

“ N I R I I S ”

CYPRUS OIL POLLUTION
RESPONSE EXERCISE

with the participation of the
European Maritime Safety Agency
(EMSA)



For further information please contact:
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REPORT

“NIRIIS 2012” CYPRUS OIL POLLUTION RESPONSE EXERCISE

Limassol 25-26 September 2012

Nicos C. Attas
Marine Surveyor A'
Department of Merchant Shipping

PREFACE

Marine pollution risks have steadily increased in the Eastern Mediterranean region over the past years. Enhanced marine and oil tanker traffic, ship to ship transfers, oil exploitation and oil cargo transfers through shoreline pipes in the neighbouring countries have the potential to lead into catastrophic events in case of accidental release of large quantities of oil at sea.

Any serious oil marine spill will have long-term adverse consequences on the quality of human life, on the country's economy and tourism. Consequently, we need to be well prepared and equipped.

“NIRIIS 2012” is held for the second time in Cyprus. It follows the successful execution of last year's exercise “NIRIIS 2011”, which was the first of this kind. Its purpose is to examine the capability of the Republic of Cyprus to mobilize anti-pollution resources and equipment in response to a major oil spill at sea and to test also the reporting, communication and emergency response procedures.

Further development of this exercise will enhance Cyprus's preparedness and ability to respond to a major oil pollution emergency and to ensure that its seas and coastlines, which are of vital importance for the present and future generations, are adequately preserved and protected.

The Department expresses its sincere thanks to EMSA for its full support, valuable advises and of course for providing at its own cost the oil recovery vessels “ALEXANDRIA” and “OSRV AKTEA” to participate in this exercise. Many thanks to EMSA also for responding to our last year's recommendation to expand the scope of the exercise by offering additional oil spill recovery capacity through a second OSRV.

The exercise organizers would like to express very special thanks to the participating Cyprus authorities, to the companies Petronav Shipmanagement Ltd, to Environmental Protection Engineering SA (EPE) of Greece, to Electricity Authority of Cyprus but also to the participating vessel-, aircraft- and helicopter crew members for their unfailing commitment, devotion and professionalism. Grateful thanks are also expressed to the personnel of the Department of Merchant Shipping who helped and assisted in the organisation and execution of this exercise.

Department of Merchant Shipping

Limassol, August 2013

In Greek mythology, the “**Nereids**” (Ancient Greek: *NIRIIDES*) are sea nymphs, the fifty daughters of “Nereus” and “Doris”, sisters to “Nerites”. They often accompany Poseidon and can be friendly and helpful to sailors fighting perilous storms. They are particularly associated with the Aegean Sea, where they dwelt with their father in the depths within a silvery cave. The most notable of them are Thetis, wife of Peleus and mother of Achilles; Amphitrite, wife of Poseidon; and Galatea, love of the Cyclops Polyphemus.



*Sea thiasos for the wedding of Poseidon and Amphitrite,
2nd half of the 2nd century BC.*

Detail: Nereid on a sea-bull, bringing a present (source: Wikipedia)

ACRONYMS

AOSC	AIR ON SCENE COMMAND(ER)
CDD	CIVIL DEFENCE DEPARTMENT
CECIS CENTRE	EU COMMON EMERGENCY COMMUNICATION AND INFORMATION
CPA	CYPRUS PORTS AUTHORITY
DFMR	DEPARTMENT OF FISHERIES AND MARINE RESEARCH
DMS	DEPARTMENT OF MERCHANT SHIPPING
EAC	ELECTRICITY AUTHORITY OF CYPRUS
EMSA	EUROPEAN MARITIME AND SAFETY AGENCY
EPE	ENVIRONMENTAL PROTECTION ENGINEERING S.A.
FDFU	FORESTRY DEPARTMENT FLIGHT UNIT
IRC	INCIDENT RESPONSE CONTRACT
JRCC	JOINT RESCUE COORDINATION CENTRE
OC-CY	OCEANOGRAPHY CENTRE – UNIVERSITY OF CYPRUS
OSC	ON SCENE COMMAND(ER)
MIC	EU MONITORING AND INFORMATION CENTRE
NCP	THE NATIONAL CONTINGENCY PLAN FOR OIL POLLUTION COMBATING
NOTAM	NOTICE TO AIRMEN
PAOU	POLICE AIR OPERATIONS UNIT
PETRONAV	PETRONAV SHIPMANAGEMENT LTD
PMP	PORT AND MARINE POLICE
POLREP	POLLUTION REPORTING
RCC	RESCUE COORDINATION CENTRE
VTMIS	VESSEL TRAFFIC MONITORING AND INFORMATION SYSTEM
VTS	VESSEL TRAFFIC SERVICES

PART I – GENERAL INFORMATION

By the Council of Minister’s Decision No. 72.032 of 29 April 2011 under the title: “Dealing with problems of marine pollution resulting from ships and oil loading and unloading facilities”, the Department of Merchant Shipping was called upon and was empowered, amongst other, *“to request international or other assistance, i.e. assistance from the oil response fleet of the European Maritime Safety Agency (EMSA), as necessary”*. This national oil spill response exercise is held in fulfilment of this Decision.

GENERAL

The Cyprus national oil pollution response exercise “NIRIIS 2012” was held between 25th and 26th September 2012 off the coastal area of Limassol. The exercise was planned and executed in close cooperation with the European Maritime Safety Agency (EMSA), who participated with two oil spill recovery units (vessels “ALEXANDRIA” and “AKTEA OSRV”).

The exercise was held in two phases, which included at-sea oil containment and oil recovery operations on 25/9/2012 and coastal protection and cleaning from oil on 26/9/2012. A day before, on the 24/9/2012, a notification and pollution reporting exercise took place.

