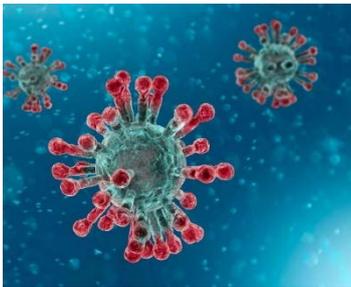


OFFSHORE SARAWAK NO NOTICE DRILL FOR INTERNATIONAL AIR RESPONSE

Date: 28 October 2020



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1. EXECUTIVE SUMMARY

Exercise Details	
Date	28 – 29 October 2020
Location	OSRL – OSRL Singapore base Emergency Operation Centre (EOC) IAR – Senai Airport and Offshore Sarawak, Malaysia
Focus Area	No Notice Drill to test response readiness of International Air Response (IAR), operator for Hercules C130, verify effectiveness of mobilisation procedures and to test assumptions for aerial dispersant spraying in East Malaysia
Number of Participants	OSRL – 3 personnel (Duty Manager, Duty Manager trainee and Operations Section Lead) IAR – 3 personnel (Captain, First Officer and Flight Engineer)
Scenario/Scope	Simulation of an OSRL Participant Member requesting aerial dispersant for a well blowout at offshore Miri, East Malaysia. The scenario was an uncontrolled release of crude starting in the early hours of 28 October 2020. The release rate was 148,000 barrels per day. The Member requested immediate mobilisation of aerial dispersant spraying application from Hercules C130.

Exercise Objectives	
<p>Following the restoration of service of the Senai based Hercules C130 from 10 October 2020, a new captain has been relocated to Senai and the in-country crew is currently reduced in size whilst the Primary captain and flight engineer proceeded to undertake their FAA mandated evaluation flights in the USA.</p> <p>The exercise objectives are:</p> <ol style="list-style-type: none"> 1. To ascertain the readiness of the aerial dispersant application service under the lead of new captain with skeleton crew by activating the Hercules C130 aircraft to perform loading of water and actual Low Level Over Water spray run according to callout procedures, without prior notice. 2. To verify feasibility under current COVID-19 travel protocols and restrictions for IAR to perform aerial dispersant application at offshore Sarawak by performing a turnaround flight and simulation of spray run with water from the Hercules C130 	

Exercise Completion	
Objectives Achieved?	Yes
Safety Remarks	OSRL – No safety concerns, even though the tabletop exercise was conducted in physical setting in the OSRL EOC, the duty team members were observed to be

	<p>well-accustomed to the COVID-19 health and safety measures i.e., working with face masks at all times, maintaining social distancing, adhering to safe distanced seating arrangements and checking in/out via Safe Entry QR code. Communication with IAR was conducted through email exchanges and phone calls.</p> <p>IAR – No safety issue reported. Refuelling and loading operations were completed at Senai airport in an efficient yet safe manner. The crews adhered to the COVID-19 regulations set by local authority i.e. donning face masks in public and common areas, maintaining safe distancing and practicing self-hygiene.</p>
Major Findings	<ol style="list-style-type: none"> 1. Tested and verified that IAR could meet the call-back and wheels up timeframe required for OSRL to meet the Service Level Agreement with Members. 2. Low level flight and simulation of spray run with water were successfully performed in offshore Sarawak, East Malaysia following the approvals of spray flight permission granted by Malaysian aviation authorities. 3. The drill on OSRL duty team was conducted smoothly in Singapore's EOC office in line with OSRL COVID-19 health and safety protocols and measures.
Debrief Date:	4 November 2020

2. INTRODUCTION

Exercises and drills are an integral part of OSRL's internal assurance plan which encompasses all aspects of response and is typically broken down into five capability elements:

Capability Element	Description
People	Ensuring that the right people, with the right skills are in the right place at the right time.
Process	To provide procedural mechanisms that maximise the effectiveness and efficiency of capability.
Equipment	Ensuring that the right tools for the job are available, effective and maintained to the right standard.
Aviation	Ensuring aviation services are fit for purpose and fully integrated.
Logistics	To ensure that mobilisation can be mounted to any global location at short notice with minimal delay.

