonnes (55%)**
- ▶ **Quantity of dispersants used (Ratio 1:20) - 11 drums**
- ▶ **Solid waste generated - 6 tonnes**

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xvi.) Day 2 – Practical Training – Photos



MRS FLORENCE BET TRAINS THE SHORELINE CLEAN UP TEAM ON SC-U EQUIPMENT

MR MASOUD OF KPA INSTRUCTS THE BOOMING TEAM ON THE RO - BOOM AS MR JOHN MUCHUNU AND BOOMING TEAM MEMBERS LOOK ON



MAURA DANIEL OPERATING THE RO-BOOM EQUIPMENT AS FRANK LILUNGU DIRECTS TEAM

PETER BETT CHECKING THE FILLED BOOM AS MR MASOUD & MR MUCHUNU LOOK ON

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xvi.) Day 2 – Practical Training – Photos



MRS FLORENCE BETT TRAINS A GROUP ON THE OPERATION OF A SKIMMER



MR GITAU MUHIA OF OSMAG TRAINS A GROUP ON THE OPERATION OF A SKIMMER



MR GITAU MUHIA OF OSMAG TRAINS A GROUP ON THE OPERATION OF A SKIMMER



MR OKUMU OF KPA LOOKING ON AS THE DISPERSANTS TEAM TEST THE EQUIPMENT

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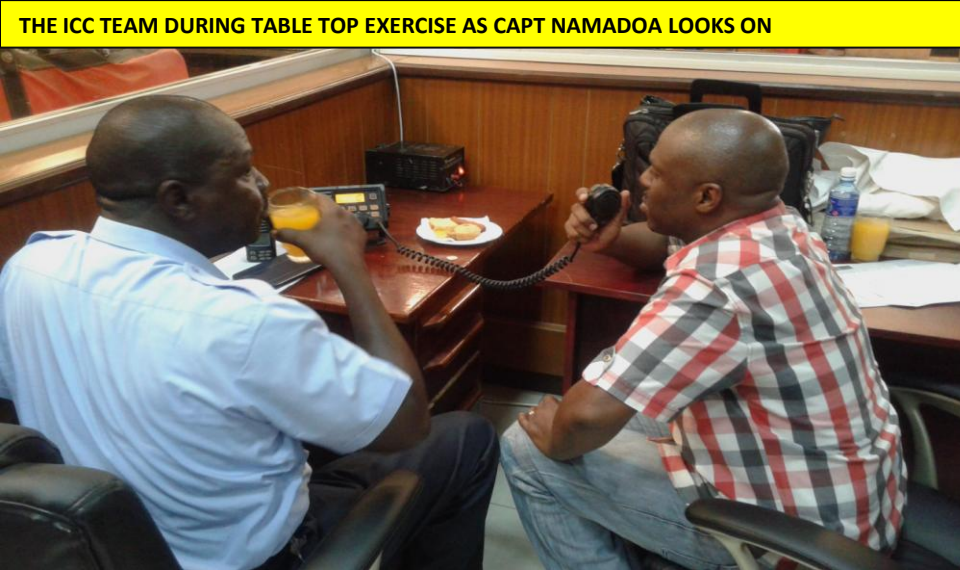
xvii.) Marine Emergency Response Drill – Photos