TASK AND OBJECTIVES

The task of the exercise was to examine the national contingency response plan and the capability of the Republic of Cyprus to mobilize antipollution resources and equipment in response to a major oil spill at sea, to test the communication and emergency response procedures and to examine and get acquainted with the procedure for requesting EU/EMSA assistance. Last but not least, to evaluate and draw conclusions on the results and to propose steps for further and future improvements.

COMMAND AND COORDINATION

The overall command and coordination of the exercise was with the Department of Merchant Shipping of the Ministry of Communications and Works.

PLANNING

The planning included the drafting of a realistic TIER III oil spill scenario, the preparation of the exercise programme, the respective timetable and to identify a suitable and safe exercise location(s). Another planning task was to liaise with EMSA and with its the operators of oil spill recovery vessels to coordinate the better exercise execution.

Coordination and organizational meetings with all exercise participants were held in July and early September, where relevant exercise handouts and scripted time intersections were handed over and the final details of the exercise were set.

The organizers obtained in advance all required approvals and budget.

The preliminary exercise general programme was distributed at the beginning of August while the final and official general programme was released on 18th September 2013.

SCENARIO

The exercise scenario was based on an oil spill incident with instantaneous release of ~2000 tons of heavy fuel oil type close to the South West edge of Limassol Bay. The incident was the cause of a collision between an oil tanker and a bulk carrier on the 24/09/2012 at 07:00 local time/04:00 GMT at geographical position:

Lat 34° 25.41 N, Long 32° 58.92 E.

The location of the incident was apprx. 30 nautical miles southwest of Limassol.

ON-SCENE COMMAND (OSC)

The OSC was assigned to Mr. Nicos Attas, Marine Surveyor A' to the Department of Merchant Shipping.

EXERCISE TIMETABLE

Date	Local Time (UTC+3)	Description
Monday, 24/9/2012		NOTIFICATION AND PRESS CONFER.
	0800-1200	NOTIFICATION EXERCISE
	1330-1430	PRESS CONFERENCE
Tuesday, 25/9/2012		PHASE I (At-sea exercise)
	1000-1200	OIL SPILL RESPONSE AND RECOVERY EXERCISE AT SEA
	1200-1300	BREAK
	1300-1600	OIL DISCHARGE EXERCISE AT VASILIKO PORT/ECO FUEL
Wednesday, 26/9/2012		PHASE II (Vassilikos EAC Power Station)
	0900-1100	SHORELINE PROTECTION AND CLEAN-UP EXERCISE

PARTICIPANTS AND RESPONSE EQUIPMENT

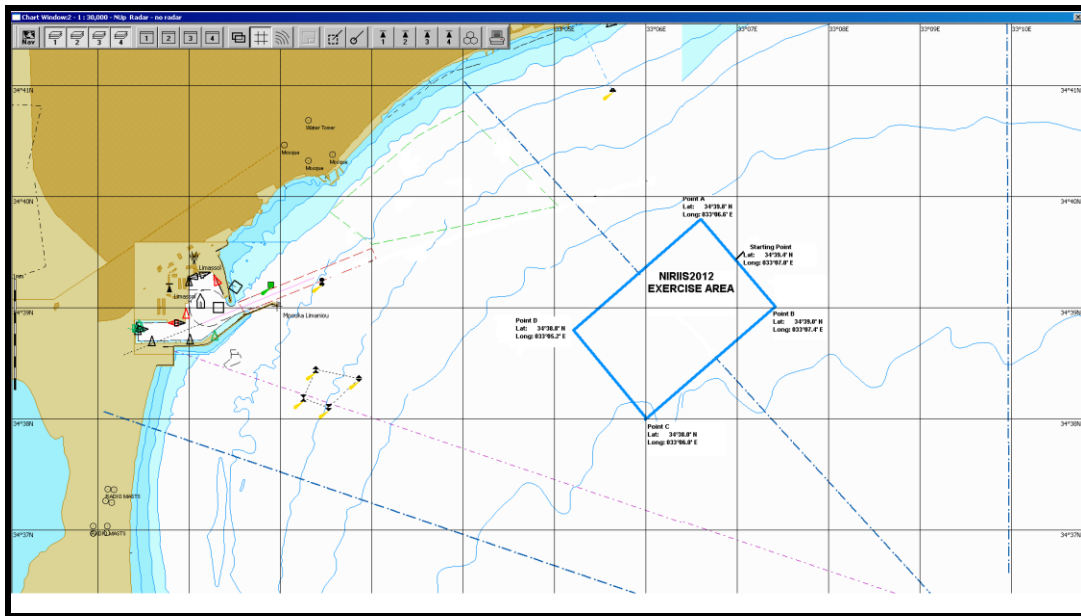
PARTICIPANT	EQUIPMENT	EXERCISE CALL SIGN
On Scene Commander	-----	“NIRIIS”
On scene Air Traffic Coordinator		“AKRITAS”
EMSA	M/T “ALEXANDRIA”	“ALEXANDRIA”
EMSA	M/T “AKTEA OSRV”	“AKTEA”
Cyprus Ports Authority	PORT TUG	“ASPELIA”
Tug Boat Provider	SERVICE TUG	“LAMBOUSA II”
Department of Merchant Shipping (DMS) - Vessel Traffic Monitoring and Information System - VT MIS	-----	“VTMIS”
Cyprus Ports Authority Vessel Traffic Services -VTS	-----	“LIMASSOLVTS”
Department of Fisheries and Marine Research	1. M/P VESSEL “AMFITRITI”	“AMFITRITI”
Department of Fisheries and Marine Research	INFLATABLE BOAT	“F.14”
Port and Marine Police	PATROL BOAT	“ASTRAPI 30”
Police Air Operations Unit	HELICOPTER BELL 412	“AKRITAS”
FDFU (Forestry Department-Flight Unit)	AIR TRACTOR 802	“FOREST-1”
JOINT RESCUE COORDINATION CENTER	-----	“CYPRUS RESCUE”
CYPRUS OCEANOGRAPHY CENTER (UC)	CYCOFOS/MEDSLIK 3D Oil spill prediction system	-----
ENVIRONMENTAL PROTECTION ENGINEERING (EPE)	“AKTEA 19” oil recovery vessel	-----

EXERCISE LOCATION (AT SEA)

The sea area was defined between the following coordinates, which are located approx. 3 nautical miles from the south coast of Limassol):

Point	Latitude	Longitude
A	34 ⁰ 39.8' N	033 ⁰ 06.6' E
B	34 ⁰ 39.0' N	033 ⁰ 07.4' E
C	34 ⁰ 38.0' N	033 ⁰ 06.0' E
D	34 ⁰ 38.8' N	033 ⁰ 05.2' E

The exact coordinates and the boundaries are shown in the below chart.



