



**TotalEnergies**

# **REPORT OF THE 2021 OSMAG-KMA-KPA-TEMKP MARINE OIL SPILL EMERGENCY RESPONSE TRAINING & TIER II DRILL EXERCISE**

29th Nov - 3<sup>rd</sup> Dec 2021

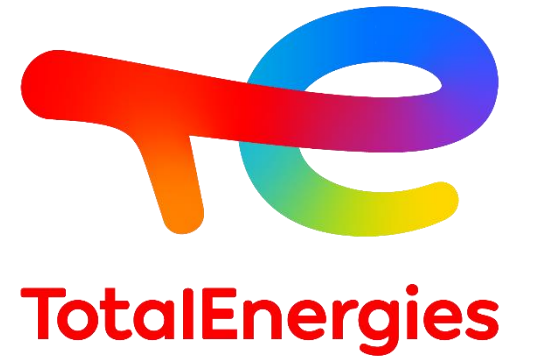
Prepared By:

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*TEMKP Environment Manager &*

*OSMAG Secretary*





# 10. CHRONOGRAM

TIME	RECORD	NOTES
9:03	Gapco T2 AGO tank overfill incident is reported to have been experienced during receipt from the vessel M/T CELCIUS RAVENA. Alert raised internally within the Terminal ESD in the tank farm activated	
9:18	Hose rupture occurs at SOT	
9:19	Vessel M/T CELCIUS RAVENA ESD activated. Pumping stopped	
9:20	Valve on the SOT/GT2 line closed A significant quantity of AGO is reported to have already spilled into the water	
9:25 – 9:30	Vessel M/T CELCIUS RAVENA tank gauging and reconciliation conducted. Approximately 50m3 of product cannot be accounted for and is presumed spilled	
9:30	Tier 1 Marine oil spill emergency response equipment arrives at SOT ex MJT Shimanzi. Equipment is comprised of: <ul style="list-style-type: none"> <li>- Dispersant – 1 Drum</li> <li>- Absorbents – 2pcs</li> <li>- Fibres – 2 Pcs</li> <li>- Floaters for spill marking – 3 Pcs</li> <li>- Squizzers – 1 Pc</li> <li>- Buckets – 4 Pcs</li> <li>- Life Jackets – 2 Pcs</li> </ul>	<i>12 minutes after hose rupture incident</i>

# 10. CHRONOGRAM

TIME	RECORD	NOTES
9:42	Notification received at the MPCC from VTS tower regarding a spill at SOT KPA PPCO & OSMAG Technical Coordinator are notified PPCO immediately boards a boat at the K-BOAT Pier and heads to the incident scene	<i>24 minutes after the hose rupture incident</i>
9:50	KPA fire team arrives at SOT and immediately starts to deploy additional emergency response equipment. Deployment completed at 10:06	<i>32 minutes after the hose rupture incident</i>
9:53	PPCO arrives at SOT and reports approximate volume to be 30-40 m3 of AGO spilled Tier 1 response equipment deployed by the spilling depot plus other equipment overwhelmed. Reports Situation is already beyond Tier 1 threshold	<i>35 minutes after the hose rupture incident.</i>  <i>11 minutes after notification</i>
9:54	An ICC is constituted at the MPCC <ul style="list-style-type: none"> <li>✓ The KPA PPCO is designated OSC</li> <li>✓ OSMAG TC – IC &amp; Technical Coordinator</li> <li>✓ TEMKP Environment Manager – Historian</li> <li>✓ TEMKP Mombasa LPG Plant Manager – ICC/TEMKP HO Liaison Officer</li> <li>✓ TEMKP HSEQ Engineer 1 – ICC-TEMKP Gapco T2 Liaison Officer</li> <li>✓ TEMKP HSEQ Engineer 2 – Logistics Manager</li> <li>✓ KPA Mr Okumu - Booming Team Leader – BT</li> <li>✓ KPA Mr Ramadhan – Skimming Team Leader – ST</li> <li>✓ KPA Mr Abdulkadir Leo – Dispersants Team Leader – DT</li> <li>✓ KPA Mrs Florence Bet – Shoreline Clean Up Team – Kibarani</li> <li>✓ KPA Mr Raphael Kombo – Shoreline Clean Up Team - Kilindini</li> </ul>	<i>12 minutes after VTS tower incident notification</i>