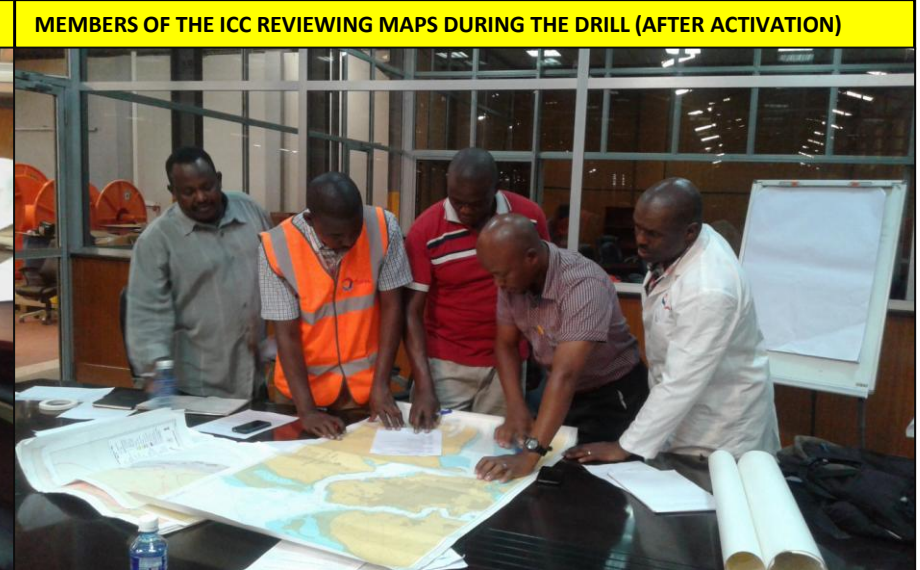
THE ICC TEAM DURING TABLE TOP EXERCISE AS CAPT NAMADOA LOOKS ON



MEMBERS OF THE ICC REVIEWING MAPS DURING THE DRILL (AFTER ACTIVATION)



FRANCIS SAHA RELAYING A RADIO MESSAGE FROM THE ICC DURING THE DRILL



MEMBERS OF THE ICC REVIEWING MAPS DURING THE DRILL (AFTER ACTIVATION)

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xvii.) Marine Emergency Response Drill – Photos



MEMBERS OF THE BOOMING TEAM GETTING KITTED OUT BEFORE PROCEEDING TO SEA

MEMBERS OF THE BOOMING TEAM KITTED OUT BEFORE PROCEEDING TO SEA



MEMBERS OF THE DISPERSANTS TEAM AWAITING TO BOARD VESSEL TO SEA

OTHER RESPONSE TEAMS GETTING KITTED OUT BEFORE PROCEEDING TO SEA

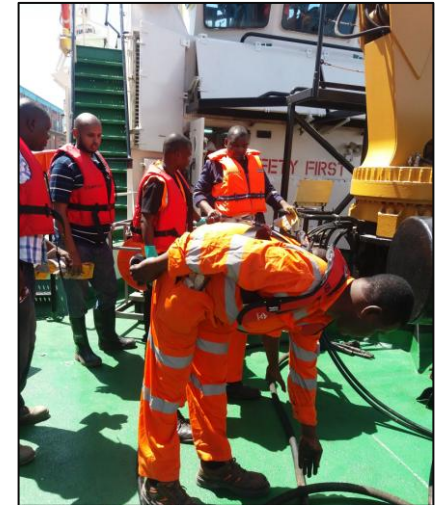
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BOOMING TEAM PREPARING TO BOARD THE TUG BOAT MV NYANGUMI



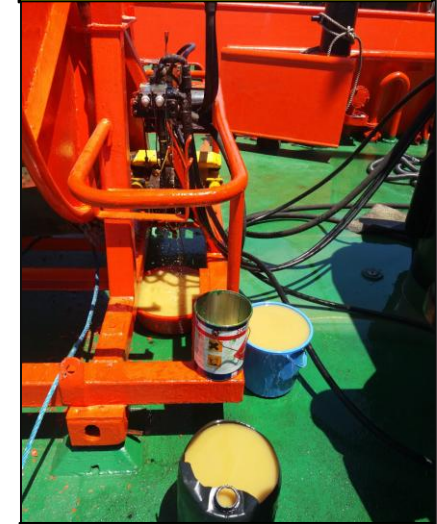
ARRANGEMENTS TO DEPLOY BOOM



ARRANGEMENTS TO DEPLOY BOOM



HEAVY SPILLAGE OF HYDRAULIC OIL EXPERIENCED



HEAVY SPILLAGE OF HYDRAULIC OIL

OSMAG/KPA/TKL MARINE EMERGENCY RESPONSE TRAINING & TIER II DRILL – 22ND - 24TH NOV 2016

xvii.) Marine Emergency Response Drill – Photos



DISPERSANTS TEAM PREPARING TO BOARD THE KMB08 CRAFT

DISPERSANTS TEAM PREPARING THE EQUIPMENT AT SEA



A MEMBER OF THE DISPERSANTS TEAM APPLYING THE DISPERSANT

A MEMBER OF THE DISPERSANTS TEAM APPLYING THE DISPERSANT

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xvii.) Marine Emergency Response Drill – Photos



SHORELINE CLEAN UP TEAM HEADING TO MTONGWE BEACH FOR THE CLEAN UP

SHORELINE CLEAN UP TEAM SETTING UP THE SHORELINE BOOM

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xvii.) Marine Emergency Response Drill – Photos