“NIRIIS 2012” exercise area

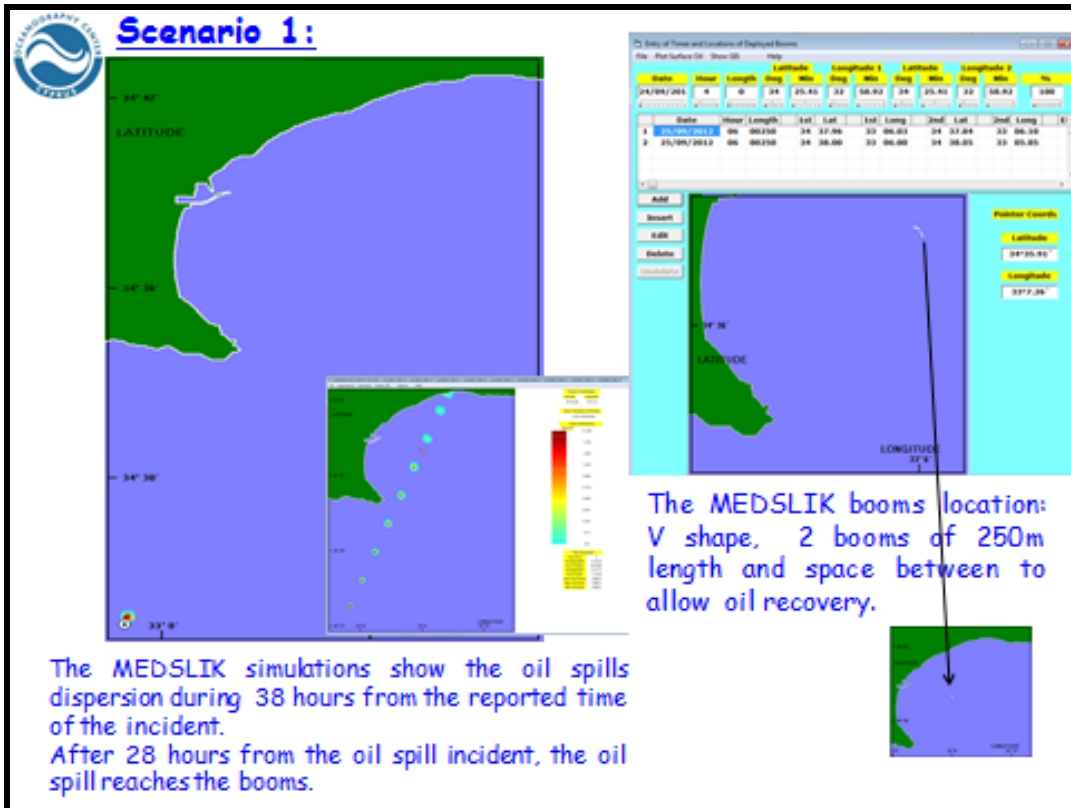
EXERCISE LOCATION (SHORELINE CLEANING)

Vasilikos Power Plant

	Latitude	Longitude
	43°-25'.30" N	33°-17'.25" E

OIL SPILL PREDICTION MODELLING (MEDSLIK 3D)

MEDSLIK 3D model developed by the Oceanography Center (OC-CY) was used and consulted during the exercise in order to predict oil slick drifting.



PART II – THE EXERCISE

Monday 24TH September 2012

Notification and pollution reporting exercise (POLREP)

The POLREP has been assigned to the Head and radar operators of Limassol Vessel Traffic and Monitoring System (VTMIS). The coordination was assigned to Mr. Themis Evriviades, Senior Marine Surveyor of the Department of Merchant Shipping.

The exercise was conducted through telephone, telefax and other communication means. The objectives were to test the procedures to alert and call out the response teams and the European Union Civil Protection Mechanism (MIC), the operators of shore installations (ports and marinas, naval bases, power stations, oil companies, water desalination plants, industrial installations), in accordance with the national oil spill combating plan.

For this purpose, an alert message was published and sent by fax to a number of preselected recipients. Recipients were urged to take precautionary measures AND TO CONFIRM RECEIPT OF THE ALERT. Those who failed to reply within 30 minutes time, were alerted and contacted additionally by phone. All replies, non replies and any errors were assessed and recorded.

To make the exercise conditions more realistic, the organisers decided not to inform the preselected recipients in advance about the exercise.

Also, in order to test the international communication and reporting procedures as required under the Barcelona Convention for the Protection of the Mediterranean Sea, the State of Israel was included in the POLREP and communication procedure, which was carried out in cooperation with RCC Haifa and the Israeli Department of Environment.

Communication with EU Monitoring and Information Centre (MIC) and EMSA

The procedure to alert *EMSA Maritime Support Services* and to request for EMSA oil recovery services was carried in accordance with section 3 of *EMSA’s User Guide “EMSA Network of Stand-by Oil Spill Response Vessels”* which requires that the request for assistance has to go through the Monitoring and Information Centre (MIC), operated by the European Commission in Brussels. This task has been undertaken and carried out by the Cyprus Civil Defence upon receipt of a relevant notification by Limassol VTMIS.