# 10. CHRONOGRAM

TIME	RECORD	NOTES
9:55	<i>OSC – ICC (Radio Call)</i> Request for urgent mobilization of resources to be deployed to SOT to combat the spill	
9.56	<i>OSC – ICC</i> *Serious interference of radio communication experienced but connection is finally restored* Oil slick is reported to be migrating towards Berth 10	
9:57	<i>ICC – OSC</i> Booming Team is fully constituted and preparing to leave for SOT	<i>15 minutes after VTS tower incident notification</i>
9:59	*Another communication hitch experienced between OSC and ICC Link restored after some time. OSC requests for immediate mobilization of the booming team	
10:06	<i>OSC-ICC</i> Booming team requests for additional manpower	
10:08	<i>OSC-ICC</i> From assessment some slicks are now drifting towards the Floral Point Requests for mobilization and dispatch of a skimming team to site	
10:09	<i>Terminal Manager Gapco – ICC</i> The event at Gapco has escalated and is now beyond capabilities of GT2 Requests for assistance	

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TIME	RECORD	NOTES
10:10	<i>Terminal Manager GT2 – ICC</i> Product ex-Gapco T2 now at Kibarani area	
10:13	<i>Terminal Manager GT2 – ICC</i> GT2 team not able to access the area	
10:16	<i>OSC-ICC</i> Extra manpower required by the towing team	
10:17	<i>OSC- BT</i> *OSC not able to establish connection with BT – No response from BT	
10:18	<i>BT-OSC</i> Additional manpower still requested by the BT	
10:21	<i>OSC-ICC</i> Request for deployment of the dispersants team to the environs of the Floral Point to disperse the slick	
10:22	<i>OSC-ICC</i> Concern that BT has not yet left the K-Boat Pier due to the un-addressed request for additional manpower ICC does not have the additional manpower requested for BT to work with what they have available	<i>*40 minutes after VTS tower incident notification</i>

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TIME	RECORD	NOTES
10:23	<i>OSC-BT</i> Instructions to proceed from the K-Boat Pier to Berth No 10 asap and work with the available manpower	
10:24	<i>ICC-OSC</i> Information that a skimming team headed by Ramadhan is also available for deployment when required	<i>*42 minutes after VTS tower incident notification</i>
10:25	<i>ICC-KMA</i> Request lodged for authority to use dispersants at the Foral Point	
10:27	<i>KMA-ICC</i> Approval granted	
10:28	<i>ST-ICC-OSC</i> Request for provision of a mooring boat for use by the Skimming Team	
10:29	<i>OSC-KPA Marine Operations Department</i> Request for one extra mooring boat to be availed	
10:30	<i>OSC-BT</i> Concern that MV Fagio II 2 for the BT has not commenced journey to Berth No 10 for the booming operation. BT Team Leader reports that delay caused by members of the dispersants and skimming teams who had boarded and were reluctant to disembark Instructions given to DT and ST teams to disembark MV Fagio II 2 immediately and wait for mooring boats which will be availed for them	<i>*48 minutes after VTS tower incident notification</i>

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TIME	RECORD	NOTES
10:30	<i>MJTM - ICC</i> Status update on the Terminal side	
10:33	<i>BT-OSC</i> Confirmation that MV Fagio II has now left the K-Boat Pier and is now on its way to Berth No 10 as required	<i>*51 minutes after VTS tower incident notification</i>
10:36	<i>OSC-BT</i> Tide is now flooding Problems anticipated with the booming operation at Berth No 10 Instruction to boom around the KPA Headquarters area instead once the team arrives at Berth No 10	
10:37	<i>OSC-VTS Tower</i> *No communication established. Communication interrupted by strong interference for a while before clearance of interruption* Request lodged by OSC for a Pilots Boat if available. Request declined. No Pilot Boats available. All engaged	
10:38	<i>ST-OSC</i> Mooring boat not yet provided to team as requested Advised that a boat will be provided to them after it assists the DT	
10:39	<i>MJTM-ICC</i> *Attempted communication interrupted by strong interference	