SHORELINE CLEAN UP TEAM SETTING UP THE SHORELINE BOOM



FAST TANK SET UP BY THE SHORELINE CLEAN UP TEAM

SHORELINE CLEAN UP TEAM SETTING UP THE SHORELINE BOOM

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xix) Debrief Observations & Action Plan - MPCC

Issue reported by teams	Explanation & Proposed Corrective Action	By Who	By When
<p>The ICC was not furnished with a list of the equipment availed for the response</p> <p>Contacts were also not available</p>	<p>To provide to the ICC the list of the equipment committed to response plus critical contact details in future exercises</p>	<p>KPA PPCO</p>	<p>ASAP</p>
<p>Exact location of the incident scene in terms of GPS coordinates was not precisely indicated to the ICC from the communication tower. This did not aid formulation of effective response strategies based on wind direction, speed and tidal info with respect to the actual incident scene. To consider incorporation of ICT tools in the ICC to facilitate more effective response</p>	<p>Plans are underway to avail relevant IT equipment in the ICC room in future including three cameras covering the entire channel plus four TV monitoring screens</p> <p>For the future, MPCC and Control Tower to consider use of GPS tools to indicate the exact location of the incident</p>	<p>KPA PPCO</p>	<p>ASAP</p>

OSMAG/KPA/TKL MARINE EMERGENCY RESPONSE TRAINING & TIER II DRILL – 22ND - 24TH NOV 2016

xix) Debrief Observations & Action Plan - MPCC

Issue reported by teams	Explanation & Proposed Corrective Action	By Who	By When
The KPA Port contingency plan and emergency response procedures were not availed to the ICC during the exercise	MPCC to avail KPA Port contingency plan and emergency response procedures in future exercises	KPA PPCO	ASAP
Booming operation could not be conducted during the exercise due to failure of the hydraulic power pack unit on board the tug boat MV Nyangumi	Review effectiveness of planned preventive maintenance schedule.	KPA PPCO	ASAP
Engineering team attributed failure to worn out seals which could have been prevented. System last tested a week ago.	Always have plan B for future exercises. Booming team to carry the portable unit GP30 (portable hydraulic power pack) or consider having it mounted on mooring boats when responding just in case.	KPA PPCO	ASAP
Had this been a real spill, the inability or delay to boom the slick could have had very devastating effects	Include in house technicians as part of the booming team	KPA PPCO	ASAP

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xix) Debrief Observations & Action Plan - MPCC

Issue reported by teams	Explanation & Proposed Corrective Action	By Who	By When
Commencement of the skimming response was delayed due to absence of crew and engineer during initial response	No proper explanation attributed. MPCC to review and get to the root cause of delay to prevent recurrence in future exercises	KPA PPCO	ASAP
Skimming team picked wrong hoses that were not compatible with the skimming unit. Forced to come back to the MPCC to replace with the correct ones. This could have affected the response had this been a real spill incident	To make use of a checklist when selecting the equipment for response at the MPCC	KPA PPCO	N/A
The skimmer initially failed to work for some time leading to even further delays in response. There was delayed diagnosis of the problem	Actual problem later diagnosed to have been failure of the equipment to release pressure. To emphasize on proper trouble shooting and include in house technicians as part of team	KPA PPCO	2016

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xix) Debrief Observations & Action Plan - MPCC

Issue	<i>Explanation & Proposed Corrective Action</i>	<i>By Who</i>	<i>By When</i>
The skimming team also forgot to carry the temporary storage tank (pillow tank). This was attributed to lack of sufficient space on board the provided craft.	In future equipment shall be deployed and buoyancy filled by the booming tug boat MV Nyangumi	KPA PPCO	2017
Droplets of dispersants blown by wind onto response team inside the boat during the dispersants application process. Team was not kitted out to mitigate against this hazard. In case this had been a real spill, many would have suffered skin irritation and dizziness.	Consider allocating affordable relevant breathing PPE's to the dispersants team such as dust masks, safety goggles etc during exercises	KPA PPCO	ASAP
Water pumping unit used by shoreline team was noted to be leaking badly	Review effectiveness of planned preventive maintenance schedule	KPA PPCO	ASAP

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xx) CLOSING REMARKS FROM THE PPCO AFTER DEBRIEF