A message was sent through the “Common Emergency Communication and Information System (CECIS)” as follows:

EXERCISE*****EXERCISE*****EXERCISE*****EXERCISE
POLLUTION INCIDENT NOTIFICATION (POLREP)

TO:	EUROPEAN COMMISSION/COMMUNITY EMERGENCY CENTRE (MIC)
FROM:	REPUBLIC OF CYPRUS/CYPRUS CIVIL DEFENCE (CCD)
RE:	EMERGENCY REQUEST TO CONTRACT EMSA OIL RECOVERY VESSELS/SERVICES
VIA	VIA CECIS/Fax+32 2 299 0525
CC.	EMSA OIL RECOVERY SERVICES FAX NO. + 351 21 1209 480

- (1) Contact details of the reporting party;**
 REPUBLIC OF CYPRUS/CYPRUS CIVIL DEFENCE
 TEL.: +357 22 403 400, +357 22 403 450/FAX: +357 22 496 900
- (2) Initial Information pertinent to the incident;**
 OIL SPILL INCIDENT/COLLISION BETWEEN AN OIL TANKER AND A BULK CARRIER
 SOUTHWEST OF CYPRUS AND RELEASE OF LARGE QUANTITIES OF HEAVY FUEL OIL
- (3) Date and time of the incident;**
 24/09/2012 AT 04:00 GMT (07:00 CYPRUS TIME)
- (4) Exact position or details of the sea area where the incident occurred;**
 LAT: 34° 25.41 N, LONG:32° 58.92 E (~30 NM SW FROM THE CITY OF LIMASSOL/CYPRUS)
- (5) Source of the pollution incident or threat of pollution;**
 SHIP COLLISION/OIL TANKER
- (6) Type and estimated quantity of oil discharged into the sea and likelihood of further pollution;**
 HFO 380/ AS OF THIS TIME ~2000 TONS HEAVY FUEL OIL/FURTHER RELEASE OF OIL
 ~150-200 TONS/HOUR.
- (7) Sea condition and weather forecast for the sea area under consideration;**
Accident location: 30 NAUTICAL MILE RADIUS FROM SOUTHWEST OF CYPRUS/
Currents: SPEED → 0.10 m/s, DIRECTION → 23° /
Wind: SPEED → 5.0 m/s, DIRECTION → 206°.
- (8) Initial Assessment of the incident/Oil spill forecasting**
 OIL PREDICTED TO REACH CYPRUS COASTS IN THE MARITIME AREA OF LIMASSOL IN
 24-30 HRS.
- (9) Initial actions undertaken for combating or limiting pollution;**
 CYPRUS NATIONAL CONTINGENCY PLAN ACTIVATED/ CYPRUS OIL SPILL RESPONSE
 TEAMS IN ALERT/DATA COLLECTION AND EVALUATION/ONGOING OIL SLICK
 PREDICTION MODELLING.
- (10) Actions requested from EU/MIC:**
 THE REPUBLIC OF CYPRUS REQUESTS EMERGENCY ASSISTANCE FROM EU AND THE
 IMMEDIATE CONTRACT OF TWO (2) EMSA OIL RECOVERY VESSELS FROM THE
 NEAREST LOCATIONS. PLEASE CONFIRM RECEIPT OF THIS EMERGENCY
 NOTIFICATION.
- (11) Cyprus Competent Authority for oil spill response and contact details**
 DEPARTMENT OF MERCHANT SHIPPING
 VESSEL TRAFFIC MONITORING AND INFORMATION SYSTEM (VTMIS)
 TEL.: +357 25 848 277, +25 848 114 Fax: +357 25 848 173
 Email: vtmis@dms.mcw.gov.cy

CYPRUS CIVIL DEFENCE
 24/09/2012

EMSA informed the respective oil recovery ship operators to provide the Incident Response Contract (IRC) to DMS, which was signed and returned.

Record Log of actions

The sequence of events, the timing and the required action for the notification exercise is described as follows:

TIME	MONDAY 24/9/2012	ACTION
800	JRCC REPORTS SHIP COLLISION TO DMS, DFMR, LIMASSOL DISTRICT ADMINISTRATION AND ISRAEL – HAIFA RCC	JRCC
805	VTMIS INFORMS N ATTAS - DMS (96 56 00 20)	VTMIS
805	VTMIS ESTABLISHES COMM WITH SHIPS AND COLLECTS INFORMATION ON ACCIDENT – USE OF VTMIS INCIDENT REPORT FORM	VTMIS
810	GOVERNMENT “OIL POLLUTION RESPONSE TEAM” IS ALERTED	N ATTAS
815	GOVERNMENT “OIL POLLUTION RESPONSE TEAM” INFORMS DIRECTOR OF DFMR	N ATTAS
830	DIRECTOR DFMR ACTIVATES NATIONAL CONTINGENCY PLAN AND PREPARES RESPONSE EQUIPMENT	DIRECTOR DFMR
900	DAMAGED TANKER REPORTS THAT THE OUTFLOW OF OIL CONTINUES. APPR. 2000 TONNES OF HFO ALREADY DISCHARGED AT SEA	NO ACTION
900	ESTABLISHMENT OF OIL RESPONSE MANAGEMENT CENTER AT LIMASSIL VTMIS	DMS/DFMR
905	NOTIFICATION OF ACCIDENT TO THE MARINE ACCIDENT INVESTIGATION SECTION	VTMIS
915	DFMR REQUESTS FROM OCEANOGRAPHY CENTER TO ASSIST WITH OIL SLICK PREDICTION AND SEA STATE PARTICULARS	DIRECTOR DFMR
915	DMS REQUESTS FROM JRCC AERIAL SURVEILLANCE TO IDENTIFY AND ASSESS OIL SLICK AT ACCIDENT AREA (FICTIVE – NO ACTION)	NO ACTION
920	CYPRUS OCEANOGRAPHY CENTER ACTIVATES THE CYCOFOS/MEDSLIK OIL SPILL PREDICTION SYSTEM	OC-UC