The drill carried out on the 28 October 2020 focused specifically on People, Process and Aviation elements.

OSRL seeks to exercise alongside Members whenever possible, on top of the multiple internal exercises planned each year. The current circumstances and restrictions imposed to the movement of personnel and face-to-face interaction have added a different dimension to typical exercises, with a key focus area being to demonstrate OSRL's readiness and ability to respond to incidents despite COVID-19 challenges. It is worth highlighting that the scenario used for this exercise was in fact adapted from one which was used in a recent Member exercise.

Following the success of the previous exercise on 16 October 2020, as part of ongoing assurance, a different location was exercised with the new IAR captain and skeleton crew, thereby presenting new elements in this exercise. The OSRL duty team was physically mobilised to the OSRL EOC during the exercise. With most of OSRL staff currently in working from home arrangement, this drill presented an opportunity to gather the duty team in office environment where COVID-19 restrictions and measures apply.

3. EXECUTION

OSRL Activation and Hercules C130 Aircraft Mobilisation

The exercise started at 0830 hrs Singapore time when the OSRL Duty Manager (DM) was notified of the exercise scenario. The initial inject outlined a well control incident resulting in a loss of containment from the well and continuous release of crude oil into the environment. The (simulated) Member requested immediate activation of the aerial dispersant service, utilising the Hercules C130 aircraft, in order to meet the dispersant window of opportunity. At the same time, the Member accepted three Technical Advisors from the 5 x 5 service offered by the DM.

The DM then tasked the duty team i.e. Operations Section Lead to activate the Hercules C130 aircraft in accordance with the mobilisation procedure, to perform a simulation of aerial dispersant spraying application at offshore Sarawak where the incident was located. Upon the receipt of authorisation from OSRL, IAR crews proceeded to file for flight plans, spraying permit application, prepared the aircraft for refuelling and loading of water operation.

As part of the simulation, Miri was identified as the forward operating base hence the landing permit application for technical stop at Miri airport was also submitted by IAR to the Civil Aviation Authority of Malaysia (CAAM) for approval. In addition, OSRL had requested for verification of the quarantine requirements for the aircrews upon landing for technical stop in East Malaysia.

At around 1730 hrs, OSRL was notified by IAR that the approvals had been granted for a spray flight application on 29 October 2020 (the following day). The landing permit for technical stop was also approved, and based on the approved permit, there was no quarantine requirements for the aircraft to perform technical stop.

However, the landing did not take place out of abundance of caution as both OSRL and IAR are mindful that the actual arrangements on the ground could be different than what was advised hence a small risk remained that the crews could be quarantined which would in-effect interrupt response readiness of the service. Furthermore, due to the dynamic nature of COVID-19 restrictions within Malaysia, any verification that is valid in the current moment may change in future. OSRL is confident that in a response situation where aerial dispersant application was required, the mobilisation and treatment of crews would be under emergency response protocols.

End of Exercise (Endex)

The spray area at offshore Sarawak was well within the flight range ring of the Hercules C130 aircraft with dispersant carried onboard. This allowed the crew to perform spraying operations within a turnaround flight, without the need to land.

The spray flight took place at offshore Sarawak, East Malaysia in the morning of 29 October 2020 and was successfully completed by the evening. The aerial dispersant application report was then produced by OSRL Operations Section Lead and that marked the end to the final element of the exercise.

Subsequently, notification of Endex was sent out to OSRL duty team and IAR at 2030 hrs Singapore time.

In conclusion, OSRL worked together with IAR throughout the mobilisation process to enable the aircraft to perform the spray flight at offshore Sarawak in an efficient and effective manner.

4. LESSONS LEARNED

A key component from exercises and drills is the ability to glean key learnings from the experience for continuous improvement. Without a concerted effort to reflect on learnings and transfer knowledge across the organisation, lessons may be lost, mistakes repeated and opportunities for improvement are missed. The following lessons were captured from the exercise on 4 November 2020, discussed during the debrief session with the OSRL duty team and IAR.