- ▶ **Thanks to everyone who participated.**
- ▶ **Happy with the annual training program and drill because in the event of a real crisis, a large group of trained people will be more effective in the event of a real spill**
- ▶ **This is attributed to fact that typical real responses normally take 6 hours before responder burn out**
- ▶ **Bidders will visit the Port in the week starting 29/11/2016 to review supply of additional oil spill response equipment solely for MPCC**
- ▶ **Around mid 2018, the MPCC will be equiped with new anti-pollution boats with own dedicated crew etc**
- ▶ **Presentation of the drill scenario is now due for change. Review of the scenario shall be part of the practical equipment familiarization**

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xxi) GENERAL CONCLUSION ON THE DRILL

- ▶ As far as the objectives were concerned, the drill was noted to have been generally successful as it once again pointed areas of weakness at the MPCC and Incident Command Centre on the ground and the Crisis Management Centre at TKL Head Office.
- ▶ The challenges that were experienced would have been the real ones experienced had there been a real spill. As such the drill presented key learning's for continual improvement.
- ▶ The recommended actions to address the noted weaknesses are indicated in the summaries above.
- ▶ KPA/OSMAG & TKL ought to follow up and ensure that all the recommendations made are executed as required for improvement
- ▶ The effectiveness of executed corrective actions shall be assessed during at the next simulation exercise planned for 4th quarter 2017.

OSMAG/KPA/TKL MARINE EMERGENCY RESPONSE TRAINING & TIER II DRILL – 22ND - 24TH NOV 2016

xxii.) Correspondences



TOTAL KENYA LIMITED

Our Ref: HSSEQ/002/16

August 5, 2016

The Managing Director
Kenya Ports Authority
P. O. Box 95009 - 80104
MOMBASA

Dear Sir,

RE: OIL SPILL RESPONSE SIMULATION ON 24TH NOVEMBER 2016 WITHIN THE PORT OF MOMBASA

Environmental sustainability is fundamental in all our operations in ports and terminals and is an important performance criteria for Total Kenya Limited and the Total Group worldwide. To meet this objective, Total Kenya Limited complies with stringent hydrocarbon vessel standards, assessment of marine and river terminals (jetties) and has a documented oil spill preparedness and response contingency plan. Notably, Total Kenya Limited is a founder member of OSMAG and recognizes the critical role KPA has continued to play in terms of personnel, policies and equipment to counter pollution.

Following the OSMAG/KPA/TKL marine emergency response training and tier 2 drills conducted in 2014 and 2015, Total Kenya Limited once again wishes to spearhead this year's oil spill response simulation training and drill between 22nd and 24th of November 2016 within the port of Mombasa, which will ultimately involve many stake holders and principally KPA. We request for your consent, access and participation in the training and ultimately in the drill.

Our HSSEQ Manager (Mr. John Muchunu) will hereafter contact the Harbour Master to discuss the finer details of the drill.

We look forward to our continued partnership.

Regards

Yours faithfully,
TOTAL KENYA LTD


Anne-Solange RENOUARD
Managing Director

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E-mail: administrator@total.co.ke ; website: www.total.co.ke

Directors: Momar Nguru*, Jean-Christophe Bengeren*, Anne-Solange Renouard* (Managing), Alice Masyaka (Mrs), Aureole Delarue* (Friend)



TOTAL KENYA LIMITED

Our Ref: ENV/2016/34

October 20, 2016

The Managing Director
Hashi Energy Kenya Ltd
P. O. Box 10795-00100
NAIROBI

Dear Sir,

RE: INVITATION TO PARTICIPATE IN MARINE EMERGENCY RESPONSE DRILL

Total Kenya Ltd in conjunction with the Oil Spill Mutual Aid Group Society (OSMAG) and Kenya Ports Authority (KPA) has organized for a Tier II marine oil spill response training on **Tuesday 22nd and Wednesday 23rd November 2016** culminating in a drill on **Thursday 24th November 2016** starting from **0900hrs to 1300hrs** at the KPA Marine Pollution Control Centre.

The training and exercise is suitable for delegates who will play a role in an oil spill emergency response or those interested in developing their oil spill response skills. The drill will involve 'real time' response based on weather conditions and KPA mooring activities.

OSMAG, the Marine Pollution Control Centre and Total Kenya Limited will bear the training and exercise costs but participants are expected to make their own travel and accommodation arrangements where necessary.