“NIRIIS 2012” - CYPRUS OIL POLLUTION RESPONSE EXERCISE

930	ALERT NOTIFICATION TO OPERATORS OF COASTAL INSTALLATION TO TAKE PRECAUTIONARY MEASURES (EAC, NAVY, PORT&MARINE POLICE, PORTS, CPA, DESALINATION PLANTS, SEA FARMS, MARINAS, OIL LOADING TERMINALS)	VTMIS
1000	CONFIRMATION OF RECEIPT OF ALERT NOTIFICATRION AND OF PRECAUTIONARY MEASURES	COASTAL INSTAL.
1000	COMMUNICATION WITH DAMAGED SHIPS TO UPDATE INFORMATION FLOW	VTMIS
1005	DAMAGED SHIPS INFORM THAT THEY ASSIGNED PRIVATE SALVAGE COMPANIES TO ASSIST THEM	NO ACTION
1015	DIRECTOR DFMR INFORMS THAT THE OIL SLICK IS TOO BIG AND NATIONAL CAPACITY TO RESPOND IS NOT ENOUGH	DFMR
1020	DIRECTOR DMS REPORTS TO CIVIL DEFENCE DEPARTMENT (CDD)AND REQUESTS CDD TO ALERT EU MIC AND EMSA OIL RECOVERY SHIPS	DMS
1030	CIVIL DEFENCE DEPARTMENT REQUESTS EU ASSISTANCE VIA CECIS	CDD
1100	INFORM CYPRUS GOVERNMENT AND POLITICAL LEADERS	NO ACTION
1100	CIVIL DEFENCE AND DISTRICT ADMINISTRATIONS IN ALERT	RESPONSE REAM
1115	CONFIRMATION FROM EMSA ON OIL RECOVERY SHIPS REQUEST AND SUBMISSION OF INCIDENT RESPONSE CONTRACT (IRC)	EMSA
1130	SIGNING OF IRC AND SUMBISSION TO CY-RETRONAV, GR-EPE AND EMSA	DMS – N ATTAS/VTMIS
1145	ISSUE OF PRESS RELEASE	NO ACTION
1150	ISSUE OF NOTICE TO MARINERS	DMS-VTMIS
1200	END OF NOTIFICATION EXERCISE	DMS/DFMR

Discussion, outcome and assessment of the Notification Exercise

The result of the Notification Exercise was positive and was generally good. Minor problems have encountered with some telephone and fax numbers which required to be updated, but this has been dealt with immediately and did not have any negative bearing in the sequence of events.

Although the procedure to call out EMSA oil recovery services was new to VTMIS radar operators, the overall performance and timing verdict is positive, although some confusion and misunderstandings on the established EMSA procedures was noticed.

To overcome the difficulties encountered and to ensure for a more timely efficient performance, additional and systematic training of radar operators in the established procedure is recommended to be arranged in the near future.

We would like to repeat the last year’s conclusion that the call out through CECIS is unnecessary complicated and time consuming. The direct communication with EMSA, at least for the initial emergency communication, is more effective and thus much more preferred.

Thursday 25TH September 2012

Phase I – At Sea Oil Spill Response and Recovery (Morning Session)

In accordance with the oil drift forecasting provided by “MEDSLIK” of OC-CY, a large amount of the oil was drifting towards the Limassol’s coast some 28 hours after the incident occurred. The slick was threatening to severely pollute public beaches and vital coastal installations such as power plants, Limassol’s port and a pleasure yacht marina.

Oil spill recovery vessels “ALEXANDRIA” and “OSRV AKTEA”, which have been mobilized by EMSA on the previous day, arrived in Limassol and reported readiness at around 07:00 pm (local).

Following a briefing and initial coordination meeting on board “ALEXANDRIA” around 07:15 pm, the OSC established radio communication with the master of “OSRV AKTEA”, briefed the participating vessel crew on the current situation, provided data and information and oil spill prediction as these were available up to this time, explained the oil spill response strategy and assigned to each oil recovery vessel a specific task and an area for oil spill recovery operations.



Briefing on board “ALEXANDRIA”

The oil response strategy included the following hierarchy of actions:

- a. The first priority should be the containment and mechanical recovery of the oil from the sea and to prevent drifting of oil to the shoreline.
- b. Any oil at sea which cannot be recovered shall be dispersed with the use of chemicals before it drifts to the coast.
- c. Despite the above actions, if any amount of oil which drifts to the coast, it shall be recovered by shoreline cleaning response personnel and equipment.

Upon securing the safety of navigation in the area and after the arrival and formation of all participating vessels, preparations for the commencement and configuration of the practical exercise section began.

At first, oil recovery ship “ALEXANDRIA” was tasked to deploy a 2x250 meter oil containment boom at sea in order to cage a large oil spill ahead. Tugs “LAMBOUSA II” and “ASPELIA” assisted with the deployment and handling of the boom in an open end “U” shape. Under this arrangement, the contained oil was diverted in a targeted flow towards the sweeping arms of the oil spill response vessel sailing behind. Oil was then swept and recovered with integrated weir/brush oil skimmers. “ALEXANDRIA” was placed on a permanent sail behind the boom.



“ALEXANDRIA and “U” Boom configuration



Arrangement of oil recovery ships

Oil recovery ship “AKTEA OSRV” was assigned a more flexible role and was tasked to deploy the sweeping arms aiming to recover the oil which drifts aside the oil containment boom. Through this flexible arrangement of “AKTEA OSRV”, it was possible to alter course to adjust to the drifting of identified oil spills.



EMSA’s oil spill response ship “OSRV AKTEA”

Smaller craft from the Department of Fisheries and Marine Research have been assigned the duty to spray chemical dispersants in order to dissolve smaller quantities of floating oil that was unable to be recovered.