S/N	Internal/External	Lesson Type	Description	Actions / Observations
1.	External	Process / Procedure	After the OSRL notification phone call was made to *Professional Emergency Response Services (PERS), the IAR representative returned the call to OSRL within 10 minutes. <i>*Third party provider that manages emergency response calls for IAR</i>	Positive point. Following the lesson learned from previous exercise, the PERS call-out procedure has been streamlined which enabled the smooth and efficient call out process.
2.	External	Process / Procedure	IAR worked out several flight sector analyses and advised OSRL on the most efficient option with optimum amount of "dispersant" to be carried onboard vs fuel consumption to enable the turnaround flight to East Malaysia, which was helpful for OSRL's consideration.	Positive point. These flight sector analyses with different timeline play a part on the decision-making process for OSRL to determine the most efficient response option for Members.
3.	External	Process / Procedure	IAR diligently followed through the mobilisation process to enable the turnaround spray flight at offshore Sarawak. It is worth to note that although the landing permit application for technical stop at Miri airport was subsequently approved, IAR did not exercise this element due to uncertainties and risks of landing at an away location which may result in unwanted consequences especially with skeleton crew available in-country, coupled with the dynamic situation of the COVID-19 pandemic. IAR shall verify the border requirements for technical stop from CAAM.	The turnaround flight successfully took place with spray runs conducted at offshore Sarawak without landing. With the receipt of the official landing permit and subsequent consultation with the CAAM, IAR is certain that they are able to perform technical stop (refuelling) without the need for quarantine. However, it is worth highlighting that during spill incidents where there may be prolonged operation period, approvals and permissions will be required in order to utilise "essential service" processes due to the dynamic situation of the COVID-19 pandemic.

4.	External	System & Technology	IAR acknowledged the challenges in photo-taking tasks during the mission with skeleton crews on-board.	IAR shall establish a procedural workflow for the crews to include photo-taking assignment and investigate a permanent imaging fixture on rear side of the aircraft for better visualisation of the spraying application.
5.	Internal	Safe, Process/ Procedure	<p>It has been more than 6 months for most of the Response staff in the Duty Team to manage an incident in the physical EOC (as opposed to virtually).</p> <p>All Response staff have attended the required Site Re-induction Tour which was helpful to ensure they understand the COVID-19 health and safety measures in base.</p>	<p>The duty team adjusted well to the COVID-19 health and safety measures reporting and managing incident in the physical EOC – face mask, social distancing, staggered seating etc.</p> <p>Good use of OSRL Virtual EOC tools.</p>

5. CONCLUSION

With reference to the objectives of this Assurance No Notice Drill, the conclusions that can be drawn from the exercise are:

- OSRL remains response ready and able to respond to and sustain an incident during the on-going COVID-19 pandemic.
- The procedures to mobilise the Hercules C130 aircraft from Senai airport are practicable and IAR, the service provider, maintained a satisfactory state of response readiness and responsiveness even with skeleton crew in-country under the lead of the new replacement captain.
- The exercise verified that a response is achievable in East Malaysia from home base with aerial dispersant application within the turnaround flight that does not require repositioning of the aircraft. In addition, the landing permit for a technical stop (refuelling) was approved by the CAAM, without the need for quarantine.
- Microsoft Teams, as the platform for establishing a common operating picture and managing an incident continues to be an effective tool.
- The COVID related measures that enable physical presence of the OSRL Duty Team in the EOC were well understood by the team, worked efficiently and did not impede effectiveness.
- The successful use of COVID-19 Malaysia Country Plan as a base for information gathering particularly to identify restrictions that OSRL may face for mobilising the support needed from the Member.

Following the success of the previous aerial dispersant application exercise, this exercise took place within two-week period from the previous one at a different location with skeleton crew in-country under the lead of the new captain which presented new elements to be tested as part of ongoing assurance. Nevertheless, the exercise was another success with key lessons learned. This is particularly pertinent given the dynamic impacts of the pandemic on international mobilisations. The benefit of practicing in an exercise setting allows all parties to identify challenges and valuable learnings from the experience which can be addressed in peace time and applied to managing a real response.

6. APPENDIX – OVERFLIGHT PHOTOS

Figure 1: IAR crews on-board in action during the sortie at offshore Sarawak

(Note: In accordance to FAA, aircrews are exempted from face masks in cockpit to allow effective communication especially during critical flight operations such as LLOW flight)



Figure 2: Overview of the Spray site