You are requested to nominate 2 persons with priority to OSRAT members to participate in the training and the said exercise. Kindly forward your response and nominations to our HSSEQ Engineer Mr. Francis Saha via e-mail francis.saha@total.co.ke by **Friday, 11th November 2016** to facilitate finalization of arrangements.

We thank you and look forward to our continued cooperation.

Regards

Yours faithfully,
Total Kenya Ltd


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OSMAG/KPA/TKL MARINE EMERGENCY RESPONSE TRAINING & TIER II DRILL – 22ND - 24TH NOV 2016

xxiii.) Scenario Document

OIL SPILL RESPONSE EQUIPMENT DEPLOYMENT TRAINING

THE INCIDENT

At 0645 hours KPA Pilot boarded M/T FUJO, 2 miles east of the channel entrance inbound for Shimanzi Oil Terminal (SOT), chartered by Total (K) Limited.

At 0730 hours, while executing the passage through the channel off buoy NO.7, the Pilot advised the Master of the vessel to commence altering the course to bring the vessel to a new course of 309 degrees. The Master promptly obliged and gave a helm order of 20 degrees to starboard. A few minutes later, the Chief Engineer reported that the propulsion engine had failed. The Pilot advised the Master to bring the wheel to amidships and standby both anchors for letting go.

At 0745 hours while the vessel was passing buoy NO.12, the Pilot advised the Master to let go port anchor. The vessel was still making headway at a speed of 7 knots. Apparently, the crew had not prepared the anchors prior to entering the port as a standard procedure applicable to all vessels.

Due to the momentum, the vessel continued swinging to starboard and at 0800 hours, she made heavy contact with Mbaraki North Wharf, thus causing extensive damage to the quay and her starboard bow.

At 0810 hours, the Pilot reported the incident to the Mombasa VTS Station and requested for assistance of two tugs.

At 0830 hours, the Pilot noticed oil slick around the vessel and immediately reported to the Mombasa VTS Station.

No injuries to personnel onboard the oil tanker and ashore was reported.

At 0835 hours, the Mombasa VTS Station notified the Head of Marine Operations and Pollution Control Office.

At 0845 hours, Pollution Control Office dispatched a team to conduct an initial assessment of the reported oil spill.

At 0915 hours, the pollution control assessment team reported to the VTS Station that there was approximately 50 tonnes of fuel oil spilled into the harbour waters and it was still flowing from the vessel towards the inner harbour.

At 0920 hours, the VTS Station relayed the information to the Head of Marine Operations, who immediately instructed Principal Control Officer to mobilize and deploy appropriate resources.

At 0935 hours, the Head of Marine Operations briefed General Manager Operations (Chairman of KPA Emergency Management Team), who immediately put the Incident Command Team on alert.

Vessel Details: LOA 182.86m, Draft 9.75m, Cargo onboard FO (180 cst) 35,485 Metric Tonnes

Tank capacity 6000 tonnes.

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xxiv.) Desk Top Exercise Documents

Scenario 1 (0945 – 1000 hours)

The Chairman of Emergency Management Team (EMT) briefs the EMT members and instructs them to proceed to ICC and establish communication with On-Scene Commander.

Scenario 2 (1000 hours – 1010 hours)

The On-Scene Commander informs the Incident Commander (IC) that large amount of oil has already escaped into the channel and is flowing outward Mwenza Creek and Mtongwe anchorage. The passenger ferries including the ramps have not been affected.

The Operations Coordinator to outline the initial Incident Action Plan (IAP) for the next three hours taking into account the port operations, tide and Kenya Navy Liberty boat services. (Hint: strategies, tactics, extra resources required etc.)

Scenario 3 (1010 hours – 1015 hours)

The IC briefs the Managing Director (MD). He informs the MD the emergency will be handled at tier 2 (Corporate) level. Assistance of other agencies is required. The IC informs Kenya Maritime Authority and OSMAG. The IC issues a letter of protest to the Master of vessel holding him responsible and establishes communications with TOTAL Kenya, the charterer.

TOTAL Kenya activates their Contingency Plan and links with Head office.

Scenario 4 (1015 hours)

Kenya Navy is concerned and complaining about the beach and shore at Mtongwe Slipway being heavily covered with black oil and the Admirals' Barge being heavily stained.

The Navy demands immediate action by the shore clean-up teams.

Scenario 5 (1100 hours)

KPA receives complaints from the local fishers and environmental activists

Based on the above complaints and other socio-economic factors draw up a list of priorities for response.