# 10. CHRONOGRAM

TIME	RECORD	NOTES
10:41	<i>ICC-MJTSTM</i> Communication now established Update given to MJTSTM. BT still on way to Berth No 10	
10:42	<i>ICC-OSC</i> *Interrupted communication due to interference* Two shoreline cleanup teams set up, one for Kilindini shoreline and the other for Kibarani shoreline	
10:46	<i>OSC-ICC</i> BT arrives at scene	<i>*1 hr 4 minutes after incident notification</i>
10:48	<i>Kibarani SCT-ICC</i> Request for resources: Transport from MPCC to Kibarani for 8 team members and equipment, gumboots, sorbents, pvc gloves, temporary storage tank Extra personnel may also be required	
10:49	<i>MJTSTM-ICC</i> Request for update on the shoreline clean up team for Kibarani	
11:00	<i>OSC-ICC</i> Complaints: OSC not able to contact the Kibarani SCT Leader	
11:01	<i>TEMKP Liaison-ICC</i> Confirmation that TEMKP head office has lodged reports on the incident to NEMA & EPRA head offices in Nairobi	

# 10. CHRONOGRAM

TIME	RECORD	NOTES
11:06	<b><i>OSC-ICC</i></b> Size of slick around the vessel environs at SOT indicates approximately 80-100 tons of AGO spilled into the sea in the incident	
11:09	<b><i>Kibarani SCT-ICC</i></b> A pickup van has been availed at the MPCC by KPA Marine Operations Dept to transfer the shoreline clean up team and their equipment to the cleanup site. However, driver for the pickup is not available	
11:12	<b><i>ICC-OSC-TEMKP Mombasa Liaison Officer</i></b> Info: Fishers and villagers based near the Kenya Railways / KPA estates are complaining about the beach and shoreline being heavily covered with oil sleek and their fishing gear heavily stained, fish being contaminated. They demand immediate action and compensation.	
11:14	<b><i>ICC-OSC</i></b> Info: Driver of the KPA pickup van is still not available Request now lodged with Gapco Terminal 2 to avail their pickup truck so as to save time in view of the complaints coming in	<b><i>* 5 mins after van availability</i></b>
11:18	<b><i>MJTSTM-ICC</i></b> Info: All accesses to the tank farm at GT2 now confirmed to be fully secured	
11:20	<b><i>OSC-ICC</i></b> Booming process has commenced	<b><i>* 2 Hrs 2 mins after hose rupture incident</i></b> <b><i>*1 Hr 38 minutes after VTS tower incident notification</i></b>

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TIME	RECORD	NOTES
11:20	<p><i>ICC-OSC-TEMKP Mombasa Liaison Officer</i>            Info: More complaints received from the Mombasa Inland Container Depot (MICD) located opposite the Gapco T2. MICD managers are complaining to the Port Authority about staining of their beach and demanding clean-up.</p> <p>TEMKP Corporate Affairs Department in liaison with KPA advised to appoint a Communications &amp; PR Officer to manage the complaints from fishermen and villagers based near the KR &amp; KPA estates and also MICD</p>	
11:20	<p><i>Kibarani SCT-ICC</i>            The driver of the KPA pickup van finally located. However, requires an approved Work Order in order to ferry the team to the site. Assistance requested by Team Leader.</p>	
11:22	<p><i>OSC-ICC</i>            Dispersants team arrives at Floral point</p>	<p><i>*1 Hr 40 minutes after notification</i></p>
11:24	<p><i>ICC-OSC-TEMKP Mombasa Liaison Officer</i>            Advice to obtain Works Order approval from the Head of Marine Operations in the absence of the PPO. Approval obtained</p>	
11:26	<p><i>OSC-ICC</i>            Info: OSC has surveyed the Kilindini shoreline. Not badly impacted as initially reported. Advice to ICC to consider deployment of the team allocated for Kilindini SCT (still at the to join the Kibarani SCT so as to boost efforts at the Kibarani shoreline which is more badly impacted</p>	