Cyprus Marine and Port Police patrol boats were securing the exercise sea area keeping it free from other vessels, high speed and small craft.



DFMR vessel “AMFITRITI” (front), “AKTEA OSRV” (back)

At approximately 10:30, all equipment was fully deployed and all participating ships and units reported fully operational.



H/C “AKRITAS” of Cyprus Police flies over Limassol’ s maritime area

To obtain updated information on the movement of the oil slick and to better coordinate the oil spill response units at sea, the OSC requested Larnaca JRCC:

- a) to arrange for aerial surveillance of the affected sea area and to provide an update of the oil slick drift and
- b) to prepare for a fixed wing aircraft from FDFU (Forestry Department) to be ready to be used for aerial dispersant application.

In response to this request, H/C “AKRITAS arrived over the exercise area around 20 minutes later, and the Commander reported that a large quantity of oil covering an area of appr. 0.5 square Km is visible and is drifting to the coast. He reported also about the existence of smaller oil spills which were visible in the wider sea area. In view of the wide area covered by the oil slick and the threat that would pose to the coastline, it has been decided to utilize aerial spray of oil dispersants.

“FOREST-1” aircraft which was already on stand-by at Larnaca airport waiting for instructions, arrived soon over the area and performed successfully the spray of chemical dispersants at realistic conditions at an attitude of 15 ft above sea level. It is clarified that the “chemical dispersants” were nothing more than coloured plain water.



“ FOREST-ONE applies dispersants at sea”

A continuous communication between OSC and participating vessels was continuously kept at VHF channel 67/68. Ship to Air communication between the

vessel “ALEXANDRIA” and H/C “AKRITAS”, was maintained through radio frequency VHF-AM 134.00.

All aerial operations were performed under the command of H/C AKRITAS, who had AOSC duties, in strict compliance with the exercise programme and according to the standard aviation safety procedures and NOTAM issued.

In respect of maritime traffic safety, Cyprus Ports Authority (CPA) issued and maintained a navigational notice/warning to mariners and to vessel traffic in the nearby area. A similar notice to all registered fishing craft was released by the Cyprus Department of Fisheries and Marine Research (DFMR). Also, during the course of the exercise, all marine traffic were under the continuous observation by Vessel Traffic Services (VTS-CPA) and Vessel Traffic Monitoring and Information System(VTMIS-DMS).

Regular data on sea conditions were regularly delivered and updated by OC-CY with reports on sea currents, speed and direction.

To ascertain the safety of the oil recovery vessels, “ALEXANDRIA” and “OSRV AKTEA” crew exercised also the determination of the flashpoint, viscosity and oil density of “oil samples” taken from the contaminated sea. In addition, the oil content of the recovered oily wastewater was measured with the use of an oleometer, which forms part of the EMSA’s oil response equipment.



The observer boat



Observers and invited guests

Observers and guests from Cyprus public services, semi-governmental agencies, the local oil industry and mass media were transferred to the exercise area and were given the opportunity to watch the core part of vessel and aerial operations along with on board exercise briefing.

The exercise remained in full progress until 12:00. All the tasks and exercise objectives were fulfilled and accomplished as envisaged.

At the same time, the OSC declared the end of the at sea oil recovery operations and requested the masters of participating vessels to debrief and report to the OSC before departure.

DEBRIEFING, FINAL REMARKS AND EVALUATION

A debriefing meeting was held onboard “ALEXANDRIA” between the OSC, EMSA, Petronav and EPE. During the meeting, the masters of the participating ships were asked to report any comments or remarks they may had about the performance or the execution of the exercise. The meeting agreed in general that:

- ▶ The exercise was performed and completed successfully;
- ▶ All the objectives set were fulfilled;
- ▶ The exercise plan and at-sea operations were performed well within the time schedule;

- ▶ The participating crews were well trained and showed a high degree of devotion and professionalism
- ▶ The overall verdict was very positive.

It has to be said that the performance of both oil spill recovery vessels was very successful. Their crew demonstrated that are well trained and very familiar with the handling of shipboard oil recovery equipment and EMSA exercise procedures. As a result of the competency, it was easy to have a smooth and effective coordination of the two EMSA vessels side by side.

The communication between both EMSA oil recovery vessels via marine VHF and the coordination of the activities of both vessels was, due to the high standards of their training and abilities, an easy task.

Although during the course of the exercise some unpredicted and sudden changes of the sea state and currents occurred, both Masters of oil recovery ships had adjust their vessels and to deviate from the planned exercise configuration and recommended steering course. This had no significant delays or negative effects to the execution of the exercise. In fact, the participating vessels and aircraft demonstrated that they can easily adapt in order to meet to the (unpredicted) prevailing sea conditions in a very effective way.

Shortcomings and areas of improvement

Participants raised and noted the following shortcomings:

- ▶ Channel 67, which was the primary communication channel, proved to be very busy, overloaded and created difficulties in the communication, it needs to be avoided in the future;
- ▶ Difficulties were also encountered with portable VHF devices used. For the future, a prior exercise test of all portable VHF devices shall be made and recorded.

Afternoon session – Oil Discharge at Vasiliko port

In the early afternoon of the same day at 1430, “ALEXANDRIA” arrived alongside at Vassiliko port and made arrangements to deliver its oily waste to ECO-FUEL LTD. (oily waste treatment plant – official discharge facility in Cyprus) through an existing shore based pipeline.



Alongside at Vasiliko port/Delivery of oily waste at the discharge facility

During this part of the exercise, the following procedures were tested and examined successfully:

- a) Pilotage, manoeuvring and handling of the oil recovery ship inside a confined port area;
- b) Alongside arrangements, communication and connection between shipboard discharge pipe and shoreline pipeline and personnel;
- c) Safety precautions and preparations;
- d) Disconnection and departure.

The above actions and the testing were done successfully and in less than an hour.