Scenario 6 (1200 hours)

The Communications Coordinator prepares a press briefing for the IC to address aforementioned complaints.

Scenario 7 (1230 hours)

The IC terminates the operations and prepares an executive summary of the incident for the MD to brief the PS.

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xxv.) Overview Of The Classroom/Theoretical Training

- **The classroom (theory) training was held on Tuesday 22nd November 2016 at the Royal Court Hotel and the following topics were covered:**
 - **Environmental and Economic Impacts**
 - **Preparedness: Incident Management System**
 - **Preparedness: Tiered Preparedness and Response**
 - **Preparedness: Contingency Planning & Sensitivity Mapping**
 - **Response: Responder Health & Safety**
 - **Response: Dispersants-Surface Application**
 - **Response: Protection & Mechanical Recovery**
 - **Response: Shoreline Response & Cleanup**
- **The facilitators were: Mr. Washington Okanga (OSMAG TC) and Mr. Gitau Muhia (OSMAG TA).**

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xxv.) Overview Of The Classroom/Theoretical Training

- There were 60 participants from 30 organizations and stakeholder agencies. The attendance rate was 81.4% (57 participants out of 70 expected) which was very good

- The stakeholder agencies in attendance were:
 - 1.) The Kenya Maritime Authority (KMA)
 - 2.) The Kenya Navy
 - 3.) The Maritime Police Unit
 - 4.) The Energy Regulatory Commission (ERC)
 - 5.) Kenya Wildlife Services – Coast Conservancy Area
 - 6.) Kenya Forests Services
 - 7.) Kenya Ferry Services
 - 8.) The Mombasa County Fire Brigade

- The post training feedback forms filled by the participants indicated that the objectives of the training were met. The participants rated the training as follows: Excellent - 38%, Good - 57%, Average – 4%, Poor/Very Poor – 0%

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xxvi.) Overview Of The Practical Equipment Handling Training

- This was held on the 2nd day (23rd November 2016) at the KPA MPCC
- Total Kenya Limited facilitated the port passes for all participants
- The four teams were each allocated a response station (Booming, Skimming, Dispersants and Shoreline Clean-up stations).
- They were then taken through the features of the different oil spill handling equipment at the centre and how to assemble and operate them.
- All the participants were taken through the four mentioned stations which covered all the equipment at the MPCC.

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xxviii.) Training Feedback Review

Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The training met my expectations.	20	27	0	0	0
2. The knowledge learned is relevant to my work as an emergency responder and will apply it.	32	15	0	0	0
3. The content was organized and easy to follow.	21	25	1	0	0
4. The trainers were knowledgeable.	31	15	1	0	0
5. The trainers met the training objectives.	20	23	2	1	0
6. Adequate time was provided for questions and discussion and class participation was encouraged.	16	23	6	0	1
Description	Excellent	Good	Average	Poor	Very poor
7. How do you rate the training overall?	18	27	2	0	0

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xxviii.) Training Feedback Review

8. What were the positive aspects about the training?
 - ✓ Various response techniques with dispersants (10 delegates, of which 6 mentioned dispersants)
 - ✓ The training was highly interactive (8 delegates)
 - ✓ Training content was relevant (5 delegates)
 - ✓ Illustrations using real examples in Mombasa (5 delegates)
 - ✓ Training was well organised and detailed (5 delegates)
 - ✓ Good presentations from knowledgeable presenters (4 delegates)
9. Any other comments, suggestions, observations and recommendations?
 - Classroom session should be offered over a longer period such as over two days (17 delegates)
 - Regular refresher training to be offered (7 delegates)
 - Use videos during the training (3 delegates)
 - Have more trainers and possibly external trainers (3 delegates)
 - Change of venue, especially for those who have attended more than once (2 delegates)
 - There is need to test the knowledge at end of training (2 delegates)

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xxix.) Classroom Training – Photos



OSMAG TC (W. OKANGA) MAKES THE OPENING REMARKS DURING THE TRAINING



PARTICIPANTS INTRODUCING THEMSELVES DURING THE TRAINING



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PARTICIPANTS DURING THE TRAINING

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xxx.) Group Photo



TKL- KPA OSMAG-MARINE OIL SPILL TRAINING AT ROYAL COURT HOTEL MSA 22nd-NOV 2016

THANK YOU



TOTAL