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TIME	RECORD	NOTES
11:32	<i>Kibarani SCT-ICC</i> Problems with radio communication reported. Team requests for a better radio	
11:35	<i>Kibarani SCT-ICC</i> The Kibarani SCT arrives at the KPA Gate No 24. However, KPA Security Team at the gate has declined to grant access demanding that an approval must be availed to them before they can allow the shoreline clean up equipment and accessories to leave the Port premises.	<i>*3 minutes delay experienced at the exit gate</i>
11:39	<i>OSC-ICC</i> Booming process completed. Slick is too thin for effective skimming. Decision made to stand down the skimming team. Info: Pick-up van ex-MJT Shimanzi arrives to transfer the Kilindini SCT to join the Kibarani Team	<i>* 2 Hrs 21 mins after hose rupture incident *1 Hr 57 minutes after VTS tower incident notification</i>
11:46	<i>ICC-OSC</i> MJT Pick up van leaves for Kibarani Info: Application of dispersants starts at Floral Point at 11:50 hrs	<i>*Time taken to prepare dispersant equipment &amp; deploy = 28mins</i>
11:59	<i>OSC-ICC</i> Escalation of complaints from fishermen received at the ICC Dispersants team has used 1 drum of dispersants at the Floral Point MV Fagio II dispatched to Floral Point to assist	
12:13	<i>Kibarani SCT-ICC</i> Kilindini SCT has arrived at Kibarani at 12:10. Kibarani and Kilindini SCT's have been merged to one team and placed under the leadership of the Gapco T2 OSC (The Terminal Manager) ICC provided radios not working. GT2 radios now employed. Shoreline assessment ongoing	

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TIME	RECORD	NOTES
12:16	<p><b><i>OSC-ICC</i></b>            Update: Dispersant application at Floral Point proceeding well. MV Fagio II now assisting KMB4. Slicks near the Floral Point, Kenya Navy and the new KOT successfully dispersed. Request to start the demobilization process.</p>	
12:19	<p><b><i>ICC-OSC</i></b>            Approval for demobilization granted.            Meanwhile, for info, a situation meeting has been convened by the KMA to include relevant Government agencies. The agenda of the meeting is to review the current status and planned operations and possible areas of further intervention.</p>	
12:20	<p><b><i>OSC-BT&amp;TT</i></b>            Instructions to start the demobilization process</p>	
12:22	<p><b><i>Gapco OSC-ICC</i></b>            Environmental sensitivities observed at the Kibarani shoreline.            Deep muddy ground surfaces are presenting serious mobility and accessibility challenges. Oil slicks are noted on waters edges but are not accessible due to low tide conditions within the lagoon.</p>	
12:30	<p>ST arrives back at the MPCC with their equipment</p>	
12:31	<p><b><i>Gapco OSC-ICC</i></b>            The shoreline cleanup operation is complicated due to the accessibility challenges but still ongoing.</p>	

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TIME	RECORD	NOTES
12:43	<i>Gapco OSC-ICC</i> The shoreline cleanup operation executed but not as effectively as intended. Team to demobilize. ICC to review strategy for future response operations in the area	
12:57	<i>OSC-ICC</i> Boom recovery ongoing	
13:41	Kibarani SCT arrives back at the MPCC with their equipment	
13:44	<i>OSC-ICC</i> Man overboard incident experienced during the boom retrieval exercise following a trip incident on board. Life ring immediately thrown to him	
13:46	<i>OSC-ICC</i> Boom & dispersant equipment retrieval confirmed completed	<i>*Time taken to recover boom &amp; dispersants equipment = 1hr 16min</i>
13:50	<i>OSC-ICC</i> Man overboard retrieved from the water. No injuries reported	<i>*Recovery: 6 minutes after overboard fall incident</i>
14:15	BT arrives back at MPCC	
14:30	Debrief starts	
15:45	Symbolic issuance of certificates by KPA PPCO, TEMKP HSEQM & OSMAG Chairman	
15:55	Lunch is served followed by departure	

## 12. KEY HIGHLIGHTS OF THE DRILL

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- Quantity reported spilled – 50 tonnes
- Time taken for the OSC to arrive at scene for surveillance = *35mins after incident (Same as in previous drill)*
- Time taken to fully set up the Incident Command Centre = *47mins after incident (previous = 53 mins)*
- Time taken for Booming Team to arrive at the scene of incident = *1hr4mins after notification (previous 53mins)*
- Time taken to prepare & fully deploy the boom = *34mins (previous = 39 mins)*
- Total length of boom deployed – 200 meters
- Time taken for Dispersants Team to arrive at the scene of incident and commence dispersion = *2hrs4min (P=2h)*
- Quantity reported to have been recovered via skimming operation = 0% (Skimming Team Stood Down)
- Quantity reported to have been dispersed via the dispersants = 8% = 4 tonnes
- {Quantity of Dispersants used = 200 ltrs (Ratio 1:20)}
- Quantity assumed to have evaporated = 5% = 2.5 tonnes
- *Quantity earmarked for the 'next operational period response' = 43.5 tonnes*

# THANK YOU