Although this part of the exercise was carried out for the first time, the participating crew and ECO-FUEL's personnel managed all the tasks in the most efficient and speedy way and no remarkable problems were encountered.

At 1530 am, the exercise was successfully declared as finished.

All actions and steps of the exercise were recorded as per the following log.

RECORD OF ACTIONS – AT SEA OIL RECOVERY EXERCISE

TIME	TUESDAY 25/9/2012	PARTICIPANTS
700	ARRIVAL OF VESSELS "ALEXANDRIA", "AKTEA OSRV" AND TUG BOAT "LAMBOUSA II" AT EXERCISE AREA.	PETRONAV, EPE, ETC.
715	NOTIFICATION TO PORT AND MARINE POLICE TO RELEASE M POLICE PATROL BOAT	JRCC LARNACA
715	BRIEFING	OSC
730	ARRIVAL OF POLICE PATROL BOAT AT EXERCISE AREA	PMP
740	START - CONFIGURATION OF VESSELS "ALEXANDRIA" KAI "AKTEA" AT SEA	OSC
745	START - DEPLOYMENT OF BOOMS – ALEXANDRIA START - DEPLOYMENT OF SWEEPING ARMS - AKTEA	M/T ALEXANDRIA AKTEA
0815	ARRIVAL OF DFMR BOATS "AMFITRITI" AND "F.14"	DFMR
0835	COMMUNICATION TEST AND START OF EXERCISE CONFIGURATION AND COORDINATION OF VESSELS	OSC
0900	DEPARTURE OF CRUISE "PRIVE" FROM OLD LIMASSOL PORT WITH GUESTS AND OBSERVERS	DMS-VTMIS
0910	DMS-VTMIS NOTIFIES JRCC AND REQUESTS TO RELEASE ONE HELICOPTER AND ONE DISPERSANT SPRAY AIRCRAFT	DMS-VTMIS
0910	DMS-VTMIS NOTIFIES JRCC AND REQUESTS TO RELEASE ONE HELICOPTER AND ONE DISPERSANT SPRAY AIRCRAFT	DMS-VTMIS
0915	JRCC NOTIFIES DEPARTMENT OF FORESTS TO PREPARE A/C FOR DISPERSANT SPRAY OVER OIL SLICK	JRCC
0920	ARRIVAL OF CPA TUG BOAT "ASPELIA"	CPA
1010	FINALIZATION OF EXERCISE GENERAL ARRANGEMENT AND CONFIRMATION TO/FROM VESSELS AND VTMIS, JRCC	OSC/ALL

“NIRIIS 2012” - CYPRUS OIL POLLUTION RESPONSE EXERCISE

1020	GENERAL ORDER TO BEGIN THE EXERCISE – CALL SIGN: "BEGIN NIRIIS 2012" (ORIG. MSG IN GREEK)	OSC
1025	TAKE OIL SAMPLE TEST, DETERMINE FLASHPOINT, VISCOSITY, DENSITY, OLEOMETER PPM/WATER	OSC, ALEXANDRIA AKTEA
1028	TAKE OFF TIME H/C “AKRITAS	JRCC
1030	TAKE OFF TIME FOREST-1 “FOREST-1”	JRCC
1030	REPORT FROM/TO SCENE COMMANDER	OSC/ALL
1050	POLICE HELICOPTER ARRIVAL – REPORT & COMM. TEST	OSC/AIR COORD., PILOTS, VTMS
1055	ARRIVAL A/C "FOREST-1" – REPORT & COMM. TEST	OSC/AIR COORD. , PILOT,
1100	EXERCISE IN FULL PROGRESS ALL PARTICIPANTS INVOLVED	ALL
1120	POLICE HELICOPTER AND A/C “FOREST -1” RELEASED	OSC
1130	DEBRIEFING AND END OF PRACTICAL PART	
1145	BEGINN OF EQUIPMENT RECOVERY FROM SEA	OSC, PARTICIPANTS
1150	RELEASE AND DEPARTURE OF PARTICIPATING VESSELS	OSC, VESSELS
1155	RELEASE AND DEPARTURE OF “M POLICE PATROL BOAT”	OSC, PMP
1200	END OF EXERCISE CODE/CALL SIGN: “END OF EXERCISE” (ORIG. MSG IN GREEK)	OSC
1200	REQUEST FROM DEPARTMENT OF ENVIRONMENT TO ARRANGE AND MANAGE THE DISPOSAL OF OILY RESIDUES RECOVERED FROM THE SHIPS	DMS
1215	APPLICATION FOR COMPENSATION TO IOPC FUND	DMS
1230	DEPARTURE OF "ALEXANDRIA" AND HEADING TO PORT OF VASSILIKOS TO DISCHARGE RECOVERED OIL/OILY RESIDUES	PETRONAV
1430	ARRIVAL AT VASSILIKOS - PILOT EMBARKATION POINT	PETRONAV

“NIRIIS 2012” - CYPRUS OIL POLLUTION RESPONSE EXERCISE

1445	ALL FAST IN PORT	PETRONAV
1500	TEST PIPE CONNECTION	PETRONAV/ECOFUEL
1530	END OF TEST AND DISCHARGE EXERCISE	OSC

Wednesday 26TH September 2012

Phase II - Shoreline Protection and Clean-Up Exercise

This part of the exercise was designed with the aim to examine and demonstrate the ability of shoreline personnel to respond, protect and clean up an affected shoreline from oil.

The overall task of this part was to establish a respond strategy to shoreline pollution but also to train and develop the cooperation between public, government services with operators of coastal installations and specialized third party services, as it would be realistically required and envisaged under a major TIER III incident.

The area of the exercise was chosen at the sea front of Vasilikos Power Station of Cyprus Electricity Authority (EAC), which bears a symbolic and vital role for Cyprus’s economy, that is due to its size and coastal location.



Overview of the power plant from seaside

The main tasks of this part of the exercise were:

- ▶ to respond and protect a vital coastal installation from the dangers of oil pollution. This included the protection of the cooling water intakes through the placement of shoreline booms
- ▶ to recover oil from the sea and from near shore through oil skimmers, specialized oil recovery vessels and sorbent material and

- ▶ to clean up the affected shoreline.

To do this, government services from the DFMR provided 200 meters of harbour boom, skimmers and all ancillary equipment (power pack, blowers, pumps) from the national stockpile, which is permanently stored within the power station.

While EAC trained responders inflated and deployed the booms, the handling and placement of the boom at sea was undertaken by DFMR personnel operating on a high-speed inflatable boat.



Preparing oil spill response equipment (EAC personnel)

At the same time, other EAC responders demonstrated the operation of a WIKOMA Komara 12K oil skimmer. Other responders have demonstrated the cleaning of oil from the rocks and the use of sorbent booms and pads near shore.

A specialized anti pollution vessel from the Greek company “Environmental Protection Engineering SA” with build-in oil recovery system was also utilized and demonstrated oil recovery from the sea.



Preparing oil spill response equipment (EAC personnel)



Boom deployment



Handling the boom around



Demonstration of rock cleaning with hot water



The “AKTEA 19” oil recovery vessel provided by Environmental Protection Engineering SA/Greece

During the exercise, the following oil response equipment was used:

- ▶ Inflatable harbour booms with buoys and anchors (appr. 200 meters)
- ▶ One oil Skimmer (KOMARA 12K) with power pack 12 KW;
- ▶ One portable air blower;
- ▶ One oil/water pump;
- ▶ A portable oil storage tank;
- ▶ A fork lift;
- ▶ High pressure steam cleaner;
- ▶ Sorbent Booms and pads;
- ▶ One multipurpose high speed boat and
- ▶ One oil recovery vessel with build in oil recovery system.

Representatives from other government services and from the local oil industry representatives were invited and have observed the exercise.

Every task was performed and managed in good order and well behind the 2 hour time limit set. There were no special occurrences or shortcomings observed.

PART III – FINAL COMMENTS, SHORTCOMINGS AND RECOMMENDATIONS

The task of the exercise was to examine the national contingency response plan and the capability of the Republic of Cyprus to mobilize antipollution resources and equipment in response to a major oil spill at sea, to test the communication and emergency response procedures and to examine and get acquainted with the procedure for requesting EU/EMSA assistance. Last but not least, to evaluate and draw conclusions on the results and to propose steps for further and future improvements.

In this respect, and upon the assessment of the overall exercise and performance, the organizer wishes to make the following comments and recommendations for the future:

The National Contingency Plan for oil pollution combating (NCP)

The NCP is currently under revision and redrafting. Due to the fact that the experiences drawn from such valuable national exercises have been duly noted and will be taken into consideration in the revised Plan, there is presently no need for further discussion and comments.

National capability to respond to a major oil spill at sea

The technical inability of the Cyprus national response agency (DFMR) to transport, deploy and operate national oil spill response equipment at sea, was and remains the “Achilles heel” of the Cyprus national response capacity.

Although the country maintains a remarkable stockpile of oil spill response equipment including equipment (booms, oil storage tanks and skimmers) that is suitable for deployment at the open sea, it lacks on suitable vessels which can accommodate it and transport it there.

This, in combination with the very limited human resources the DFMR Naval Service employs, limit drastically the national capacity into shore or near shore oil spill response operations only. This is the reason why DFMR could not have the primary role during the at-sea operations of this national exercise.

Based on these weaknesses, it needs to be said that in case of a major oil disaster at the maritime area off Cyprus, it will not be possible to respond without the assistance of EMSA or other third parties.

However, as the purpose and philosophy of EMSA’s fleet of oil spill response vessel is not to substitute the national oil spill response capacity but to top-up the existing national capabilities, it is herewith highly and urgently recommended that the Republic of Cyprus provides the necessary financial resources and political decisions that will enable the effective upgrading of the national oil spill response capacity the soonest possible.

We have to note the excellent cooperation between the Department of Merchant Shipping and EMSA, which makes it easier to plan and execute such exercises. The service EMSA is offering to Member States is undoubtedly of high value and the experiences and knowledge that is gained through this kind of exercises will definitely pay off in a real oil spill pollution incident.

EMSA’s crew on oil spill recovery vessels has proved to be well trained and very familiar with the onboard specialized oil response and recovery equipment and the respective procedures.

Emergency Response and Notification

There is not much that needs to be said on this part of the exercise. The reporting procedures and the MIC notification became familiar and the level of cooperation between the various national entities involved is now smooth and effective.

EMSA’s User Guide “[EMSA Network of Stand-by Oil Spill Response Vessels](#)” is a well structured publication which provides the proper guidance on the procedure needed for the mobilization of oil spill response services through MIC/CECIS.

Excercise Planning and Independent Evaluation

The organizer wishes to recommend the establishment of a national exercise committee, with the task to plan, organize and execute future national oil spill response exercises.

Another evaluation committee shall be established in order to undertake the independent overall evaluation of the exercise. The reports and fact findings of the evaluation committee will have to be included in the final exercise report.

Proposals for the future

The Department of Merchant Shipping believes that the following proposals should be taken into consideration for the future:

- ▶ The national oil pollution response exercise with the participation of EMSA shall continue to be planned and performed regularly. This is required to ascertain a high degree of readiness and ability to respond to a major oil spill incident;
- ▶ Due to the increasing offshore exploitation activities in the eastern Mediterranean Sea but also the number of STS operations off Cyprus, it looks appropriate to consider in a future exercise an appropriate offshore relevant accident scenario that will enable the testing of the response to pollution from those activities;
- ▶ It is of paramount importance to effectively upgrade the participation of the national response agency (DFMR) in terms of personnel, oil recovery vessels and state of the art equipment, in the next national oil spill response exercise of this kind.



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